



Ministerul Educației, Culturii și Cercetării
al Republicii Moldova



Culegere de articole selective

**SIMPOZION ȘTIINȚIFIC
INTERNȚIONAL AL
TINERILOR CERCETĂTORI**

EDIȚIA A XVII-a

(24 – 25 aprilie 2019)

Chișinău, 2019

CZU 082:378.633(478-25)=135.1=111

S 58

Culegere de articole selective

Simpozion Științific Internațional al Tinerilor Cercetători (24-25 aprilie 2019)

Copyright 2019

Editori:

Academia de Studii Economice a Moldovei, Republica Moldova. Adresa: Republica Moldova, mun. Chișinău, str. Mitropolit Gavriil Bănulescu-Bodoni, 61, MD-2005, Telefon: + 37322224128, Fax: +37322221968, www.ase.md

Editura ASEM, Centrul Editorial-Poligrafic al ASEM. Adresa: Republica Moldova, mun. Chișinău, str. Mitropolit Gavriil Bănulescu-Bodoni, 59, ASEM, bloc B, b. 502, MD-2005, Telefon: + 37322402936, www.ase.md

Toate drepturile sunt rezervate

Editorii nu sunt responsabili pentru conținutul lucrărilor științifice publicate și nici de opiniile autorilor prezentate în acest Volum.

COLEGIUL DE REDACȚIE

Redactor-șef: Prof. univ., dr. hab., academician Grigore BELOSTECINIC

Membri:

Corneliu GUȚU, dr., Prorector Pentru cercetare și parteneriate, ASEM

Liliana CONDRATCHI, cercet. șt., Șef Serviciu Știință, ASEM

Diana BRAGOI, Secretar științific al Senatului ASEM, ASEM

Eugenia FEURAS, dr. hab., Directorul Școlii Doctotale ASEM

Veaceslav ZAPOROJAN, dr., Școala Doctorală în drept, științe Politice și Administrative ASEM-USPEE

Angela CASIAN, dr., Director al Școlii Masterale de Excelență în economie și business ASEM

Zinovia TOACĂ, dr., Decan al Facultății „Tehnologii Informaționale și Statistică Economică”, ASEM

Ludmila COBZARI, dr., hab., Decan al Facultății „Finanțe”, ASEM

Angela SOLCAN, dr., Decan al Facultății „Business și Administrarea Afacerilor”, ASEM

Alic BÎRCĂ, dr. hab., Decan al Facultății „Economie Generală și Drept”, ASEM

Lilia GRIGOROI, dr., Decan al Facultății „Contabilitate”, ASEM

Rodica CRUDU, dr., Decan al Facultății „Relații Economice Internaționale”, ASEM

Nina ROȘCOVAN, dr. Institutul de Cercetări Economice și Studii Europene, ASEM

Descrierea Camerei Naționale a Cărții

Simpozion Științific Internațional al Tinerilor Cercetători : Culegere de articole selective, Ediția a 17-a, (24-25 aprilie 2019) / col. red.: Grigore Belostecinic [et al.]. – Chișinău : ASEM, 2019. – 344 p. : fig. color, tab.

1 disc optic electronic (CD-ROM ; 700 Mb ; 52x speed) : sd., col.; în container, 15 x 15 cm. – Titlu preluat de pe eticheta discului. – Cerințe de sistem: Windows OS, HDD 64 Mb, PDF Reader - Disponibil : www.ase.md

Antetit.: Acad. de Studii Econ. a Moldovei. – Texte : lb. rom., engl. – Rez.: lb. engl. – Referințe bibliogr. la sfârșitul art.

ISBN 978-9975-75-962-5.

082:378.633(478-25)=135.1=111

S 58

Acest Volum include lucrările științifice prezentate la Șimpozionul Științific Internațional al Tinerilor Cercetători, Ediția a XVII-a, 24-25 aprilie 2019, care s-a desfășurat în cadrul Academiei de Studii Economice a Moldovei (ASEM), Chișinău, Republica Moldova.

Simpozionul a cuprins următoarele secțiuni:

SECȚIUNILE TEMATICE:

I. CERCETĂTORI ȘI DOCTORANZI

Secțiunea 1: Strategii de dezvoltare a economiilor naționale

Secțiunea 2: Managementul și marketingul în economia contemporană

Secțiunea 3: Evoluțiile financiare contemporane

Secțiunea 4: Contabilitate, audit, analiză economică

Secțiunea 5: Suportul informatic și metode cantitative în economie

Secțiunea 6: Econometrie și statistică economică

Secțiunea 7: Științe juridice. Științe politice și administrative

II. MASTERANZI

Secțiunea: Dezvoltarea Republicii Moldova în noul context politic, social și economic, în cercetările masteranzilor ASEM

III. STUDENȚI (CICLUL I), ELEVI (COLEGIU)

Secțiunea 1: Aspecte și practici pentru o dezvoltare eficientă a economiei naționale

Secțiunea 2: Aspecte teoretice și practice ale activității unităților economice

Secțiunea 3: Managementul și sustenabilitatea afacerilor în sec. XXI

Secțiunea 4: Tendințele marketingului modern

Secțiunea 5: Comerț, turism și alimentație publică

Secțiunea 6: Contabilitate, Audit și Analiză Economică

Secțiunea 7: Jurisprudență națională și europeană

Secțiunea 8: Resurse umane și afaceri publice

Secțiunea 9: Cooperarea și integrarea economică regională: probleme și perspective

Secțiunea 10: Finanțe corporative. Asigurări

Secțiunea 11: Finanțe publice și fiscalitate

Secțiunea 12: Evoluții pe piețele financiare

Secțiunea 13: Evoluții în domeniul monedei și creditului

Secțiunea 14: Econometrie și statistică economică

Secțiunea 15: Suportul informatic și metode cantitative în economie

CUPRINS

PREZENTĂRI ÎN PLEN

DIGITAL ECONOMY GOVERNANCE	8
<i>PhD student, Roman BAHNARU, ASEM</i>	
CREATIVE INDUSTRIES - OPPORTUNITIES TO BOOST ECONOMIC DEVELOPMENT	16
<i>PhD student, Mariana DAMASCHIN, ASEM</i>	
THE IMPACT OF FOREIGN CAPITAL ENTRY ON THE EMERGING COUNTRIES BANKING SYSTEM	22
<i>Valeriu BRICEAG, masterand, Școala Masterală de Excelență în economie și business, ASEM</i>	
<i>Conducător științific: Victoria COCIUG, dr., conf. univ., ASEM</i>	
THE ENQUIRE AND NURTURE OF THE HEART AS A PREREQUISITE FOR THE DEVELOPMENT OF THE HUMAN PERSONALITY	30
<i>Luciana GURDUZ, studentă, anul II, Specialitatea – Economie Mondială și REI, ASEM</i>	
<i>Conducător științific: Elina BENEĂ-POPUȘOI, dr., conf. univ., ASEM</i>	

I. CERCETĂTORI ȘI DOCTORANZI

SECȚIUNEA I:

STRATEGII DE DEZVOLTARE A ECONOMIILOR NAȚIONALE

CIVILIZATION CRITERIA FOR CITIES IN ROMANIA AND THE REPUBLIC OF MOLDOVA	35
<i>PhD student, Laurențiu CRĂCIUN, ASEM</i>	
INDICATORS FOR EVALUATION OF BANKING SUPERVISION EFFICIENCY	42
<i>PhD student, Daniela DERMENGI, ASEM</i>	
DYNAMICS OF MIGRATION FLOWS IN THE REPUBLIC OF MOLDOVA IN THE EUROPEAN UNION	48
<i>PhD Student, Stela MOROZAN, ASEM</i>	
NON-TARIFF REGULATIONS TRENDS IN THE CONTEXT OF BREXIT AND RELATION OF UNITED KINGDOM AND REPUBLIC OF MOLDOVA WITH EUROPEAN MARKET	57
<i>PhD Student, Radu LUPAN, ASEM</i>	
EVALUATION ASPECTS OF THE MECHANISM OF FINANCING OF THE RESEARCH SECTOR FROM REPUBLIC OF MOLDOVA IN THE CONTEXT OF EUROPEAN TENDENCIES	64
<i>PhD Student, Veronica RAILEAN, NIER</i>	
LOBBYING: THE RELATIONSHIP BETWEEN STATE, MARKET AND THE PUBLIC SECTOR	71
<i>PhD Student, Aliona MANTALUȚĂ, ASEM</i>	

SECȚIUNEA II:

MANAGEMENTUL ȘI MARKETINGUL ÎN ECONOMIA CONTEMPORANĂ

ASSESSING THE REPUBLIC OF MOLDOVA BUSINESS ENVIRONMENT THROUGH PRISM OF INTERNATIONAL RANKINGS	77
<i>PhD Student, Ana CĂRLAN, ASEM</i>	
CHALLENGES OF STRATEGIC MANAGEMENT OF HUMAN RESOURCES IN THE CONTEXT OF EUROPEAN INTEGRATION	85
<i>PhD student, Igor GUSEINOV, ASEM</i>	
FACILITY MANAGEMENT AN ALTERNATIVE METHOD OF ATTRACTING INVESTMENTS	94

<i>PhD Student, Eugeniu LITVIN, ASEM</i>	
CONCEPTUAL PERSPECTIVES OF DEVELOPING A BALANCED SCORECARD: CONTENT AND RELEVANCE	99
<i>PhD student, Elena ANDROSOV, ASEM</i>	
THEORETICAL ASPECTS IN CHANGING THE EFFECTIVENESS OF ORGANIZATIONAL CHANGES WITHIN SERVICE PROVIDERS	104
<i>PhD Student, Victor DOMNIȘOR, ASEM</i>	
SUPPLY CHAIN: KEY PERFORMANCE INDICATORS ANALYSIS	109
<i>Scientific researcher, Liliana CONDRAȚCHI, ASEM</i>	
PERSPECTIVES OF CULTURAL DIMENSIONS RESEARCH PROECT GLOBE IN THE REPUBLIC OF MOLDOVA	115
<i>PhD Student, Angela PÎRLOG, ASEM</i>	
ORGANIZATIONAL CLIMATE APPROACHES AS A PERSONNEL RISK FACTOR	124
<i>PhD student, Constantin SCARLAT, ASEM</i>	
DEVELOPING NATIONAL SOCIAL MARKETING STRATEGIES IN THE REPUBLIC OF MOLDOVA	128
<i>PhD Student, Alina TIMOTIN, ASEM</i>	
 SECȚIUNEA 3: EVOLUȚIILE FINANCIARE CONTEMPORANE 	
FINANCIAL STABILITY IN THE REPUBLIC OF MOLDOVA	136
<i>PhD Student, Ana IONAȘ, ASEM</i>	
CAUSES OF SALARY PAY GAP BETWEEN WOMEN AND MEN IN THE REPUBLIC OF MOLDOVA	145
<i>PhD Student, Mariana ROBU, ASEM</i>	
REFLECTION ON THE ORGANISATION OF INTERNAL AUDIT IN THE PUBLIC SECTOR OF THE REPUBLIC OF MOLDOVA	150
<i>PhD Student, Ludmila POPA, ASEM</i>	
IMPLICATIONS OF NET CASE FLOW ANALYSIS ON THE SUSTAINABILITY OF THE INSURANCE COMPANY	156
<i>PhD Student, Lilian MARIN, ASEM</i>	
IMPLEMENTATION OF BASEL III STANDARDS TO REDUCE THE VULNERABILITY OF THE BANKING SYSTEM IN THE REPUBLIC OF MOLDOVA	162
<i>PhD Student, Vadim LOPOTENCO, ASEM</i>	
MODEL OF BANKING ACTIVITY AND MAXIMIZING PROFIT	168
<i>PhD student, Victor ABABII, ASEM</i>	
THE OPPORTUNITY OF MONETARY POLICY INSTRUMENT APPLICATION IN ORDER TO CONTROL THE INFLATION PROCESS	173
<i>PhD Student, Olga HINEV, ASEM</i>	
EFFECTIVENESS OF MONETARY POLICY	180
<i>PhD Student, Veronica CHICU, ASEM</i>	
THE PARTICULARITIES OF THE FINANCIAL AUDIT OF ECONOMIC ENTITIES WITH PUBLIC PROPERTY FROM THE REPUBLIC OF MOLDOVA	184
<i>PhD Student, Ana VÎRCOLICI, ASEM</i>	
THE PECULIARITIES AND STAGES OF THE INNOVATION PROCESS IN THE BANKING SYSTEM	194

<i>PhD Student, Cristina PANFIL, NIER</i>	
FINANCIAL INSTRUMENTS BASED ON PRECIOUS METALS AND THEIR REGULATION IN THE REPUBLIC OF MOLDOVA	201
<i>PhD Student, Ana LITOCENCO, ASEM</i>	
THE ANALYSIS OF HEALTH EXPENDITURES IN THE REPUBLIC OF MOLDOVA, IN 2012-2018	207
<i>PhD Student, Elena ZUBCOVA, ASEM</i>	

SECȚIUNEA 4: **CONTABILITATE, AUDIT, ANALIZĂ ECONOMICĂ**

PROBLEMATIC ASPECTS OF THE SUBSEQUENT MEASUREMENT OF INVENTORIES	213
<i>PhD Student, Artur VÎRTOSU, ASEM</i>	
ANALYTICAL PROCEDURES USED BY PUBLIC CATERING ESTABLISHMENTS	220
<i>PhD Student, Valentina KHOROZOVA, ASEM</i>	
THE ORGANIZATION OF MANAGEMENT CONTROL IN TRADE ENTITIES	226
<i>PhD Student, Andrei JIZDAN, ASEM</i>	
THE INFLUENCE OF THE URBAN CENTERS FROM THE CENTRAL DEVELOPMENT REGION ON THE CONSUMPTION OF WATER RESOURCES	232
<i>PhD Student, Daniela BURDUJA, Institute of Ecology and Geography</i>	
BUDGETING AND KEY PERFORMANCE INDICATORS ESTABLISHMENT AS A TOOL FOR DECISION-MAKING PROCESS OPTIMIZATION	239
<i>PhD candidate, Daria ROTARU, ASEM</i>	

SECȚIUNEA 5: **SUPTUL INFORMATIC ȘI METODE CANTITATIVE ÎN ECONOMIE**

MOBILE APPLICATIONS WITH BIOMETRIC AUTHENTICATION IN BUSINESS ACTIVITIES	245
<i>PhD Student, Vasile NASTAS, ASEM</i>	
ALGORITHMS FOR PREDICTING THE MONOPOLIST BEHAVIOUR IN VIEW OF THE WALD AND SAVAGE DECISION CRITERIA	251
<i>PhD Student, Lilian GOLBAN, ASEM</i>	
INTERNET DEVICES FOR SMART HOUSES DEVELOPMENT CONDITION AND PERSPECTIVES	256
<i>PhD Student, Adriana CATRUC-INCULEȚ, ASEM</i>	
ADOPTING THE BEHAVIOR OF PRODUCTION SYSTEMS TO MARKET DEMANDS	261
<i>PhD Student, Ștefan BLANUȚA, ASEM</i>	

SECȚIUNEA 6: **ECONOMETRIE ȘI STATISTICĂ ECONOMICĂ**

ANALYTICAL REVIEW OF MONETARY POLICY TRANSMISSION MECHANISMS	265
<i>PhD Student, Olga PANIȘ, ASEM</i>	
RELEVANT INDICATORS OF THE MACROECONOMIC PERFORMANCE OF THE REPUBLIC OF MOLDOVA	272
<i>PhD Student, Victoria BLANUȚA, ASEM</i>	
EVOLUTION AND ANALYSIS OF THE BANKING SYSTEM OF THE REPUBLIC OF MOLDOVA	279
<i>PhD Student, Ion VEVERIȚĂ, ASEM</i>	

SECȚIUNEA 7:
ȘTIINȚE JURIDICE. ȘTIINȚE POLITICE ȘI ADMINISTRATIVE

ON SOME MODERN SPECIAL INVESTIGATION METHODS AND PREVENTION IN CRIMINAL PROCEEDINGS	287
<i>PhD Student, Serghei PÂNTEA, Ministry of Internal Affairs of Republic of Moldova</i>	
LEGAL ASPECTS REGARDING THE DEVELOPMENT OF RENEWABLE SOURCES OF ENERGY IN THE REPUBLIC OF MOLDOVA	292
<i>PhD Student, Mihaela IARMENCO, ASEM</i>	
LEGAL FRAMEWORK OF SUBJECTS ENTITLED TO APPEAL THE CONSTITUTIONAL COURT	300
<i>PhD Student, Corina ZAPOROJAN, USM</i>	

II. MASTERANZI

Secțiunea: Dezvoltarea Republicii Moldova în noul context politic, social și economic, în cercetările masteranzilor ASEM

MANAGEMENTUL TIMPULUI CORPORATIV ÎN CADRUL COMPANIILOR DIN REPUBLICA MOLDOVA	305
<i>Diana VRABIE, masterandă, Școala Masterală de Excelență în economie și business, ASEM</i>	
<i>Conducător științific: Angela SOLCAN, dr., prof. univ., ASEM</i>	
COGNITIVE HEALTH. A PUBLIC HEALTH CRISIS IN REPUBLIC OF MOLDOVA	311
<i>Alexander FOIGHELMAN, masterand, Școala Masterală de Excelență în economie și business, ASEM</i>	
<i>Conducător științific: Artiom JUCOV, dr., conf. univ., USMF</i>	
METODE SPECIFICE DE PROMOVARE ÎN DOMENIUL EDITORIAL SAU CUM SE FABRICĂ UN BESTSELLER?	319
<i>Dorina GHENCIU, masterandă, Școala Masterală de Excelență în economie și business, ASEM</i>	
<i>Conducător științific: Oxana SAVCIUC, dr., conf. univ., ASEM</i>	
ANALIZA COMPARATIVĂ A RISCURILOR ȘI PERFORMANTELOR BANCARE ÎNTRE REPUBLICA MOLDOVA ȘI ȚĂRILE UNIUNII EUROPENE PENTRU ANII 2014 – 2018	324
<i>Nicoleta TOFAN, Maria NACLADA, masterande, Școala Masterală de Excelență în economie și business, ASEM</i>	
<i>Conducător științific: Stela CIOBU, dr., conf. univ., ASEM</i>	
ROLUL INOVAȚIILOR TEHNOLOGICE ÎN EVOLUȚIA PIETELOR FINANCIARE	331
<i>Nicoleta TOFAN, Maria NACLADA, masterande, Școala Masterală de Excelență în economie și business, ASEM</i>	
<i>Conducător științific: Svetlana BILOOCAIA, dr., conf. univ., ASEM</i>	
HEADHUNTING	338
<i>Nicoleta BULAT, masterande, Școala Masterală de Excelență în economie și business, ASEM</i>	
<i>Conducător științific: Aliona GUȘUVATI, dr., conf. univ., ASEM</i>	

PREZENȚĂRI ÎN PLEN

DIGITAL ECONOMY GOVERNANCE

Roman BAHNARU
PhD student
bahnaru@ase.md

Academia de studii Economice a Moldovei
Republica Moldova, Chișinău,
str.Banulescu-Bodoni 61,
+373224128, www.ase.md

Abstract. *The aim of this research it is to analyse the digital ewconomy governance. Governance includes the activities of governmental and non-governmental actors that appear on several levels.*

The purpose of the research is to conduct an analysis of the theoretical framework describing the digital economy governance that will allow an empirical analysis of the digital economy's level and the digital economy's governance in the business environment, performing a synthesis of contemporary economic instruments for studying the impact of the digital economy.

The case is the research analysis of the current level of the digital economy in the Republic of Moldova and the impact of the digitazation for the national economy, identifying the digital economy contribution to GDP. The paper analysis the digital ecosystem - the relationship between the stakeholders and try to present the national legislations in liason with digitalization.

The approaches investigated by this research are settled on the base of specific methodology, theoretical and empirical researches regarding the digital economy governance and relevant literature.

The preliminary results show positive effect of the digital economy on the national economy, while we need more colaboration between all stakeholders – business, government, citizens, academic environment and civil society, strengthening institutions by assuring a good Governance at national, regional and international level.

Keywords: digitazation, digital economy, governance, collaboration, stakeholders, policy

JEL: H20, M10, M13, M16, M20, M21, M29

INTRODUCTION

The global deployment of information and communication technologies (ICT) at a fast pace can be seen and felt socially, politically and economically. From an economic point of view, digital technologies have facilitated business growth, which has led to increased service platforms and Internet connectivity, nowadays, more than half of the world is online [1], and digitalization has attracted more and more attention. This has led to an increase in challenges for digital economy governance. Therefore, the countries of the world are preparing for transformations to the economy of the future.

The economy of the future, in turn, is based on the passage of economic activities into a digital economy, where digital technologies form the basis of activities. In many developed countries, the term "digital economy" includes both the economy and the entire society in which digitization as a transformation process has changed business models, increased the life and activity of the population and has transformed policies and government practices through online platforms.

The digital economy is at the same time part of the 4th Industrial Revolution [2] and part of „the third wave” of the civilization development [3]. The 4th Industrial Revolution is evolving at an

exponential rather than a linear pace. Moreover, it is disrupting almost every industry in every country. And the breadth and depth of these changes herald the transformation of entire systems of production, management, and governance. The possibilities of billions of people connected by mobile devices, with unprecedented processing power, storage capacity, and access to knowledge are unlimited. And these possibilities will be multiplied by emerging technology breakthroughs in fields such as artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing (Figure 1).

Figure 1. **Fourth Industrial Revolution**

Source: <https://www.weforum.org>

Materials and Methods

In order to understand digital economy governance, there are several essential concepts to be explored. Furthermore, most of the literatures on the topic investigate the digital economy, while there are few empirical researches. Thus the paper first explores the digital economy definition and less analyse the digital economy governance. Regarding the case study, which is a qualitative research, the author examined international methodologies, government documents, including policy papers.

The purpose of the research is to conduct an analysis of the theoretical framework describing the digital economy governance, particularly in the business environment, by identifying the key elements of the digital economy, determining the relevant indicators that will allow for an empirical analysis of the digital economy's level and the digital economy's governance in the environment business, performing a synthesis of contemporary economic instruments for studying the impact of the digital economy on the business environment. Achieving this goal has conditioned the following basic research objectives:

- examination of specialized literature in order to define the concept of digital economy, identification of elements of the digital economy governance;
- establishment of tools for estimating the digital economy;
- study of performance indicators in the field of governance of the digital economy at international and national level.

Digital Economy Governance: concepts and theoretical background

The Internet, broadband networks, mobile applications, ICT services and equipment are the foundation of the digital economy. And mobility, AI, blockchain, cloud technologies, social networks, Internet of things and Big-data are some of the most important trends in the digital economy today. Together, these trends make possible a future where "everything is intelligent" (eg houses, telephones, televisions, society, business, transport, government, energy) by empowering the business, consumers and society as a whole.

The concept of digital economy has evolved over time due to the dynamism and development of digital technologies. According to the Oxford Dictionary, the digital economy is the economy that works primarily on digital technologies, especially digital transactions through the Internet. Many times, the digital economy is called the Internet Economy, New Economy, Platform Economy or Web Economy. The internet economy can be identified as a broad set of the digital economy. The term internet economy has been defined by the OECD as "the value of all economic activities being undertaken with / and the help of the Internet". From a technical point of view, the digital economy expands a little further by including non-internet digital technologies.

According to the OECD, the digital economy allows trade in products and services through e-commerce over the Internet [4]. The European Union sees the digital economy as the single most important factor for increasing innovation, competitiveness and growth in the world [5]. IBM defines the digital economy as a factor that can deliver high-quality ICT infrastructure and harness the power of ICT for the benefit of consumers, businesses and governments. According to the UK Government, the digital economy includes the production of digital equipment, editorial activity, media production and computer programming.

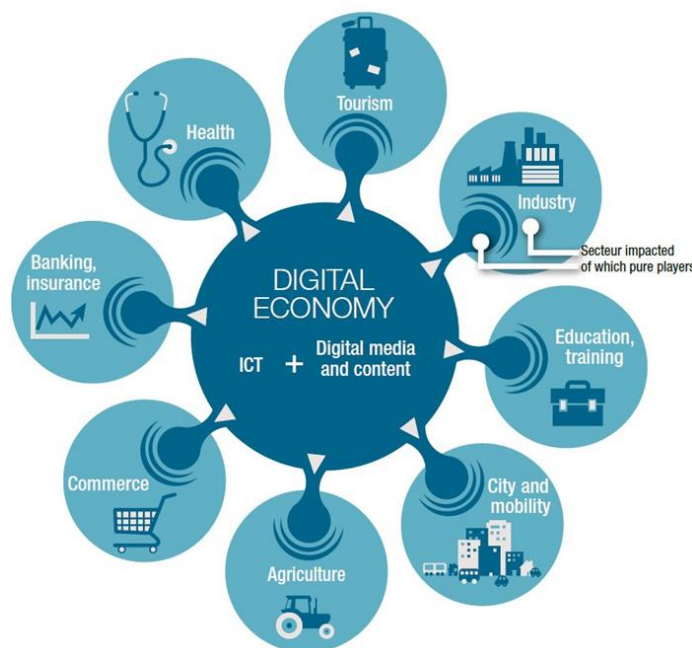


Figure 2. **Digital Economy impact**

Source: <https://industryreports24.com>

Governance is defined here as purposeful and authoritative steering of social processes. It includes activities of governmental and non-governmental actors (including civil societies, action networks, partners, and private-sector entities), which occur at multiple levels.

At country level, digital economy estimation tools are different depending on the purpose of the research, but there is no specific measurement methodology at international level. To measure the digital economy, we need to isolate companies that include the broad concept of digitizing the digital

economy. OECD and Eurostat define the ICT sector (as an approximation of the digital economy) as a "combination of the manufacturing industry and services that transmit and present data and information in electronic format".

Arguments may be made for several other activities of the economy to be considered as part of the digital economy, such as publishing, video and television production, advertising and market research, designing activities, education, gambling activities because many companies that fall into these categories either expand their business to have an online presence or have moved entirely into the online environment. Developments and innovations in the digital sector mean that more and more businesses are finding ways to become digital, and this in turn makes the measurement of the digital economy problematic.

At the OECD, Eurostat, UK - the most popular method for estimation of the digital economy is based on the economic activity classifier, with small deviations from the country to other activities included - usually refers to ICT.

The digital economy is based on a platform-based model, which allows the three mechanisms (inclusion, efficiency and innovation) to benefit from digital technologies for business, people and government (Figure 3).

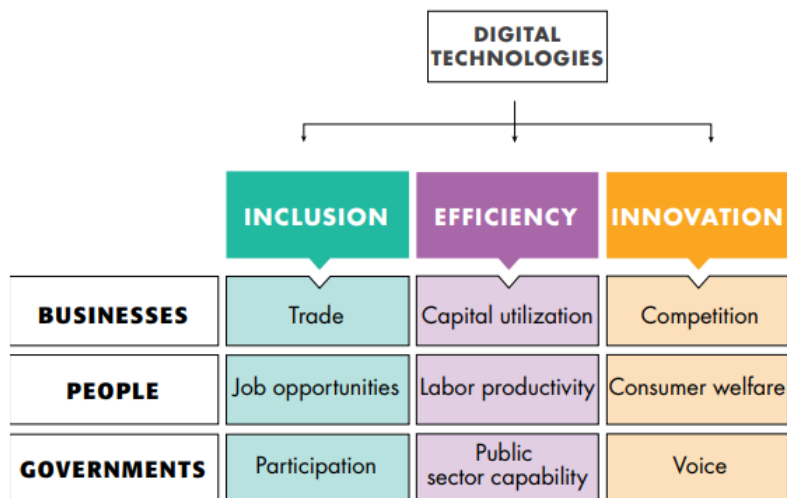


Figure 3. Mechanisms of the digital economy applied to business, people and governments

Source: *Digital Dividends 2016, worldbank* [6]

For the business environment, the Internet promotes the inclusion of companies in the global economy by expanding trade, increasing capital productivity and enhancing competition on the retail market, which in turn determines innovation. People are offered opportunities by creating new jobs, capitalizing on human capital and increasing consumer welfare. Digital technologies provide citizens with access to public services, strengthen governance capacities and serve as a platform for citizens to address issues that require collective action.

Digital Economy Governance in Republic of Moldova: Case Study

There is no single policy document in the Republic of Moldova on the digital economy, although some states of the world have specific strategies and plans on the digital economy (Great Britain, Sweden, Thailand, Australia, Russia, Belarus). Thus, when we carry out an analysis of the national laws that are directly related to the digital economy, we must refer to over 10 legislative documents, the most relevant acts are:

1. **The National Strategy "Digital Moldova 2020"** - being the most important legislative document that has a significant impact on the development of the digital economy in the Republic of Moldova, the strategy is oriented towards the creation of conditions through the minimum intervention of the state but with maximum effect for the development of the information society, concentrating efforts on three pillars:

Pillar I: Infrastructure and Access - Improving connectivity and access to the network;

Pillar II: Digital content and electronic services - promoting the generation of digital content and services;

Pillar III: Capacities and use - Enhancing literacy and digital skills to enable innovation and stimulate use.

2. **The strategy for increasing the competitiveness of the IT industry 2015-2021** - the strategy determines the IT industry's place in the value chain of the ICT sector, describes the current situation and its challenges, which can be overcome through the elaboration and implementation of public policies, formulates the vision and the general objective, the specific objectives and strategic initiatives for each priority, the IT industry growth assessment and monitoring indicators, as well as the expected results.

3. **Law on information technology parks** - the key element of the law is the implementation of the tax model for IT park residents by applying a 7% single tax. The parks can also operate in "virtual" mode, and residents can perform the specified activity genres from their own offices located on the territory of the Republic of Moldova. The law expresses 9 types of activity, especially tangent to program development. Main activities (according to CEAM rev.2) carried out in information technology park "Moldova IT Park" are:

1. customized software development activities (customer oriented software) (62.01);
2. computer game editing activities (58.21);
3. editing of other software products (58.29);
4. management activities (management and operation) of computing means (62.03);
5. data processing, web page management and related activities (63.11);
6. web portal activities (63.12);
7. information technology consulting activities (62.02);
8. other information technology service activities (62.09).
9. other forms of education (85.59) limited to training in computer science.

4. **Strategy for the development of the information technology and eco-system for digital innovation for the years 2018-2023** - is a strategic planning document setting out the objectives and priorities for the growth and diversification of the information technology industry.

Institutions directly involved in the governance of the digital economy in the Republic of Moldova are:

- Ministry of Economy and Infrastructure (MIE) – in charge of ICT;
- National Regulatory Agency for Electronic Communications and Information Technology (ANRCETI);
- Ministry of Finance;
- State Tax Service;
- National Center for Personal Data Protection (CNPDCP);
- Information Technology and Cyber Security Service (STISC);
- Electronic Governance Agency;
- Competition Council;
- Academic environment - IDSİ, ASEM, UTM, USM, ULIM, etc .;
- Technology centers - hubs.

The data presented by ANRCETI for the past years show stable trends in the Internet adoption by citizens and the business environment of both fixed and mobile connections - the broadband market being the only growing telecom market, thus ensuring the foundation of the digital economy - namely connectivity, without which it would be impossible to develop the digital economy.

Using the data obtained from the National Bureau of Statistics, Table 1 shows the contribution of GDP of the Republic of Moldova in the digital economy.

Table 1. The contribution of the digital economy to GDP (mil. lei), 2016

code	Activities in the ICT sector (CAEM)	Gross added value (<i>th. lei</i>)
26.1	Manufacture of electronic components	-
26.2	Manufacture of computers and peripheral equipment	22.458
26.3	Manufacture of communications equipment	-
26.4	Manufacture of consumer electronics	-
26.8	Manufacture of magnetic holders for recordings	-
46.5	Wholesale of information and telecommunications equipment	51.719
53	Mail and courier activities	415.634
58.2	Software publishing activities	-
61	Electronic communications	5.436.328
62	Information technology service activities	1.211.515
63	Computer service activities	424.811
63.1	Activities of web portals, data processing, web pages management and related activities	-
95.1	Repair of computers and communication equipment	256.458
	ICT sector Total	7.818.924
	GDP	134.476.589
	% in GDP	5,8

Source: Developed by the author, based on information from the National Bureau of Statistics

As we can see, the contribution of the Republic of Moldova's digital economy in terms of GDP is close to the average of OECD countries - 6% [7], or the EU average of 5% [8].

An alternative method for calculating the contribution of the digital economy to GDP using the available public information on the National Bureau of Statistics is by viewing in the Data Bank of the National Bureau of Statistics the Contribution of Economic Activities to the Formation of Gross Value Added (current prices) for Section J - Information and telecommunication. This section includes the production and distribution of information and cultural products, the provision of means of transmission or distribution of such products, as well as communications, information technology and data processing services and other information service activities. The main components of this section are editing activities (division 58), including software publishing activities, cinematographic production and audio recordings (division 59), radio and television broadcasting and broadcasting activities (division 60), telecommunications (Division 61), information technology services (division 62) and other information services (division 63).

Table 2. Contribution of economic activities to the formation of gross value added, current prices, CAE Rev.2 by economic activities and years

	2014	2015	2016	2017
J – Information and Telecommunications	5,3 %	5,6 %	5,6 %	5,4 %

Source: Developed by the author, based on information from the National Bureau of Statistics

On below diagram, the Republic of Moldova is presented in terms of the development of the digital economy through various reports of international institutions, such as the World Economic Forum (WEF), the International Organization for Intellectual Property (WIPO), the United Nations (UN) and the International Union of Telecommunications (ITU). As we can see, the Republic of Moldova is in the first half of the rating, according to reports, best placed in the Global Innovation Index report (48th out of 126 countries) (Figure 4).

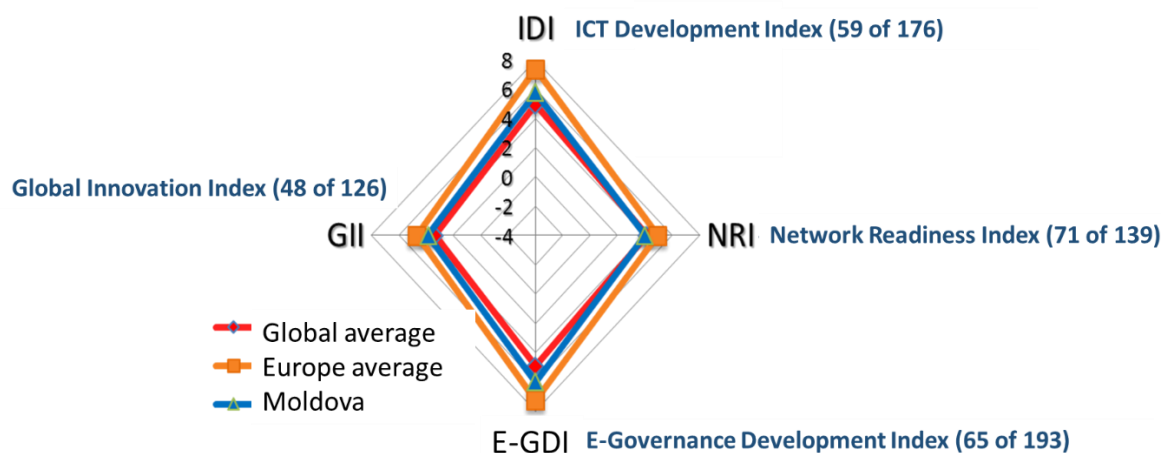


Figure 4. Moldova in international ratings

Source: Developed by the author

Conclusions

New tools are needed to measure the digital economy governance. Thus, existing methods measure ICT diffusion, they are less able to cope with new technologies that are rapidly implemented and used by business and people. Taking into account the rapid adoption pace of new ICT technologies, it needs a special digital economy agenda, based on international standards and experiences that would allow at national level to meet new challenges related to the digitization of society and in particular the business environment:

- strengthening institutional structures - good governance;
- improving the methodology for measuring the impact of ICT and linking with macroeconomic performance;
- defining and measuring the skills needed for a future economy;
- an effective and fair tax system, appropriate for the digital age.

Finally, we can conclude, according to international reports and experience, that the full benefits of ICT for the digital economy will not be realized until the business climate, investment in people's education, and good governance have improved. This is because the experience of other states has shown that the growth of the digital economy has not been stimulated without these „analogue” foundations. And only those countries that have invested in the digitization of the economy by collaborating, by assuring a good governance, have made reforms, they have been able to reap dividends by increasing the economy, creating more jobs and provide better services.

REFERENCES

1. *Measuring the Information Society Report – 2018* [online]. **International Telecommunication Union**. [cited 11.04.2019]. ISBN: 978-92-61-27231-9.
Available: <https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2018/MISR-2018-Vol-1-E.pdf>.
2. *The 4th Industrial Revolution* [online]. **World Economic Forum** [cited: 11.04.2019].
Available: <https://www.weforum.org/agenda/archive/fourth-industrial-revolution>
3. ALVIN TOFFLER. *The third wave*. 1996. 430 p. ISBN 973-9127-61-4.
4. *Measuring the Internet Economy, a contribution to the research agenda* [online]. **OECD** [cited: 11.04.2019].
Available: www.oecd.org
5. *Digital Agenda for Europe* [cited: 11.05.2019]. Available: [http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52010DC0245R\(01\)](http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52010DC0245R(01))
6. *Digital Dividends, 2016* [online]. **World Bank** [cited 17.04.2019]. www.worldbank.org
7. **OECD** [cited 17.04.2019]. Available: <https://data.oecd.org/ict/ict-value-added.htm>
8. **European Commission**. [cited 17.04.2019]. Available: <http://ec.europa.eu/eurostat/web/products-datasets/-/tin00074>

CREATIVE INDUSTRIES - OPPORTUNITIES TO BOOST ECONOMIC DEVELOPMENT

PhD Student, MARIANA DAMASCHIN

Academy of Economic Studies of Moldova,

61 Mitropolit Gavriil Bănulescu-Bodoni St, Chișinău, Moldova, Republic of

e-mail: damaschin-mariana@mail.ru

Abstract. *In the age of scientific and technological transformations, mass digitization and the growth of intellectual property, the creative industry becomes one of the most important spheres of economic and social development. It contributes to the formation of new types of social and economic interactions, having a direct impact on the economy, including employment. Globally, Cultural and Creative Industry (CCI) emerged as a big economy in first decade of 21 st century. It has contributed 3 per cent to global economy. Among others countries, US, Australia, UK, China, Malaysia and India are getting maximum benefits from these industries, as CCI in US, Australia, UK, China, Malaysia and India contributed 4.2 per cent, 3 per cent, 5.2 per cent, 6.37 per cent, 1.27 per cent and 0.95 to their GDPs respectively.*

The purpose of the research is to analyse the influence of 11 creative sectors such as Advertising, Architecture, Books, Gaming, Music, Movie, Newspapers and Magazines, Performing Arts, Radio, TV and Visual Arts in the most developed five regions including Asia-Pacific (APAC), Europe, North America, Latin America and Caribbean, and Africa and the Middle East in the period 2013-2016, and development trends towards 2020.

Key words: *creative industries, creative economy, economic boost, revenue, jobs, creative industries models.*

JEL Classification: F 02, F 42, F 63, M13

The definition of „creative industries” was first used at the official level in 1994 in the Australian Report, entitled „Creative Nation”, when the federal government headed by Prime Minister Paul Keating initiated a cultural policy that provided for additional \$ 250 million for all cultural institutions, specifying the economic potential of cultural and artistic activity.

A wider exposure was developed in 1997 when policy makers from the United Kingdom Department of Culture, Media and Sport created the Creative Industries Taskforce. According to this, creative industries are those industries that originate in creativity, talent, and mastery of individuals, with the potential to create jobs and prosperity by generating and capitalizing on intellectual property.

Despite the fact that this term was first used at official level in 1994, the definition of „creative industries” to date is a matter of considerable inconsistency and disagreement in academic literature and in policy-making circles, regarding the parallel concept of „cultural industries”. Sometimes a distinction is made between creative and cultural industries; sometimes the two terms are used interchangeably.

One of the most popular definitions is the one proposed by the UK Labour Government in 1998 in the Creative Industries Mapping set, which is focused on describing Creative Industries as a set of economic bodies that engage creativity, personal skills and talents to create wealth and jobs. The set consists of 13 creative industry mapping documents (Advertising, Antiques, Architecture, Handicraft, Design, Fashion, Film, Leisure Software, Music, Visual Arts, Publishing, Software, TV and Radio) their contribution to the economy and the problems they face.

Creative industries have also been defined in Creative Industries Mapping (Creative Industries Mapping) 2001, which was a continuation of the 1998 analysis that demonstrates the successes of the creative industries during this period. The revision of the document preserved the original definition of creative industries as „those industries that originate in creativity, individual skills and talents and have the potential to gain wealth and create jobs by generating and exploiting intellectual property”.

The totality of the creative industries sectors forms the creative economy.

In present, numerous classifications of creative industries sectors can be found in the literature. The three most popular are listed below:

Table 1. The main models of classification of creative industries

The Howkins Model, 2001, revised in 2013	Model of Copyright of the World Intellectual Property Organization, 2003	Model of the Department of Culture, Media and Sport, 2001
Advertisement Architecture The art Crafts Design Fashion Movie The music Art of the show Publishing Software Toys and games Television and radio Video games	Copyright industry Advertisement Collection companies Film and video The music Art of the show Publishing Software Television and radio Visual art and graphics Industries that are interdependent on copyright Empty recording materials Consumer electronics Musical instruments Photocopying paper Photographic equipment Partial copyright industries Architecture Clothing, footwear design Fashion Household goods Toys	Advertisement Architecture The art market and antiques Crafts Design Fashion Film and video The music Art of the show Publishing Software Television and radio Video and computer games

Source: Creative Economy Outlook And Country Profiles: Trends in international trade in creative industries, 2015;
Creative Economy Report 2013, special edition, widening local development pathways

In 2016, Creative and Cultural Industries sectors generated US \$ 2,250 billion of revenues and 29.5 million jobs as well, where Asia-Pacific (APAC) becomes the world's biggest CCI market with US \$ 743 billion of revenues and 12.7 million jobs, Europe is the second-largest CCI market with US \$ 709 billion of revenues and 7.7 million jobs, North America is the third-largest CCI market with revenues of US \$ 620 billion and 4.7 million jobs, the Latin American becomes the fourth largest CCI market with revenue of US \$ 124 billion and 1.9 million jobs and Africa and the Middle East is the fifth largest CCI market with US \$ 58 billion in revenues and 2.4 million jobs. These results are represented in Table 2.

Table 2. Contribution of the Creative Industries to the global economy, 2016

Indicators	Region	Results	Top
1	2	3	4
Revenue, total	Global	\$ 2,250 billion	5 top regions: Asia-Pacific, Europe, North America, Latin America and the Caribbean, Africa and the Middle East
Jobs, total		29,5 mil.	
1	2	3	4

Revenue	APAC	\$ 743 billion	The largest market in the world
Jobs		12,7 mil.	
Revenue	Europe	\$ 709 billion	The second largest market in the world
Jobs		7,7 mil.	
Revenue	North America	\$ 620 billion	The third largest market in the world
Jobs		4,7 mil.	
Revenue	Latin America and Caribbean	\$ 124 billion	The fourth largest market in the world
Jobs		1,9 mil.	
Revenue	Africa and the Middle East	\$ 5,8 billion	The fifth market in the world
Jobs		2,4 mil.	

Source: developed by the author based on Sahib Oad „Current status of cultural and creative industries (CCI)” and Analytical Centre attached to the Government of the Russian Federation

The shares of revenue and jobs in the creative industries sectors in the 5 most developed regions are shown in Figure 1 and 2.

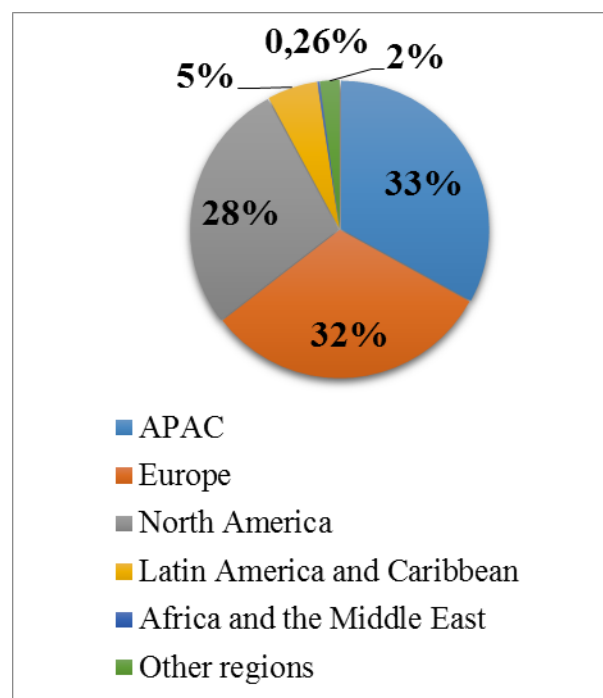


Figure 1. The share of revenue in the creative industries sectors, 2016

Source: developed by the author based on Sahib Oad „Current status of cultural and creative industries (CCI)” and Analytical Centre attached to the Government of the Russian Federation

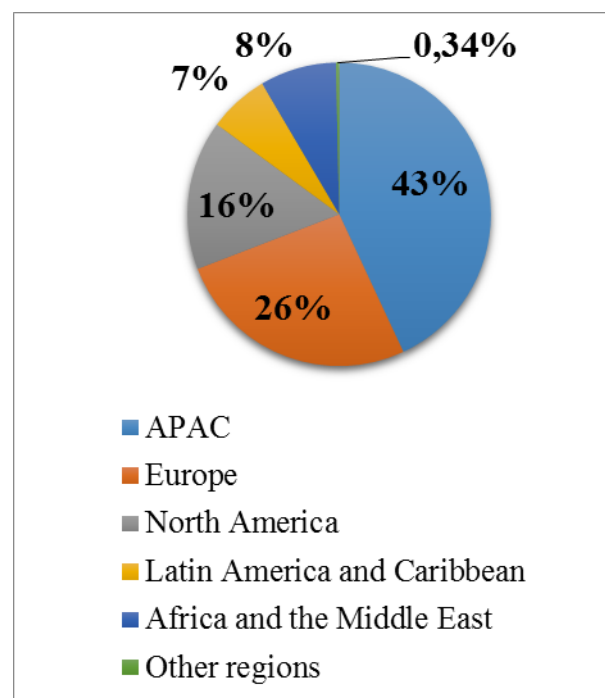


Figure 2. The share of jobs in the creative industries sectors, 2016

Source: developed by the author based on Sahib Oad „Current status of cultural and creative industries (CCI)” and Analytical Centre attached to the Government of the Russian Federation

APAC market accounts for 33% of total sales revenue, accounting for 43% of jobs on the labor market. APAC is the world's largest creative industry market with the highest concentration of consumers, the highest demand for newspapers and video games, and the "house" - the seat of a number of creative industry leaders. For example, Tencent's China revenue, a key player in gaming and instant messaging services in 2016, amounted to \$ 22.9 billion. The Japanese newspaper Yomiuri Shimbun has a circulation of 10 million copies a day. The Indian Book Industry is the world's 10th largest book market, with the highest card sales growth rates.

The European creative Industries market accounts for 32% of total sales revenue, which represents 26% of jobs in the labour market. The European creative industries market is based on a unique concentration of organizations related to historical heritage, art and fashion. For example, 7 of the 10 most visited museums in the world are European; Of the 69 „creative cities”, 30 are European; UK is the leader of the art market (especially in the field of contemporary art); French Publicis is a key player in the global advertising industry; major actors in the creative industry are VPPG, Pearson, Axel Springer, Universal, Ubisoft and others. The European creative economy generates an annual revenue of 0.5 trillion euro (about 4% of Europe's total GDP).

In North America, Creative Industries market accounts for 28% of total sales revenue, accounting for 16% of jobs on the labour market. The development of the creative industry market in the US and Canada is linked to the creative and audio visual services market - television, film and radio production (182 and 28 and \$ 21 billion respectively). The largest number of consumers of digital cultural content is concentrated here (47%), which is more than in Asia (25%) and Europe (24%). The emerging market for the creative industry is represented by Grupo Globo (Brazil), Grupo Televisa (Mexico) and Grupo Clarin (Argentina) multimedia conglomerates, with 6% of the CI's overall revenue, 7% of the total number of jobs; no less wide public.

Among Creative and Cultural Industries sectors, globally Television tops with revenue of US\$477 billion and 3,527,000 jobs, Visual arts sector becomes second largest sector with US\$391 billion in revenue and 6,732 000 jobs, Newspapers and magazines sector is third largest sector with US\$354 billion and 2,865,000 jobs, Advertising becomes fourth largest sector with US\$285 billion and 1,953,000 jobs, Architecture is fifth largest sector with revenue of US\$222 billion and 1,668,000 jobs, Books sector becomes six largest sector with revenue of US\$143 billion and 3,670,000 jobs, Performing arts sector is seventh largest sector with US\$127 billion in revenue and 3,538,000 jobs, Gaming becomes eighth largest sector with US\$99 billion in revenue and 605,000 jobs, Movies sector is ninth largest sector with US\$77 billion and 2,484,000 jobs, Music becomes 10th largest sector with US\$65 billion in revenue and 3,979,000 jobs and Radio is 11th largest sector with US\$46 billion in revenue and 502,000 jobs. The results are presented in Table 3.

Table 3. Analysis of Creative industries contribution to revenue and employment formation by sectors, 2013

Sector	Top	Revenue, bilion. \$	Jobs, thousands
Television	1	477	3527
Visual arts	2	391	6732
Newspapers and magazines	3	354	2865
Advertisement	4	285	1953
Architecture	5	222	1668
Books	6	143	3670
Art of the show	7	127	3538
Games	8	99	605
Movies	9	77	2484
The music	10	65	3979
Radio	11	46	502

Source: Analytical Centre attached to the Government of the Russian Federation

A benchmarking of incomes across creative industries points to the absolute dominance of media products and services (more than 50% of the creative industry's revenue), where the undisputed leader is television, accounting for about half of this revenue. Newspapers and magazines are slightly inferior to it, with the high proportion being mainly provided by Internet versions. The second place in terms of revenue in the creative industries belongs to the arts, where more than 70% of the income comes from the visual arts. The third position in terms of revenue is occupied by functional creativity (more than 20% of total creative industry revenue) where creative industries are the main sector that drives changes in the creative industries in 2020.

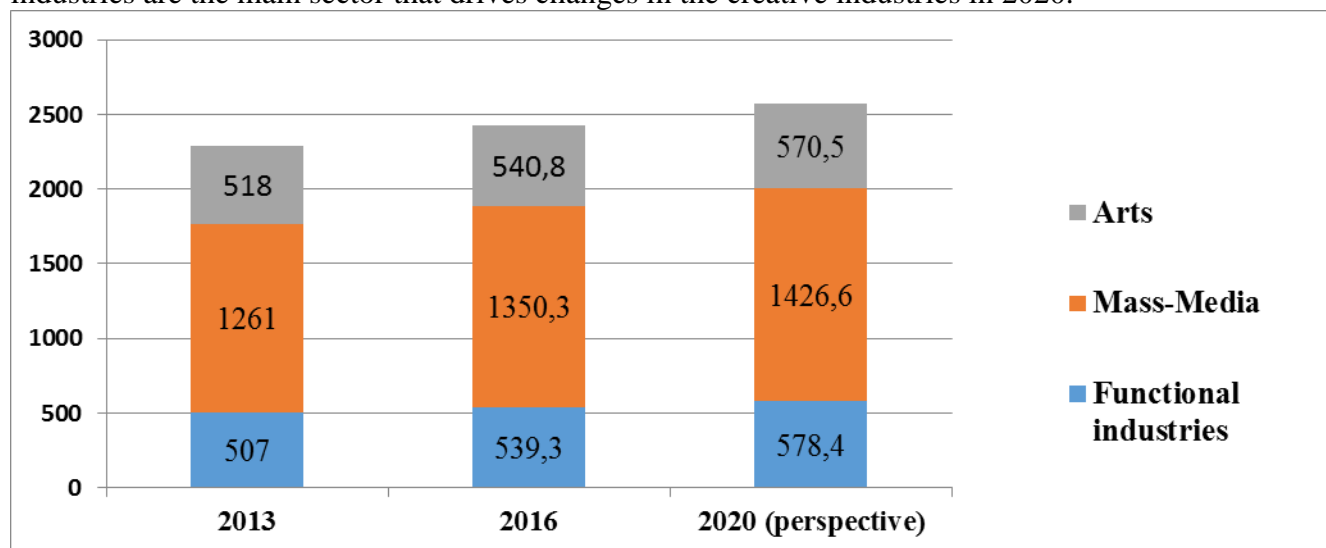


Figure 3. Dynamics of revenue in the creative industries in the 2013-2020 period, billions of US \$
Source: Analytical Centre attached to the Government of the Russian Federation „Education and creative industries through national and international practices”, p. 9 and Cultural Times: The First Global Map Of Cultural And Creative Industries, EY.

The following table shows the Creative Industries contribution to revenues, jobs and GDP formation in some countries.

Table 4. Creative Industries contribution to revenues, jobs and GDP formation in some countries

Country	Revenue, US \$, billion	Jobs, mil.	Share in GDP, %
USA	763,6	4,92	4,2
Australia	90,19	0,348	3,0
Great Britain	109,4	1,8	5,2
China	406	1,2	6,37
Malaysia	2,27	0,146	1,27
India	8,1	1,8	0,95
UE-28	628	8,3	4,4

Source: developed by the author based on Sahib Oad „Current status of cultural and creative industries (CCI)”

CONCLUSIONS AND TRENDS

- Today, the creative industries are among the most dynamic sectors of the world economy. The growing economic impact of creative industries has become more and more evident in recent years, both in high-level economies and in developing countries.

- Globally, CCI generated billion dollars and thousands of jobs and also contributed 3 per cent to global economy. Among others countries, US, Australia, UK, China, Malaysia and India are getting maximum benefits from these industries, as CCI in US, Australia, UK, China, Malaysia and India contributed 4.2 per cent, 3 per cent, 5.2 per cent, 6.37 per cent, 1.27 per cent and 0.95 to their GDPs respectively.
- The most successful sectors of creative industries worldwide are: television, visual arts, publishing.
- A dilemma in appreciating the importance of developing creative industries is the inequality they develop in different regions. However, due to policies implemented in some regions, economically underdeveloped areas have the potential to develop new businesses and provide new jobs.
- A particular feature of the creative economy as compared to the general economy is that there is no way to classify creative industries worldwide. Thus, several field researchers have presented a number of classifications that differ from one region to another.
- In the Republic of Moldova there are several impediments that hinder the development of creative industries, including: lack of legislation, lack of control by the state, lack of promotion of culture and cultural heritage.

BIBLIOGRAPHY:

1. John Howkins „Creative Economy”, 2001, revised 2013;
2. Department for Culture, Media and Sport, Creative Industries Economic Estimates - January 2014, Statistical Release Date: 14/01/2014, 35 pages.
3. Sahib Oad and others „Current status of cultural and creative industries (CCI)”;
4. Analytical Centre attached to the Government of the Russian Federation;
5. Creative Economy Outlook And Country Profiles: Trends in international trade in creative industries, 2015;
6. Creative Economy Report 2013, special edition, widening local development pathways.
7. Department for Digital, Culture, Media & Sport, Creative Industries Mapping Documents 1998, publication date 09.04.1998, [online], [cited 01.02.2019]. Disponibil: <https://www.gov.uk/government/publications/creative-industries-mapping-documents-1998>
8. Department for Digital, Culture, Media & Sport, Creative Industries Mapping Documents 2001, publication date 09.04.2001, [online], [cited 01.02.2019]. Disponibil: <https://www.gov.uk/government/publications/creative-industries-mapping-documents-2001>
9. Commonwealth of Australia 1994, Analyses & Policy Observatory, publication year 1994, [online], [cited 01.02.2019]. Disponibil: <https://apo.org.au/node/29704>
10. CREATIVE ECONOMY LITERATURE REVIEW presented by The Creative Nova Scotia Leadership Council in partnership with Nova Scotia Department of Communities, Culture and Heritage, 14.02.2012
11. Cultural Times: The First Global Map Of Cultural And Creative Industries, EY.

THE IMPACT OF FOREIGN CAPITAL ENTRY ON THE EMERGING COUNTRIES BANKING SYSTEM / IMPACTUL INTRĂRII CAPITALULUI STRĂIN ASUPRA SISTEMULUI BANCAR DIN ȚĂRILE EMERGENTE

CONDUCĂTOR ȘTIINȚIFIC: **conf. univ., dr., COCIUG Victoria**
Academia de Studii Economice din Moldova
Republica Moldova, Chișinău, str. Banulescu-Bodoni 61
e-mail: **stiinta@ase.md**

AUTOR: **MASTERAND, BRICEAG Valeriu**
Academia de Studii Economice din Moldova
Republica Moldova, Chișinău, str. Banulescu-Bodoni 61
e-mail autor: **valeriubriceag@yahoo.com**

Abstract. *Ensuring growth rates and increasing economic competitiveness depends, to a large extent, on the flow of investment, including foreign investment. Along with financial benefits, foreign direct investment boosts local economic activity and intensifies competition. These statements is applied to all sectors of the economy, including the banking sector, which is meant to finance the real economy. The economic reforms that have developed in Moldova over the past years have highlighted the need and importance of the banking sector to the national economy. To enhance the ability of banks to meet the current needs of the economy, the National Bank, by improving the regulatory framework may affect their operation. Investments, including foreign ones are a necessary element in the development of domestic banks. Access to finance and, by extension, a well-functioning financial sector are of central importance for bank performance and economic growth. In this context, the role of foreign direct investment by banks is controversial because the economic channels through which foreign banks affect financial constraints and firm performance are not well understood, yet.*

Participarea țărilor emergente la cooperarea economică internațională și la integrarea regională internațională determină direcția actuală de dezvoltare a economiilor naționale, activează procesele de investiții și oferă sprijin financiar adecvat în țară. Însă o economie în dezvoltare necesită un sistem bancar puternic, capabil să-și îndeplinească funcțiile și să finanțeze sectorul real. Necesitatea dezvoltării băncilor în țările emergente, în absența capitalului intern, a condus la cercetarea oportunității investițiilor străine directe în sectorul bancar autohton, contribuind la creșterea performanțelor bancare, inclusiv a celor financiare.

Un sistem bancar poate fi privit ca un ansamblu al instituțiilor, relațiilor financiar-bancare, normelor, infrastructurilor, tehnicilor ce interacționează în mod complex, cu scopul de a mobiliza sub formă de depozite și de a distribui, sub formă de credite, fonduri financiare, precum și de a oferi facilități, inclusiv sisteme de plăți, pentru diverși agenți economici, financiari sau nefinanciari, inclusiv persoane fizice. Într-o țară dezvoltată acest sistem a evoluat în legitatea sa firească, formând relații trainice și fundamente clare de evoluție, nici devastatoarele crize financiare nefiind în stare să-l distrugă. În țările emergente, însă, sistemul bancar este fragil, fără o construcție fermă, fără reguli clare, adaptate necesităților economice. O piață bancară emergentă este una în formare, fără experiență specifică unei perioade lungi de consolidare, care depinde în evoluția sa de o premisă sau un catalizator din extern. Soluția fortificării sistemelor bancare din țările emergente pare să fie injectarea de capital străin prin deschiderea de filiale de către băncile din sisteme bancare formate, care, odată intrate pe piața bancară, vor aduce nu numai resursele financiare necesare, dar și experiență și tehnologii bancare avansate.

În țările în curs de dezvoltare, evoluția proceselor economice a început anume cu venirea capitalului străin. Economiiile emergente suferă modificări în permanență și drept consecință antrenarea capitalului străin în sistemul bancar crește eficiența alocării lui datorită funcțiilor

specifice ale băncilor în economie. Intrarea băncilor pe o piață nouă este bilateral atractivă atât pentru investitorii străini, cât și pentru sistemul bancar autohton, din următoarele motive:

- majorarea profiturilor și extinderea teritorială a rețelei băncilor străine;
- maximizarea capitalului injectat în sistemul bancar din țara recipient;
- implementarea tehnologiilor informaționale moderne;
- perfecționarea sistemului de deservire a clienților, diversificarea serviciilor și produselor bancare etc.

Aceste afirmații, însă, nu întotdeauna sunt demonstrate prin experiența economiilor emergente. În acest scop vom analiza impactul venirii capitalului străin pe piețele țărilor emergente și vom propune următoarele premise de cercetare care vor dezvolta idea ulterioară.

Un sistem bancar eficient conține banca centrală independentă și transparentă prin excluderea influențelor externe dar și băncile comerciale eficiente, care își îndeplinesc funcțiile indiferent de țara lor de origine, și nemijlocit se supun organului de reglementare.

În opinia lui Pierre Masse, investiția reprezintă „*schimbarea unei satisfacții imediate și sigure, la care se renunță, în schimbul unei speranțe viitoare ce s-ar obține și al cărei suport sunt tocmai bunurile investite*”.

Investițiile străine directe cuprind un imens diapazon de avantaje și riscuri sub formă de dezavantaje pe care le implică odată venite pe o piață străină. În aceeași ordine de idei se v-a enumera atât partea pozitivă cât și cea mai puțin pozitivă din perspectiva absorbției acesor capitaluri.

Avantajele intrării capitalului străin pe o nouă structură implică promovarea proceselor de integrare în economia mondială prin extinderea bazei de resurse și facilitarea dezvoltării social-economice prin introducerea tehnologiilor moderne pe piața financiară. Tranziția la standardele globale ale culturii financiare îmbunătățește calitatea serviciilor și mărește gama produselor oferite. Formarea unor investitori instituționali mari aduce cu sine și o transparentă mult mai detașată și mărește orizonturile contabile prin perfectarea exactă a documentelor financiare. Partea juridică se respectă mai prudent. Paleta de produse și servicii devine mai diversificată și neintenționat crează concurență, fiind supravegheate totodată și de standardele internaționale deja învățate. O parte destul de utilă ar fi un sprijin financiar în orice moment de cotitură de către societatea mamă, ceea ce duce la capitalizarea sistemului.

Totodată partea bună nu poate veni singură, așa că orice privilegiu aduce și sacrificii sau neplăceri care se generează odată cu injectarea capitalului. Ieșirea necontrolată a capitalului străin poate genera amenințări la adresa economiilor interne. Consolidarea impactului negativ al globalizării vine odată cu creșterea incertitudinii și dependențe de surse străine.

Creditele în valută devin o alternativă, pentru piața internă înlocuind treptat moneda națională.

Reducerea competitivității naționale în fața multinaționalelor, suprimarea autohtonilor prin dominarea mărfurilor de import, etc.

Sistemele bancare dezvoltate lucrează pe principii stabile și funcționale atât din perspectiva investitorului cât și a receptorului, din acest motiv se vor compara 4 funcții a sistemelor bancare în diferite medii, pentru a realiza mai bine investiția în proces și de a micșora riscurile unei potențiale investiții.

Realizarea celor 4 funcții în sistemele bancare din țările dezvoltate și din cele în curs de dezvoltare sunt exemplificate în tabelul de mai jos.

Tabelul 1

Funcția	Sistem bancar din țările dezvoltate	Sistem bancar din țările emergente
1. Funcția de compensare în spațiu	Multitudine de mecanisme și instrumente de plată prin care se efectuează stingerea obligațiilor reciproce	Plăți preponderent în cash, operațiuni bancare de plată simple
2. Funcția de compensare în timp	Diverse instrumente de investire non-bancare conduc la diminuarea resurselor depozitare și necesitatea suplinirii lor pe piața interbancară	Cantitate considerabilă de resurse sub formă de depozite care necesită valorificare
3. Funcția de creație monetară	Perfect îndeplinită prin diversificarea formelor de creditare	Realizată incomplet datorită restricțiilor de politică monetară, și capacitatea de creditare a băncilor limitată
4. Funcția de finanțare a economiei	Multitudine de forme de finanțare a economiei, datorită inovațiilor financiare	Neîndeplinită datorită subdezvoltării instrumentelor de creditare și a restricțiilor de supraveghere

Sursa: Elaborat de autor

După cum se observă, funcțiile se manifestă total diferit din mai multe motive, unele reglementări prea dure micșorează baza de creditare, altele care țin de tradiție influențează mediul social, din acest motiv țările în curs de dezvoltare au de pierdut de două ori față de țările deja puse pe picioare. Pentru a deveni mai puțin sceptici, pe baza ipotezelor de mai jos vom verifica dacă intrarea capitalului străin se manifestă la fel în diferite medii. Prin urmare, se vor testa următoarele 5 ipoteze pentru convingerea sau confirmarea unei investiții.

1. **Stimularea creșterii economice - prin creditarea suplimentară datorită introducerii în țările emergente a capitalului străin**
2. **Bancile străine diminuează volumul riscului de credit prin mecanisme de evaluare și eliminare mai performante, decât cele din țara emergentă și introduc modele proprii de gestiune, preluate din experiența proprie.**
3. **Prin introducerea reglementărilor de credit, valabile în țara investitorului și extrapolarea lor asupra cerintelor locale are loc reducerea volumul de credite acordate (din motiv ca ele nu corespund acestor cerințe)**
4. **Intrarea prin achiziție a băncilor străine nu ar trebui să stimuleze o creștere mai rapidă decât intrarea nouă a capitalului.**
5. **Băncile străine atenuează asimetria informațională**

În continuare vom testa ipotezele date în baza datelor din RM, pe perioada 2013-2018, perioadă în care au fost raportate creșteri de capital prin injectare în valoare de 250 mil. lei la EXIM și intrare de capital străin prin achiziționare la BCR astfel, că la data de 31.03.2019 în R.M. activau 11 bănci comerciale, care aveau o structura a capitalului prezentată în Fig.

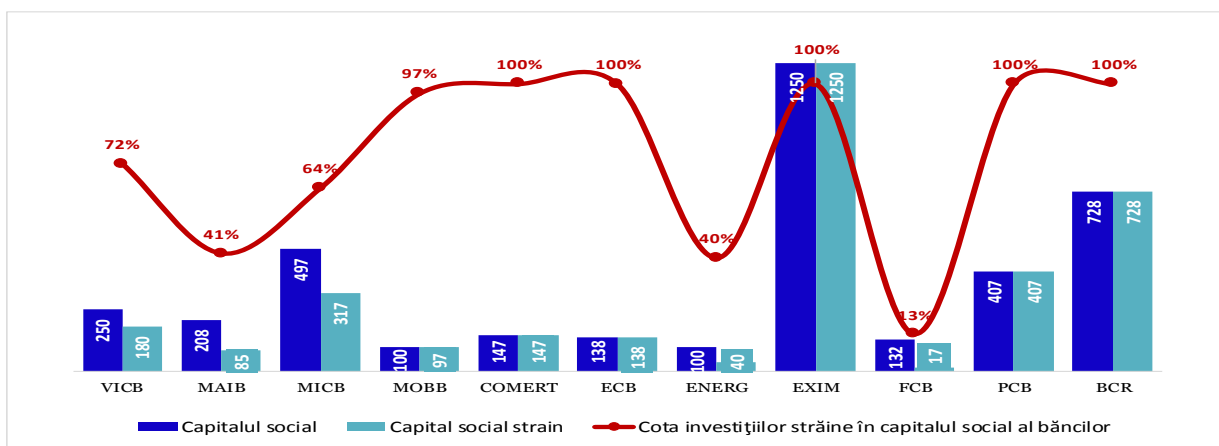


Fig. 1

Sursa: Elaborat de autor pe baza datelor prezentate de BNM

Observăm, că în sistemul bancar din R.M. sunt 5 bănci cu capital integral străin, iar 3 bănci cu ponderea capitalului străin mai mult decât 2/3 și numai 3 bănci cu acest indicator mai mic de 41%. Consider că sistemul bancar autohton este oportun pentru testarea ipotezelor menționate, deoarece ponderea medie a capitalului străin per sistem este de 78.08%.

Prima ipoteza presupune că prin furnizarea de fonduri suplimentare, băncile străine vor atenua finanțarea externă. Acest efect al ofertei de împrumut ar trebui să fie valabil în timpul crizelor bancare locale. Creditorii externi care se finanțează prin intermediul companiilor-mamă și de obicei nu au prea multă expunerea la riscul sistemic local pot continua să acorde credite firmelor. Efectul scontat ar trebuie să fie ca atunci când volumul capitalului se mărește respectiv acesta ar trebui să fie direct proporțional cu creșterea economică.

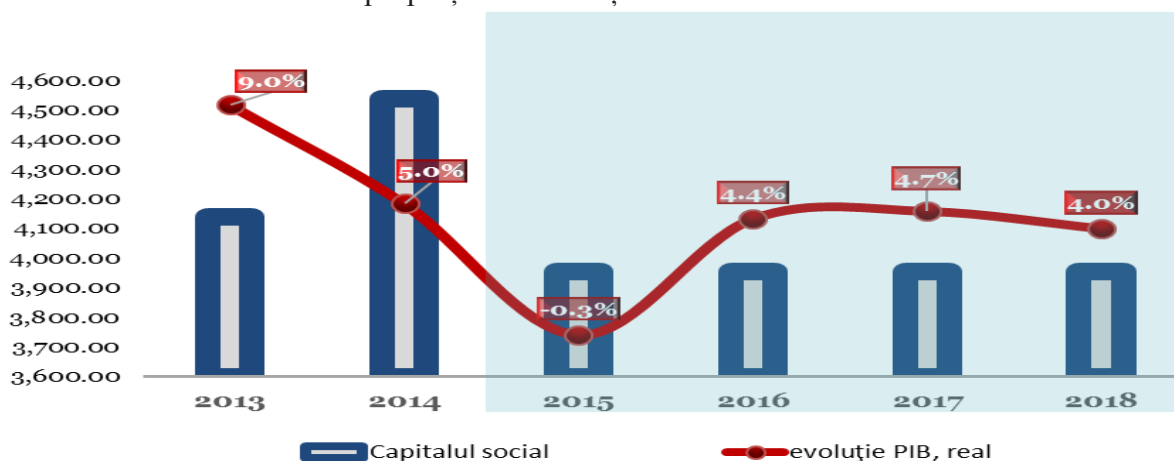


Fig.2 Evoluția capitalului social și a creșterii economice (mil.lei)

Sursa: Elaborat de autor pe baza datelor prezentate de BNM

Această ipoteză **nu se respecta** deoarece, odată ce se injectează capital străin într-o economie, acesta nu va crește datorită acestui surplus de capital fiind considerat ca un catalizator din perspectiva țărilor în curs de dezvoltare. Indicele volumului fizic al PIB-ului nu devine mai mare odată ce se suplinește o economie cu capital străin asta se observă începând cu anul 2013 când a fost injectat capital în Eximbank în jur de 250 mil.lei, totodată se observa că de la o creștere economică de aproape 9% în 2013 aceasta devine cu 4 p.p. mai mică cu toate că a fost suplinit în

2014 capitalul străin. Tot în Fig.1 se prezintă o scădere bruscă de capital social începând cu anul 2015 aici este vorba despre falimentul a 3 bănci.

Ipoteza a doua stabilește că dacă intrarea din străinătate a capitalului îmbunătățește disponibilitatea creditului și, prin urmare, reduce costurile de împrumut ar trebui teoretic și riscul să fie atenuat, depinde doar de reacția concurențială a sectorului bancar local. Dacă băncile străine accentuează financiar constrângerile privind performanța fermă datorită reducerii de către creditorii autohtoni a unei prezențe mai extinse ar trebui să conducă la o creștere reală mai lentă a riscului de credit.

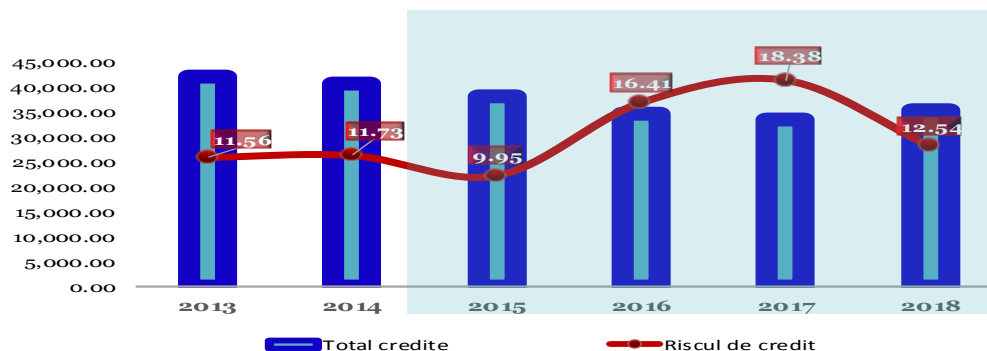


Fig. 3 Evoluția volumului creditelor și a fondului de risc (mil.lei)

Sursa: Elaborat de autor pe baza datelor prezentate de BNM

Evoluția sistemului bancar din Republica Moldova demonstrează veridicitatea acestor ipoteze, deoarece injectarea capitalului străin vine inclusiv și cu proceduri, reguli și rigori noi care deja sunt experimentate și funcționează perfect. Riscul de credit este atenuat și chiar diminuat cel existent. În Fig. 3 este reprezentat volumul creditelor și soldul creditelor neperformante la soldul creditelor de bază, asta arată parțial riscul deoarece odată ce capitalul este mare, volumul creditelor devine mai mare, odată ce numitorul raportului crește numeric se reduce și cota celor neperformante și problematice în total. Din acest motiv ipoteza 2 prinde adevăr.

Volumul creditelor acordate este corelat direct cu reglementările care vin să spună că în anumite condiții și sub o anumită formă clienții vor primi finanțarea solicitată, aceasta duce involuntar la niște restricții primite de societățile comerciale respectiv are de suferit și consumatorul final. **Ipoteza a treia** vine cu introducerea reglementărilor de credit, valabile în țara investitorului și extrapolarea lor asupra cerințelor locale are loc reducerea volumului de credite acordate (din motiv că ele nu corespund acestor cerințe), din altă perspectivă un impact major îl are statul, deoarece prin puterea pe care o deține implică anume bariere pentru aplicarea reglementărilor externe la nivel local.

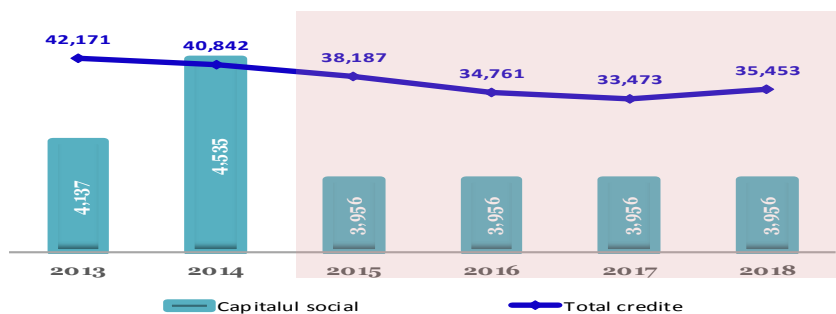


Fig. 3 Evoluția volumului de credite și a capitalului social

Sursa: Elaborat de autor pe baza datelor prezentate de BNM

Această ipoteză devine veridică precum ca creditarea începe a fi mai prudentă și are loc impactul reglementarilor straine. Volumul creditelor conform Fig. 3 este în declin până în anul 2017, volumul capitalului social începând cu anul 2015-2018 nu a fost modificat semnificativ. În anul 2018 cu implicarea la nivel macro a statului și lansarea produsului creditor “Prima Casă” volumul creditelor a prins avânt față de anul 2017 cu 1.9 mil. lei sau cu 5.9 %.

Presupunem că băncile străine, datorită accesului lor adesea superior la expertiza de împrumut și capital, au un avantaj competitiv în ceea ce privește producția de informații și executarea contractului de datorie. **Ipoteza a patra** se referă adesea la băncile străine care încearcă să se infiltreze prin achiziționarea pachetului majoritar de acțiuni devin mult mai de succes decât cele care încearcă să se lupte pe câteva fronturi deodată, deoarece intrarea nouă a unei bănci pe o piață în curs de dezvoltare se ciocnește de cadrul juridic, societatea care este obișnuită cu alte preferințe și necunoscutul în sine presupune o barieră în activare.

Indicator	Creare sucursale noi (ex: BCR)	Implantare în business existent (ex: VICB)
Costul de intrare pe piață	>	<
Tehnici	+++	++
Produce	+++	++
Marketing	+++	+++
Inovații financiare	+++	++
Rezistență la schimbare	+++	++
Concept	++	++
Misiune	++	++
Obiective	++	++
Timp de reacție	++	+
Impat asupra pieței	+	++
Clientela țintă	++	+++
Risc legislativ	+	+++
Tradiție	+	+++

Tabelul 2 Analiza comparativă a intrării capitalului străin prin achiziția unei entități existente sau prin penetrarea nouă a pieței

Sursa: Elaborat de autor

Penetrarea unei piețe devine mult mai costisitoare și periculoasă decât preluarea unei entități deja existente asta reprezintă confirmarea ipotezei 4. În tabelul 2 este făcută analiza comparativă a celor două modalități de intrare pe piață prin injeccare de capital sau prin intrarea de la zero pe o piață străină. Deci, partea mai puțin riscantă revine intrării pe piață pe o nișă deja existentă, motivele prezente confirmă ricurile la care se supune un investitor dacă vine pe o piață străină fără a prelua ceva existent sau a cumpăra acțiunile unei entități cu istoric.

Atenuarea asimetriei informaționale confirmă că băncile străine ajută țările emergente în dezvoltarea permanentă și în introducerea caracterului inovator așa cum se precizează în **ipoteza a cincea** prin următoarele momente:

- ❖ Evaluare a risk-ului în concepție avansată
- ❖ Acces la bază mai largă și orizonturi mai vaste de banking
- ❖ Creșterea avansată a transparentizării
- ❖ Modificarea procedurii de aprobare a creditelor bancare;
- ❖ Modificarea procedurii de aprobare a creditelor bancare;

Inovația mereu a adus îmbunătățiri și perspective noi care au creat concurență involuntară, partea bună este că această concurență devine sănătoasă și cu impact rapid.

Indicatorii de rentabilitate arată un echilibru pe piață deoarece cota investițiilor străine în capitalul social al bancilor la sfârșitul anului 2018 era de 78.08 %, ceea ce confirmă o stabilitate financiară creată de mediul extern într-o țară emergentă.

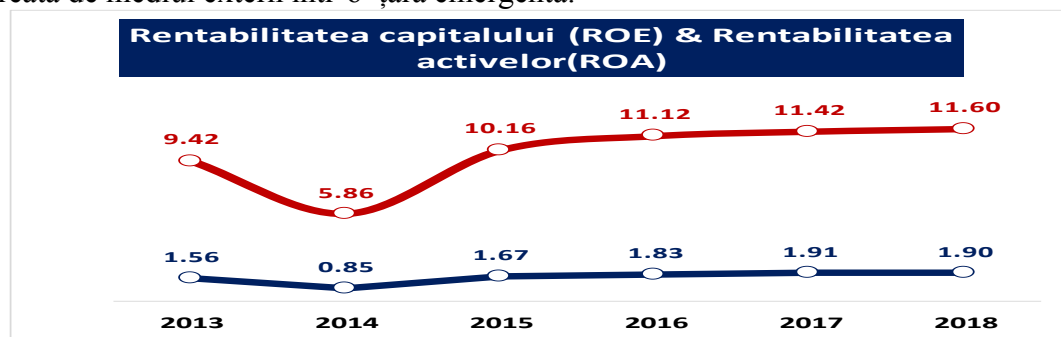


Fig. 5

Sursa: Elaborat de autor pe baza datelor prezentate de BNM

Efectele investițiilor străine asupra sistemului bancar din Republica Moldova

- Stimularea concurenței în sectorul bancar;
- Implementarea structurilor organizatorice mai raționale și mai eficiente;
- Ameliorarea abilităților de management, ceea ce contribuie la îmbunătățirea profilului de gestiune al băncilor;
- Implementarea noilor tehnologii informaționale avansate;
- Aplicarea noilor procedee în vederea maximizării calității de servire a clientelei;
- Implementarea noilor produse și servicii bancare;
- Introducerea posibilităților de extindere a rețelei în scopul dezvoltării și amplasării mai aproape de clienții strategici;
- Intensificarea posibilităților de colaborare cu organizațiile internaționale;
- Micșorarea prețurilor la serviciile și produsele oferite datorită accesului la resursele externe;
- Ameliorarea politicilor de gestiune a riscurilor bancare;
- Creșterea abilităților profesionale ale personalului angajat;
- Implementarea proiectelor noi în scopul atragerii, menținerii și fidelizării personalului.

CONCLUZIE

- Investițiile străine au efecte pozitive directe în funcție de nivelul de dezvoltare a sistemului bancar. Pentru cele din țările cu tradiții în activitatea bancară, orice intrare de capital conduce la creșterea capacității de creditare și ca urmare, la creștere economică.
- Pentru țările emergente efectele intrării capitalului străin în sistemul bancar nu sunt palpabile datorită unui cadru instituțional subdezvoltat, care nu permite asimilarea și canalizarea corectă a surplusului de capital, astfel nu este un impact asupra volumului și ritmului de creștere economică, ci asupra paletelor de produse și servicii, mecanisme de prestare și promovare.
- Deci impactul investițiilor străine asupra sistemului bancar din țara emergentă este, mai mult calitativ decât cantitativ.

SURSE BIBLIOGRAFICE

1. HOTĂRÎRE Nr. 269 din 17.10.2001 privind aprobarea Regulamentului cu privire la suficiența capitalului ponderat la risc (redacție nouă) <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=291610>
2. An evaluation of commercial banks... (PDF Download Available). Available from: https://www.researchgate.net/publication/281449335_An_evaluation_of_commercial_banks_performance_The_Mauritian_context
3. *The financial market of Ukraine and the role of foreign direct investment*” by Igor Lyutiy, Mariya Borovikova ISSN 1392-1258. EKONOMIKA 2013 Vol. 92(1)
4. *Revista / Journal „ECONOMICA” nr.6 (70) 2009,Articolul “IMPACTUL INVESTIȚIILOR STRĂINE DIRECTE ASUPRA BĂNCILOR COMERCIALE AUTOHTONE” de Lorina Tigulea*

CERCETAREA ȘI EDUCAREA INIMII CA PREMISĂ PENTRU DEZVOLTAREA PERSONALITĂȚII UMANE / THE ENQUIRE AND NURTURE OF THE HEART AS A PREREQUISITE FOR THE DEVELOPMENT OF THE HUMAN PERSONALITY

BENEA-POPUȘOI ELINA
ASEM, Chișinău, str. Mitr. B.-Bodoni, 59
Telefon: + 37369203859
e-mail: elinabenea@gmail.com

GURDUZ LUCIANA
ASEM, Chișinău, str. Mitr. B.-Bodoni, 59
e-mail autor: luciana.gurduz@gmail.com

Abstract

Nowadays, both society and academic community are aiming at the practical application of heart education, along with the science supporting intellectual/brain development. The topic is of real interest, since humankind has always been encountering more obstacles in educating the heart than in training the intellect. Via an interdisciplinary approach, the authors have tried to identify the contemporary prerequisites and principles of the heart enquire and nurture, as well as the capability of the educational system to cope with them. Additionally, the concept of heart ambassadors is enquired, which is adjacent to the subject matter.

Key words: *heart education, heart nurturing, peace of mind, intellectual development, human brains, human stress, intuition, heart intelligence, emotional intelligence, emotional management, nervous system, nervous and psychic states and equilibrium, heart rhythm, heart ambassadors, Christian-Orthodox teaching.*

JEL CLASSIFICATION: A13, I12, I25, I31, O15, Z12, Z13.

INTRODUCERE

Importanța și obiectivele cercetării. Inima umana este o creație miraculoasă și deosebit de complexă, cu un spectru larg de abilități puțin cercetate până acum. Ea deține o inteligență proprie și o capacitate de percepție unică. Complexitatea sa provine din faptul că ea reacționează și se schimbă neconștient, în funcție de trăirile și sentimentele noastre ea se transformă, devine „alta”. În acest sens, educarea inimii urmărește să mențină în inimă ordinea și armonia.

Obiectul cercetării îl reprezintă “inima”, care este spațiul sacru al vieții. Toți depindem de echilibrul și sănătatea inimii. Dar cum ne influențează aceasta viața și cum ne schimbă percepțiile și realizările? Și cel mai important: în ce mod poate fi inima educată astfel încât să ne direcționeze pe drumul fericirii și succesului în viață?

Societatea contemporană urmărește aplicarea în practică a educației inimii, de rând cu știința care susține dezvoltarea creierului / intelectului. Astfel, obiectivele cercetării vizează delimitarea conceptelor vizavi de stările / trăirile inimii, evidențierea importanței autoobservării și autoanalizei acestora de către om, precum și impactului acestora asupra dezvoltării personalității umane, asupra bunăstării la nivel individual, comunitar și social.

CONȚINUTUL DE BAZĂ

Suportul teoretico-metodologic. Sub aspect metodologic și informațional, cercetarea se axează pe lucrările experților Doc Childre, Howard Martin de la Institutul HeartMath (*matematica inimii (rom.)*), fiziologilor John și Beatrice Lacey, cercetătorilor și promotorilor educării inimii Ruediger Schache, Mitropolitul Antonie de Suroj, Tedd Tripp, Drunvalo Melchizedek. Drept sursă de inspirație pentru acest articol au servit lucrările personalităților notorii precum Aristotel, Albert Einstein, Dalai Lama, Mahatma Gandhi, precum și cărțile motivaționale ale renumiților scriitori contemporani precum Paulo Coelho, Daniel Mitel ș.a.

Metode aplicate. La elaborarea prezentului articol, au fost utilizate diverse metode de cercetare, inclusiv metoda descriptivă, analiza și sinteza diverselor abordări în domeniul cercetării și educării inimii, examinarea și testarea ipotezelor de lucru în vederea argumentării concluziilor cu privire la oportunități de modernizare a sistemului educațional.

Rezultatele obținute

Cu referință la suportul informațional studiat, se poate scoate în evidență valoarea și importanța supremă a educării inimii în mod sistematic, absolut necesar perioadei contemporane.

De fapt, cu sute și mii de ani în urmă, „a fi în inimă” constituia starea naturală a omului. Înțelepți, sfinți și mari maeștri din numeroase culturi și-au dedicat viața practicării traiului în inimă și păstrării tradiției legate de metodele ajungerii acolo.

Drunvalo Melchizedek și Daniel Mitel [1] ne oferă un compendiu de meditații ce sintetizează cele mai vechi și mai autentice practici de coborâre din creier în inimă. Cartea “Călătorii în inimă” [1] transmite și dezvoltă o întreagă moștenire a viețuirii în acord cu cel mai înalt potențial propriu de reconectare cu inima, care nu se realizează doar la nivel individual, având implicații globale.

În cartea “Păstorind o inima de copil”, [2] Tedd Tripp vorbește despre felul în care, un adult trebuie să i se adreseze inimii copilului său. Lucrurile pe care copilul le face și le spune se revarsă din inimă. Luca 6:45 [3] exprima lucrurile astfel: “căci din prisosul inimii vorbește gura”. Iată de ce, părintele are obligația de a “păstori” inima copilului încă din fragedă pruncie.

Renumitul roman al lui Paulo Coelho “Alchimistul” [4] impresionează prin simplitatea și înțelepciunea cu care împărtășește istoria unui păstor andaluz care, părăsindu-și casa în căutarea unei comori materiale, începe călătoria de descoperire a unor comori ascunse înlăuntrul inimii sale, devenind astfel, o mărturie reală a modului în care omul se poate schima, urmându-și visele și ascultându-și inima.

Într-o lume bulversată în care tehnologiile și obiectele preiau locul emoțiilor și sentimentelor adevărate, este absolut necesară implicarea activă a fiecărui individ întru prosperarea societății umane. Iată de ce, personalitățile active din întreaga lume își unesc forțele în comunități, devenind ‘ambasadorii ai inimii’, promovând educarea inimii și schimbarea pentru întreaga lume.

Spre exemplu, savanții de la Institutul de cercetare HeartMath (*matematică a inimii (rom.)*), din California [5] afirmă că inteligența inimii, de fapt, se reflectă în inteligența emoțiilor și puterea managementului emoțional. Astfel, inteligența inimii este în mod real, sursa inteligenței emoționale.

În urma studiilor realizate de către “ambasadorii inimii” [5], s-a demonstrat faptul că stresul este un „asasin” care scurtează viața omului, făcându-l vulnerabil la diverse boli. Persoanele cu nivele ridicate de stres, trăiesc mai puțin decât cei care sunt calmi. Cercetările de la HeartMath au

relevant, că emoțiile negative ne dezechilibrează sistemul nervos, iar atunci când se întâmplă acest lucru, ritmul inimii devine dezordonat, și se prezintă zimțat pe ecranul monitor cardiac. Inima comunică dezordinea/tulburarea creierului, rezultatul fiind inhibiția corticală. Din contra, emoțiile pozitive, ordinea și echilibrul în sistemul nervos, produc ritmuri line, armonioase ale inimii, ritmuri care amplifică abilitatea oamenilor de a percepe clar lumea din jur.

Știința HeartMath din cadrul programului de educare a „ambasadorilor inimii” [6] prezintă dovezi reale, în baza investigării a 11.500 persoane, care au confirmat îmbunătățiri ale stării psihice și emoționale în doar 6-9 săptămâni, folosind instruirea și tehnologia HeartMath [7]. În urma utilizării tehnologiei, nivelul de focusare, atenție și liniște sufletească crește considerabil, în timp ce anxietatea, depresia și oboseala sunt în descreștere. Iar toate aceste efecte pozitive se datorează faptului că „ambasadorii inimii” sunt capabili să activeze într-o manieră, în care să producă beneficii atât pentru fericirea și binele personal, cât și pentru întreaga comunitate.

Dar acest lucru poate deveni realitate numai dacă educăm inima, de rând cu intelectul. Atunci când nu este posibilă oprirea gândirii, trebuie să se caute și să se găsească pacea minții, deoarece pentru a avea un corp sănătos omul are nevoie de mișcare și exerciții fizice, însă pentru a avea o minte sănătoasă și lucidă are nevoie de calm, liniște și pace spirituală. Educarea inimii este un proces anevoios și dificil prin complexitatea sa, însă este posibilă studierea și cultivarea unor deprinderi de viață, care mai devreme sau mai târziu dau roadele așteptate.

O altă descoperire științifică vizează faptul că „ambasadorii inimii” utilizează „matematica inimii”, un program fondat pe ideea că „inima este o sursă de inteligență”. Acest program arată că emoțiile precum iertarea, iubirea, acceptarea, recunoștința, au efect măsurabil asupra fiziologiei noastre, determinând calmarea stresului și scăderea tensiunii arteriale. Cercetătorii de la Institutul HeartMath oferă chiar o metodă practică, pas cu pas pentru a „educa inima”, împreună cu educația intelectului. Vestea bună este că niciodată nu-i prea târziu pentru a obține acest tip de educație.

În cartea „Soluția matematicii inimii/The HeartMath Solution”, scrisă de Doc Childre și Howard Martin[8], fondatorul și respectiv purtătorul de cuvânt al HeartMath, ei explică: „Din cercetarea noastră de la Institute of HeartMath, am concluzionat că inteligența și intuiția sunt elevate, atunci când învățăm să ascultăm mai profund de propria noastră inimă. Prin învățarea descifrării mesajelor pe care le primim de la inima noastră, noi dobândim percepția necesară pentru a ne gestiona eficient emoțiile în cadrul schimbărilor de viață. Cu cât mai mult învățăm să ascultăm și să urmărim inteligenta inimii, cu atât mai educate, echilibrate și coerente devin emoțiile noastre. Fără influența călăuzitoare a inimii, cădem cu ușurință pradă emoțiilor reactive precum neliniștea, mânia, frica și blamarea, sau altor reacții și comportamente care ne seacă energia.”

În situațiile de criză și stres în viață, inima poate interveni prin legătura pe care o are cu creierul, calmând situația. Prin centrarea atenției în zona inimii, starea mentală se îmbunătățește, se trece la o stare emoțională pozitivă, creierul primește mesajul de schimbare în bine a emoțiilor, astfel poate trimite semnale de acțiune în ritm normal. În acest sens, cercetătorii de la Institutul HeartMath au elaborat diverse tehnici.

Spre exemplu, exercițiul „Freeze Frame” ajută la schimbarea percepției umane. Mai mult decât gândirea pozitivă, el creează o schimbare simțită în inimă - schimbarea modului în care percepem o situație, o persoană sau chiar pe noi înșine. Conform acestui exercițiu se recomandă:

- ✓ Schimbarea atenției din minte în zona inimii, păstrarea ei acolo timp de 10 secunde, respirând normal.
- ✓ Amintirea unei situații agreabile din viață și a sentimentului pozitiv respectiv. Încercarea de a vizualiza, și în special, a simți din nou acele momente plăcute.
- ✓ Adresarea inimii, pentru a înțelege cum poate fi corijată situația problematică curentă.
- ✓ Ascultarea inimii. S-ar putea să nu auzim nimic, doar să ne simțim mai calm.

S-ar putea să verificăm în acest fel ceva ce cunoșteam deja. Dar vom vedea momentul de criza într-un alt mod. E posibil să nu avem control asupra evenimentului, însă avem control asupra modului în care îl percepem.

Astfel, putem conchide că “ambasadorii inimii” sunt acei dintre noi, care, cultivându-și încontinuu personalitatea, ajung să-și urmeze nu doar inteligența minții, dar și a inimii, să-și dezvolte acea intuiție, care îi face să depășească interesele personale și să acționeze din perspectiva bunăstării comunității și omenirii în întregime.

Ținem să menționăm că, ‘ambasadorii inimii’ pot fi excelent definiți prin prisma învățaturii creștin-ortodoxe, care afirmă că aceștia sunt cei, care înalță inimile noastre spre ceruri și aduc Raiul pe Pământ, întrucât Sfânta Evanghelie valorează oamenii curați cu inima, milostivi, blânzi, drepi și cinstiți. Totodată, cuvântul ortodox arată, că rugăciunea este cea forță stabilă, care menține armonia în inimă.

În istoria omenirii găsim multiple exemple de personalități ‘ambasadori ai inimii’. Astfel, din cele mai vechi timpuri, Aristotel afirma ca educarea minții fără educarea inimii, nu înseamnă deloc educație[9]. Iar Albert Einstein ajunge la concluzia că, atunci când omul își exprimă gândurile și emoțiile într-un mod separat de mediul ce-l înconjoară, el își restricționează potențialul de dezvoltare. Einstein îndeamnă omul să își descătușeze sufletul și inima[5]. Dalai Lama spune că educarea inimii este cheia generațiilor viitoare, deoarece scopul vieții umane este de a crește căldura inimii.

CONCLUZII/RECOMANDĂRI

Cu secole în urmă, „a fi în inimă” constituia starea naturală a omului. Înțelepți, sfinți și mari maestri din numeroase culturi și-au dedicat viața practicării traiului în inimă și păstrării tradiției legate de metodele ajungerii acolo.

Într-o lume bulversată în care tehnologiile și obiectele preiau locul emoțiilor și sentimentelor autentice, personalitățile active își unesc forțele în comunități, devenind ‘ambasadorii ai inimii’ și promovând educarea inimii. Savanții de la Institutul de cercetare HeartMath din California au dovedit că inteligența inimii este sursa inteligenței emoționale, elaborând totodată, programul “matematica inimii” valorificat de către “ambasadorii inimii”. Atunci când nu este posibilă oprirea gândirii, trebuie să se caute și să se găsească pacea minții. Educarea inimii este un proces complex și anevoios, pentru care au fost elaborate diverse tehnici, fiind posibilă studierea și cultivarea unor deprinderi de viață corespunzătoare.

“Ambasadorii inimii” pot fi excelent definiți prin prisma învățaturii creștin-ortodoxe, care, implicit arată, că rugăciunea este forța stabilă, ce menține armonia în inimă. În istoria omenirii găsim multiple exemple de personalități “ambasadori ai inimii”.

Sistemul educațional contemporan urmează să probeze impasul la care ajunge personalitatea umană, societatea umană, în rezultatul supraestimării dezvoltării intelectuale și subestimării necesității de a cultiva inteligența inimii – sursa inteligenței emoționale. Acest impas determină necesitatea ajustării corespunzătoare a paradigmei și concepțiilor educațional-pedagogice la toate nivelele de școlarizare.

REFERINȚE BIBLIOGRAFICE:

1. **DRUNVALO MELCHIEDEK, DANIEL MITEL**, Călătorii în inimă. București, 2016. 208 p., ISBN:978-606-639-120-7
2. **TEDD TRIPP**, Păstorind o inimă de copil. București, 2018. 247 p., ISBN:978-606-8875-21-7
3. **RUEDIGER SCHACHE**, Înțelepciunea inimii. București, 2015. 270 p., ATM978-606-8758-06-0
4. **PAULO COELHO**, Alchimistul. București, 2018. 224 p., ISBN: 978-606-779-380-2

SURSE ONLINE:

5. <https://www.heartmath.com>
6. <https://foculvietii.wordpress.com/2015/05/28/inima-un-altfel-de-creier/>
7. <https://pages.heartambassadors.com/>
8. <https://jurnalspiritual.eu/inima-ce-este-inteligenta-inimii/>
9. <http://subiecte.citatepedia.ro/despre.php?s=Aristotel%40educa%FEie>
10. <https://buna-vestire.net/2018/07/educarea-inimii.html>
11. <https://www.crestinortodox.ro/interviuri/copilul-trebuie-educat-inima-143657.html>
12. <https://ro.baiug.org/to-educate-mind-without-educating-heart-is-not-to-educate-2344>
13. <https://www.libris.ro/intelepciunea-inimii-ruediger-schache-ATM978-606-8758-06-0--p1040879.html>
14. <http://autoeducare.ro/cu-mintea-sau-cu-inima>

I. CERCETĂTORI ȘI DOCTORANZI

SECȚIUNEA I: *Strategii de dezvoltare a economiilor naționale*

CIVILIZATION CRITERIA FOR CITIES IN ROMANIA AND THE REPUBLIC OF MOLDOVA

PhD, LAURENȚIU CRĂCIUN,

Guidance Professor: PhD, Associate Professor MIHAI HACHI
ASEM, Republic of Moldavia, Chisinau, str.G.Bănulescu-Bodoni, 61
e-mail:dl.levis@yahoo.com
tel.+040730224224

ABSTRACT: *There is currently no internationally accepted definition to specify the notion of a city. This way, each country defines its concept of a city, based on certain geographical, historical or administrative considerations. In many countries, the criterion of demographic size is applied to identify small cities with other urban categories in the urban system. In this regard, the UN recommends as a criterion for defining the city a human settlement with a minimum threshold of 2,000 inhabitants. For the delimitation of cities, beyond the quantitative criteria for population numbers, several states of the world have also used qualitative criteria based on the functions they perform or the environment's relationship to the city.*

Key words: *small cities, urban, settlement system, social-economic factors.*

INTRODUCTION

"Any science that addresses the issue of the existence and development of society is faced with the need to study the city in general and as a phenomenon of the socio-human system." Referring to this finding, geography is considered to be the first science that chose the city as the subject of systemic research. According to DEX (1998) "the city is a complex form of human settlements with variable dimensions and industrial facilities, usually having administrative, commercial, political and cultural function", having as synonyms: urban, fortress, citadel. Compared to the village, "the city has a developed street tramway, with no streets, the population density being well above the village, and the residential area is different from the rural area by the housing districts, which extend more vertically than on the horizontal". Albăstroi, Elena-Simona, (2009). At the end of the nineteenth century, the German geographer and ethnologist Friedrich Ratzel (1897) characterized the city, referring only to three components: the professional activity of the population, the degree of distribution and concentration of buildings and the minimum number of people. We mention that the evolution of today's human society has not diminished this role of the city of organizing the environment, but instead helped it to integrate its potential and resources more easily into the general circuit of values, because from an economic point of view, social-cultural and municipal housing, "the city remains the most developed center". In this sense, the city can be expressed through the process of spatial organization, which determines the spatial unity, but also its extension, which is the subject of geographic analysis.

The purpose of the research: to identify and classify the cities of Romania and the Republic of Moldavia, from the beginning to the present, to establish a correct taxonomic rank in

order to improve the regional development policies and strategies in the two countries regarding the urban settlements.

Methodology of scientific research: Several methods have been used to compile this article: comparative, analytical, systemic, historical, statistical-mathematical and cartographic. In economic geography studies, particular attention is paid to the department of typology and classification of cities.

The Romanian legislation stipulates that a town can have the status of a city if it meets 16 quantitative and qualitative conditions. According to the 2004 Census of the Republic of Moldova, the cities are classified according to the number of inhabitants in 9 groups. Thus, we identify from the smallest urban localities with a population of less than 3 000 inhabitants to urban areas that exceed 500 000 inhabitants. There are also some cases where the status of a city is acquired through governmental decision. This way of defining and identifying cities takes into account their importance in the institutional and political system, and cities are considered centers for public decision-making.

Criteria for Individualization of Cities on the Globe. In economic geography studies, particular attention is paid to the department of typology and classification of cities. The criteria for globalization of cities vary from one country to another, and for a number of countries that have reached a high degree of socio-economic maturity, there is no difference between urban and rural backgrounds. Most of the time, when setting up cities internationally, four types of criteria are taken into account:

- Minimum population level;
- Administrative criterion;
- Share of the agricultural population;
- Urban facilities and functions.

However, when setting up cities on the Globe, most countries only take into account the three major criteria detailed below.

1) Minimum population number. The delimitation of urban localities, using the minimum number of inhabitants as a criterion, varies from one state to another. While in some states there are declared cities - localities with a minimum of 200-250 inhabitants (Denmark, Ireland), in others, the number of inhabitants may reach 15 000-20 000 (India) or even 50 000 (Japan), (Gheorghe MT Radulescu, 2007, Vasile Cucu 1994). Please note that in Romania, the minimum threshold to which this criterion applies is 2 000 inhabitants.

2) Administrative criterion. This criterion takes into account the laws of each country's parliament. Every state has its own Constitution and its own laws decreeing the status of the city. States that use this criterion for defining the city give it certain rights, competences and duties, the city's definition being also found in the country's legislative system. In some states or regions (Germany, England, Wales, etc.), the legislative system makes administrative differences between urban and non-urban territories.

3) Share of agricultural population. At European level, the proportion of people working in agriculture at the time of setting up a new city varies from one country to another, this percentage usually ranging from 25% to 35%. The Romanian legislation stipulates that when a city is set up, the percentage of the population working in agriculture shall not exceed 25%. In Moldova, the criterion for identifying cities for human settlements with a non-agricultural population of more than 50% has been established since the social period.

4) Urban Facilities and Functions: This criterion is of particular importance, making it harder to quantify. In Romania only the first 3 criteria are used most frequently. The typology of cities is the highlight of all cities, according to the most important peculiarities. It allows a large and varied number of cities to be grouped into a smaller number of categories in which identical cities

can be assigned to certain qualitative indicators. By the classification term, the distribution of cities is understood according to one or more criteria.

Worldwide researchers have evoked several criteria for identifying cities, which are tailored to the realities of the countries of province. Thus, according to Baranschi N.N., the typology of cities is closely related to their classification and the most important classification criteria are: the administrative criterion, the demographic size, the city's function, the year of attestation of the settlement, the year of declaring the city status, the geographical position, the planning, etc.

From the American geographic school, it was Chaney D. Harris. It highlighted the following categories of cities according to their functions: 1) processing industry; 2) retail trade; 3) mixed type (industrial and commercial); 4) wholesale trade; 5) transportation, 6) extractive industry; 7) university; 8) resorts, etc. This classification was elaborated according to the monofunctional principle, considering that the majority of cities have a polyfunctional character. In order to determine the basic economic functions in the seven categories of different size cities, researcher Pownall L.L., used his own method of estimating the deviation of the average percentage of the employed population in a certain economic branch.

According to this statistical-mathematical method, Pownall L.L. has come to the conclusion that most of the cities in New Zealand are performing mixed functions. French geographer George Pierre proposes a classification of cities according to historical-geographic principles: 1) cities in agricultural regions - town-market, which simultaneously perform several functions: defense, administrative and religious; 2) commercial cities, which have maintained their assets during ancient, medieval and contemporary periods; 3) commercial and industrial cities generated by the emergence of capitalist relations; 4) colonial cities; 5) socialist cities. The great Romanian geographer, Simion Mehedinți (1931), points out that the classification of cities must be given a special attention to both functions and landscape. These two main aspects need to be combined to establish complex types of cities.

Cities can be classified by function, but their geographic character is derived, in particular, from the way cities enter the landscape (physiognomy). In turn, the urban landscape also results from the way in which functions are manifested. For these reasons, the classification should be as complex as possible, combining all the criteria, based on as varied indices. The geographer Vasile Cucu makes another classification of the Romanian cities and "identifies the following genetic types: 1) the sanctuaries; 2) fortress or fortress; 3) the fair; 4) ports; 5) cities based on primary resources; 6) recently-decreed cities based on rural antecedents. " Cucu, Vasile, (1994, p. 136). In another classification, Vasile Cucu, (1994), "refers to the position of the cities in the territory: 1) cities located on the Carpathian valleys; 2) cities located in the area with road and railway nodes; 3) Danubian cities; 4) cities located in certain areas with underground resources, etc. ". Compared to rural settlements, the cities have the vast majority of flats with a high degree of population concentration, multiple public amenities and streets are paved.

Commercial, industrial, administrative, social-cultural activities, etc. are taking place in cities. Urban localities have tied up with the localities in the peri-urban area, over which they can exert their economic and social influence. Based on their position in the territory, we identify cities that occupy a greater or lesser central location, cities located in places where communication routes converge, or those placed in strategic defense places.

Criteria and requirements for the establishment of administrative units in Romania.

Currently in Romania, the criteria for establishing a city take into account several indicators:

- When establishing a city, the size of the area and the number of inhabitants, which must be at least 5,000 for cities and 25,000 for municipalities, are taken into account (Gheorghe M.T. Rădulescu, 2007).

- Appropriate technical equipment;
- The economic profile of the locality requires that there be banks, shops, agro-food market and other economic units;
- Occupation of the population, as well as the source of its existence, the majority of the inhabitants will perform non-agricultural activities that have to be at least 75% and will work in industry, services, social assistance, etc.

In Romania, according to the legislation in force, for the decree of the city status, a town must meet 16 minimal quantitative and qualitative conditions. Among them are: 1) Number of inhabitants 5 000-25 000; 2) Population employed in non-agricultural activities (% of total employed population) 75-85; 3) Furnishing of dwellings with water supply installations (% of total dwellings) 70-80; 4) Equipment of dwellings with bathroom and toilet in the dwelling (in% of total dwellings) 55-75; 5) Number of beds in hospitals at 1,000 seats 7-10; 6) Number of doctors returning to 1,000 inhabitants 1,8-2,3; 7) post-high school, high-school or other education; 8) Cultural and sports facilities, theaters, theaters, musical institutions, public libraries, stadiums, sports halls, showrooms, public libraries, sports facilities; 9) Places in hotels 50-100; 10) Upgraded streets (in% of total street length) 50-60; 11) Streets with water distribution networks (% of total street length) 60-70; 12) Streets with sewerage pipes (% of the total length of streets) 50-60; 13) Sewage treatment.

Mechanical and biological treatment plant. Mechanical sewage treatment plant; 14) Streets with fire extinguisher hydrants (in% of the total street length) 60-70; 15) Green areas (parks, public gardens, squares) m² / inhabitant 10-15; 16 In the (*** Law No. 5/2000), which refers to the arrangement of the Romanian territory, it is stipulated that the urban settlements of the third rank, the towns, are characterized by certain elements and the level of equipment specified below:

- The population of these localities must usually be between 5 000 and 25 000 inhabitants;
- Cities of this rank serve the localities around them in a radius of about 15-20 km;

In Romania, it is forbidden to create administrative-territorial units on certain criteria - ethnic, religious, linguistic, or the like. " (Law No.351 / 06 July 2001). These criteria can not be accepted because they would discriminate between the citizens of the same country, depending both on their belonging to a national minority and on the use of a particular mother tongue. Therefore, the criteria must be general and common for all administrative-territorial units of the same rank or level. This is a problem that needs to be resolved at national level, not being a matter of local concern.

In the literature, the following criteria are most frequently used in Romania:

A. Classification after the appearance and age of the cities on the current territory.

The oldest urban settlements on the present surface of Romania date back more than 2 500 years. The ancient Greek colonies-Tomis / Constanta, Callatis / Mangalia and Histria / Istria appeared on the Black Sea. Later, almost 2,000 years ago, a number of Roman cities emerged on this territory, including Napoca / Cluj Napoca; Apulum / Alba Iulia; Drobeta / Drobeta Turnu Severin; Turris / Turnu Măgurele; Potaisa / Turda; Cumidava / Rasnov Ampelum / Zlatna; Dierna / Orșova; Pelendava / Craiova; Sucidava / town Corabia, Olt county and others.

During the Middle Ages, between 1300-1700, feudal fairs and cities continue to appear, many more than the ancient and Roman ones: Timișoara, Oradea, Sibiu, Brașov, Sighișoara, Iași, Baia, Suceava, Târgoviște, Curtea de Arges, Bucharest, etc. Between 1900 and 1947 a series of capitalist cities appeared, some of them being documented as localities, but not as cities: Resita, Hunedoara, Anina, Petrosani, Marasesti, Vatra Dornei, Pascani and Predeal. During this period, urban life acquires new valences with the first half of the 20th century.

"If in 1910 there were 119 cities, until 1947, their number had risen by 33." Grigore Posea, (1982) Later socialist cities appeared, the number of which grew significantly between 1947 and 1989. In this in the same time, 110 cities were declared, so that their number stood at 262. Grigore Posea,

(1982) After 1989, the cities continued to appear until 2002. Since 2002, have changed the status, becoming cities, so that at present Romania has 320 cities. Cucu, Vasile, (1994).

B) Classification of Romanian cities by number of inhabitants:

Table no. 1. Classification of Romanian cities by number of inhabitants:

No. crt.	Type of city	Number of inhabitants
1	Very small cities	Under 20 000 inhabitants; (Fieni, Comarnic, Orșova, Pucioasa)
2	Small cities	Between 20 000-50 000 inhabitants; (Codlea, Făgăraș, Zărnești, Mangalia)
3	Middle cities	Between 50 000-100 000 inhabitants; (Slatina, Târgoviște, Tulcea, Suceava)
4	Big cities	Between 100 000-200 000 inhabitants; (Sibiu, Pitești, Arad, Bacău)
5	Very big cities	Between 200 000-300 000 inhabitants; (Iași, Constanța, Craiova, Timișoara)
6	Millionaire cities (Metropolis)	Over 1 000 000 Inhabitants. (Bucharest, the capital of Romania with approximately 2 000 000 inhabitants).

Sursa: Cucu, Vasile, (1998); Ilinca, Nicolae, (1999)

C) Classification of Romanian cities according to the economic functions they perform:

Table no. 2. Ranking cities according to the economic functions they perform

No. crt.	Types of cities based on their functions
1	Agricultural cities (the majority)
2	Cities with industrial activities Bucharest, Brașov, Craiova, Iași, Zărnești;
3	Cities with processing industry: Ploiești, Târgoviște, Galați, Brăila, Bacău;
4	Cities mining centers: Petroșani, Urziceni, Anina, Lupeni;
5	Cities forest centers: Câmpulung Moldovenesc, Gheorgheni, Toplița;
6	Mixt cities centers: many;
7	Cities with service functions: countless cities:
8	Political and administrative cities: Bucharest, county municipalities, municipalities, other cities with local influence on localities;
9	Tourist center cities: Bucharest, Brașov, Predeal, Bușteni, Sinaia;
10	Cities railway node: Bucharest, Brașov, Ploiești, Măreșești, Filași, Pașcani, Fetești, Teiuș, Simeria;
11	Spa city centers: Băile Herculane, Băile Govora, Pucioasa, Băile Olănești, Băile Felix, Geoagiu Băi, Sovata, Băile Tușnad, etc.

Sursa: Ilinca, Nicolae, (1999).

According to the 2004 Census of the Republic of Moldavia, the cities are classified according to the number of inhabitants in 9 groups. From the smallest localities with a population of less than 3,000 to urban areas that exceed 500,000 inhabitants. There are some cases where the status of a city is acquired through governmental decision. This way of defining and identifying cities takes into account their importance in the institutional and political system, and cities are considered centers for public decision-making. Thus, we identify a series of classifications: 1. Physical-geographic classification of the cities based on the topographic position, being individualized categories of cities, depending on the position on different relief forms (plain, hill,

river meadow, etc.). **2. Administrative-political classification:** which implies the existence of hierarchical subordination relations between cities. Thus, the most important administrative center is the capital of the country, followed by other administrative centers, which perform their functions on territorial units in which the state is divided. **3. Economic classification of cities** that is determined by the systematization of statistical indicators. The city's statistical and economic classifications are divided into two categories: quantitative and qualitative. The demographic classification of cities presented in the 2004 Census is similar to the one proposed by the UN, therefore, it is not only an official classification but also adapted to international criteria. For the first time, in the geographical literature of the Republic of Moldavia, the issue of typology of urban localities according to the number of population, genesis and fundamental peculiarities was highlighted in a collective work, attended by the teachers Matei C. and Mătcu M., who established five groups of cities as follows:

Table no. 3. Typology of urban localities in the Republic of Moldavia, by population, genesis and fundamental peculiarities

City groups	Types of cities specific to that group
1st	Large republican cities with republican ranks, with multiracial specialization
2nd	industrial centers with multi-faceted profile, but with a narrow specialization
3rd	industrial centers with narrow specialization
4th	small urban settlements (less than 10,000 inhabitants) with limited industrial development
5th	the very small towns, with no clear urban settlement features, the agricultural base being represented by agriculture.

Sursa: Constantin Matei ; Matei Mătcu

Among the first complex socio-economic classifications of the cities, it was made by the historian Babilunga NV, who, on the basis of the 1897 Census materials, also conducted on the territory of Bessarabia, determined the concentration indicators and the priority economic functions for the cities of this region: Chisinau, Tighina (Bender), Soroca; culture-Chisinau, Balti, Orhei, Soroca; industrial-Chisinau, Balti, Orhei, Hotin; transport-Tighina (Bender), Balti, Reni; trade-Chisinau, Balti, Orhei, Soroca, Hotin. By summing up the indices, the author obtained a classification of the level of economic development: a) Highly developed cities - Hotin, Chisinau; b) Medium developed cities - Tighina (Bender), Balti, Bolgrad, Soroca; c) Poorly developed cities - Orhei, Ismail, Reni; d) Underdeveloped cities - Chilia, Akkerman (Cetatea Albă), Cahul.

The obtained results (the scientific problem solved) in the respective field: following the study, we identified the criteria for identification of the cities in Romania and Moldavia compared to other states of the world. They also assessed the criteria used to identify cities as a principle for improving the urban system in these states in the context of their regional and sustainable development.

IN CONCLUSION, we find that:

- 1) The city remains a subject of study for researchers from different fields: history, geography, demography, urbanism, economy, ecology, etc. each field having its own subject-matter;
- 2) Criteria used by different authors, scientific schools, state legislation have a subjective character, reflecting the current political, economic and social situation;
- 3) To define the concept of a city, a series of concepts and theories are analyzed, varying from one country to another;

4) Each country has its own criteria for promoting rural settlements among cities, based on certain historical, geographical or administrative considerations, changing in time and space;

5) The typology used is of both theoretical and practical importance in the current context of regional development and the sustainable development of human settlements.

BIBLIOGRAPHY

Albăstroiu, Elena-Simona, (2009)-*Evoluția funcțională, teritorială și urbanistică a municipiului Bârlad*, Editura Taida, Iași.

Babilunga, N. (1897)-*Materiale de la Recensământul populației de pe teritoriul Basarabiei, material preluate și în lucrările apărute mai târziu: Промышленность Бессарабии в конце XIX-начале XX в.* (1985) de; culegerea tematică *Вопросы истории Молдавии XIX века – начала XX века* (1989).

Baranschi N.N. , (1953)-*Geografia Economică a URSS*, Editura de Stat pentru Literatură și Geografie, 552 pagini.

Cucu, Vasile, (1995)-*România-Geografie umană (pag.136)*. Editura Glasul Bucovinei, Iași.

Cucu, Vasile, (1998)-*România-Geografie umană și Economică*, Editura Printech.

Cujbă, Vadim, (2015)-*Evoluția orașelor mici și mijlocii din Republica Moldova prin prisma geografiei economice*, Teză de doctor în științe economice, ASEMD, Chișinău.

Hachi, Mihai, (2005)-*Modul de trai al populației Republicii Moldova: Abordare socio-geografică*. ASEM, Chișinău, 19-20p.

Ianoș, Ioan, (2004)-*Dinamica urbană: aplicații la orașul și sistemul urban românesc*. Editura Tehnică, 214 p, București.

Ilinca, Nicolae, (1999)-*Geografia umană. Populația și așezările omenești*. Editura Corint, București.

Matei C., Mățu M., (2008)-*Rolul orașelor mici în dezvoltarea complexului agroindustrial al Republicii Moldova*, ASEM, 166 p, Chișinău.

Matei Constantin, Mățu Matei, Sainsus Valeriu, Hachi Mihai, (2008)-*Rolul orașelor mici în dezvoltarea complexului agroindustrial al Republicii Moldova*, Editura ASEM, 87-92p, Chișinău.

Mehedinți Simion, (1931)-*Terra. Vol.I*, Editura Națională-S. Ciornei-București.

Pierre George, (1970)-*Dictionnaire de la Geographie*, Presse Universitaire de France, Paris, France.

Posea, Grigore, (coordonator), (1982)-*Enciclopedia geografică a României*, Editura Științifică și Enciclopedică, București.

Ratzel, Friedrich, (1888)- *Geografia politică*, în anul (1897), Berlin, Germania.

Rădulescu M.T. Gheorghe (2007)-*Urbanism și Amenajarea teritoriului*, Curs, Facultatea de Științe, Universitatea de Nord, Baia Mare.

*** *Constituția României din anul 1923*.

*** *Constituția României din anul 1965*.

*** *Legea 5 din anul 2000*.

*** *Legea Nr. 351/06 iulie 2001, privind aprobarea Planului de amenajare a teritoriului național*.

INDICATORS FOR EVALUATION OF BANKING SUPERVISION EFFICIENCY

Daniela Dermengi
Academy of Economic Studies of Moldova, Chișinău
61, Bănulescu-Bodoni Street, MD-2005
danieladermengi@gmail.com
068244412

Abstract: *The financial crisis has exposed weaknesses in the current regulatory and supervisory frameworks. The banking supervision aims not only to ensure compliance with certain standards and legislative acts, but also to influence the macroeconomic environment by achieving societal goals. Thus, the crisis has raised questions concerning the performance of supervisors and the effectiveness of their activities to avoid crises. Although banking supervision is more in the context of crises, crises are not the only motivation for supervision. The supervisors must be able to demonstrate the causal relationship between their activities (cause) and outcome (effect). Thus, it is necessary to measure the efficiency of banking supervision and to select relevant indicators for this purpose. In practice, the efficiency of the banking supervision is difficult to quantify, from the many reasons that are discussed in this article. Thus, the article examines the indicators for measuring the performance of banking supervision, the difficulties in measuring the effects of banking supervision and the aspects that are important to consider for a more objective performance assessment.*

Keywords: *banking supervision, supervisor, efficiency, performance indicators, compliance, effort to effect ratio*

JEL Classification: *G28 Government Policy and Regulation*

„Banking supervision is an essential aspect of modern financial systems, seeking crucially to monitor risk-taking by banks so as to protect depositors, the government safety net and the economy as a whole against systemic bank failure and its consequences”. [6, p.3]

In the specialty literature, the efficacy of the banking supervision is defined as degree to which supervisory practice contributes to the realization of supervisory objectives and relationship between the projected effect and the actual outcome of the supervisory activity. [5] In the context of the recent financial crisis, it was profiled a new approach of „efficacy”, being defined as „achieving an optimal ratio between the speed of decision-making and their quality”. [2]

The meaning of the concept of „efficacy” becomes more comprehensive when it is analyzed in correlation with another concept, namely „efficiency” defined as „maximizing the results of an activity in relation to the resources used” [1]. As the management consultant Peter Drucker said – „Efficiency is doing things right; effectiveness is doing the right things.”

The term „efficiency”, unlike „effectiveness”, refers not only to the impact or result, but also to the effort. To determine the efficiency it is necessary to make a cost/benefit analysis. There are situations when the costs of supervisory resources are higher than the benefits in terms of compliance and societal effects. In these cases, the solution to market failure may be worse than the failure itself, this situation being defined as supervisory failure. [7, p.14]

The indicators used for determine the performance of financial supervision can be divided into: effort indicators and effect indicators. The effort indicators show how much time and resources are needed to achieve the surveillance objectives. The effect indicators measure the performance of surveillance and show the outcome, intermediate and final impact of the intervention.

The choice of indicators is closely related to the objective of measuring performance. The objective determines what type of indicator is most appropriate. If the objective is to assess the effectiveness of the supervisor then the effect indicators are generally most suited. Only by applying effect indicators can supervisors answer the effectiveness question: did the supervisor achieve the results it set out to produce? [4, p.588] However, the use of performance measurement for budgeting or efficiency purposes requires more than effort indicators. This is becoming more and more

important, as more attention is paid to the cost/benefit analysis of supervision. Financial supervisors have the role of preventing the market failure or mitigating its consequences. For reasons of efficiency, supervisors need a combination of measures – effort/effect.

The objectives of surveillance can be defined in two categories, namely societal objectives and compliance objectives. First of all, the supervisor must ensure that the supervised institutions actually comply with the rules and standards required by the legislation (compliance objectives). As a result, supervisors do not focus on compliance per se, but focus on compliance in order to ensure that supervised institutions contribute to the societal objectives. Thus, the primary (social) objective of banking supervision is to ensure the health and soundness of banks and the banking system. In order to achieve this goal, it is checked whether institutions meet supervisory requirements for solvency and liquidity, but also assesses the business model, corporate governance strategy and governance within these institutions. [7, p.3] For the banking sector, the basic principles for efficient banking supervision are set by the Basel Committee.

The primary objective of measuring the efficiency and effectiveness of banking supervision is to provide clear information on performance. This information can be used for various purposes, supervisors having different goals when measuring performance. These goals can be related to certain results, determining whether a specific market problem has been successfully mitigated, what interventions and under what circumstances have been effective, or creating additional incentives to increase performance. [4, p.588]

The supervisory authorities have to decide at what level – strategic, tactical or operational – they will take intervention measures according to the objectives they want to achieve. Indicators selected to measure the effects of surveillance also need to be adapted to objectives.

Measurement of tactical performance allows the supervisor to determine whether a specific market problem actually becomes smaller due to its interventions. At the practical level, tries to identify the most important market problems and focuses on designing a mix of interventions that will effectively mitigate the problem. Measuring the effects of these interventions is necessary in order to determine whether the problem has been sufficiently mitigated to relocate supervisory resources to another supervisory issue. Performance measurement at a tactical level, consequently, supports supervisors when making decisions about the prioritization of market problems and allocation of resources.

Performance management can be useful to improve knowledge of what interventions are effective in certain circumstances. This is considered to measure operational performance.

Strategic performance measurement enables a supervisor to show his added value to society and other relevant stakeholders through such indicators as the level of confidence in the system, the supervisory authority and the level of financial stability. [7, p.4]

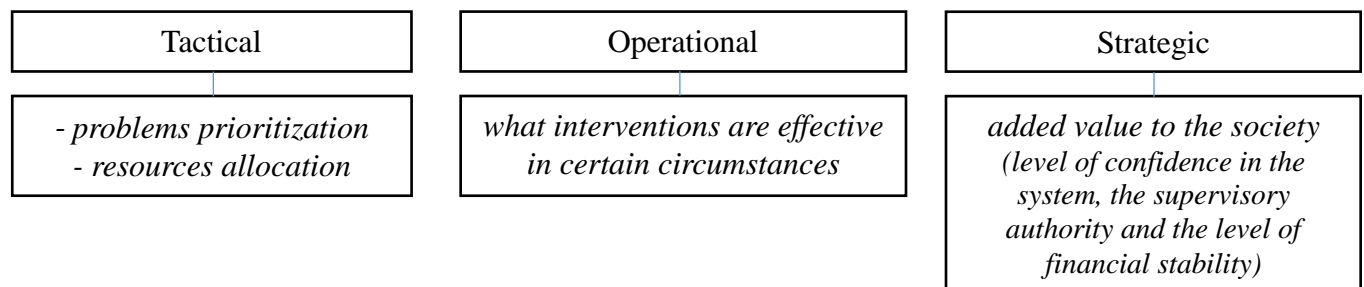


Figure no.1. Levels for supervisor's actions and interventions

Source: elaborated by the author

There are several lessons to be considered that can help establish a practical way of measuring the effects of supervision and can contribute to the success of an assessment of the effectiveness of financial supervision:

1) **Defining a specific objective and measure at a micro level** - it is recommended to choose SMART (specific, measurable, accessible, relevant and timed) objectives. Measurement of performance depends on surveillance objectives – compliance or societal. The more clearly a problem is defined, the more precisely the objective is formulated and the efficiency indicators are more easily identified.

2) **Increasing the plausibility of the causal relationship between the effect and the contribution of the intervention.** Supervisors can increase the plausibility of the causal relationship between their activities and the results by:

- reducing the level of abstraction at which the effects are measured. It is easier for supervisors to demonstrate that an additional on-site control has improved the corporate structure of a bank than demonstrating that these actions have led to an improvement in overall financial stability. [12]

- developing a logical theory of change. A theory of change explains how a policy or supervisory intervention is expected to lead to the desired outcome. [13, p.77] The logical reasoning of such a theory can be well established on past experience in the field of supervision and can help the supervisor build a credible „contributing story”. The key tools in building a credible contribution story are a results chain or a logic chart. A results chain or logical chart shows how intervention or surveillance policy should work. [9, p.8]

- selecting a research framework that excludes the impact of exogenous factors.

- the systematic exclusion of alternative causes for an observed effect;

- examining the causal relationship between financial supervision and banks' risky behavior – banks with a high risk profile appear to be significantly more affected by regulation and supervision than banks with a lower risk profile. In addition, not all regulatory and supervisory standards have a significant influence on bank risk. [8, p.5]

3) **Develop a portfolio of performance indicators.** The performance of supervisory policy can be illustrated more convincingly by following the „multiple lines of evidence” argument and building a portfolio of performance indicators. [9, p.20]

When developing a set of performance indicators, it is important for supervisors to include in their portfolio different types of indicators. [7, p.14]

Moreover, it is also important to include indicators that focus on different levels of performance measurement - strategic, tactical and operational. At the strategic level, it is not always easy to establish the causal relationship between interventions and surveillance objectives. However, a portfolio of indicators should not only focus on objectives that the supervisor can directly influence, as it would not meet the expectations of the public and other stakeholders on the supervisor's responsibility for achieving the strategic objectives. [7, p.15]

Depending on the nature of the data taken in the analysis, the performance indicators can be divided in two types: hard indicators (based on quantitative data) and soft indicators (based on qualitative data). [11]

The advantage of hard indicators is the higher level of objectivity and verifiability. Most of these indicators are easy to understand, time-tracked and can be aggregated to meet the confidentiality requirement imposed on supervisors. The soft indicators show the surveillance efforts undertaken in terms of qualitative aspects. This is important because banking supervision is increasingly focused on forward-looking issues such as governance, conduct and culture. These indicators can also be aggregated. On the other hand, the soft indicators can be seen and checked less objectively than the hard indicators.

Table no. 1. Types of performance indicators

<ul style="list-style-type: none"> • Hard indicators
<ul style="list-style-type: none"> - Based on market data, such as credit ratings, equity prices. These indicators show the bank's risk profile. Other indicators include the level of investments in high-risk products, the nature of the financial products launched and the number of criminal investigations resulting from incorrect or incomplete financial reporting; - Supervisory requirements, such as liquidity and solvency indicators; - Number of bank failures and the amount of losses associated with these bankruptcies; - Financial benefits for consumers – decisions to impose cartel sanctions and license applications withdrawals. - Transfer time for surveillance activities –can be used primarily to determine the effectiveness of a supervisor, which is particularly useful when measuring effects at the operational level. However, it is important to note that the transfer time has limited significance over the actual quality of the surveillance activities. Also focusing on transfer time can also have an adverse effect.
<ul style="list-style-type: none"> • Soft indicators
<ul style="list-style-type: none"> - Public confidence in the banking sector or banking supervisors. This can be measured periodically through a randomized questionnaire with a representative group of citizens/ entities. - Changes in the number of institutions subject to a specific supervisory regime. Supervisors usually share the institutions they supervise in different categories, within a risk-based framework, to optimize capacity allocation. These categories determine the intensity of the necessary supervision. Alternatively, risk scores can be used to indicate how supervisors should assess risks in a particular part of the activity. A financial institution with a precarious financial situation will, for example, be allocated to an „enhanced supervision” regime. However, the assignment of supervisory categories or risk scores is partly determined by external factors. - Degree of compliance with the evaluation criteria related to the qualitative aspects of supervision, such as business models, strategy and governance within financial institutions. Being able to demonstrate that more institutions have increased their compliance with the minimum standards required over time can be seen as an effect of surveillance. - Level of compliance with (inter)national surveillance standards. The IMF examines the quality of oversight of member states, based on international standards that are minimum requirements for banking supervision. - „back testing” methods of surveillance. Some financial supervisors use previous incidents in the sector to „test” their surveillance methods.

Note. All indicators need to be adjusted to the economic cycle because they can be affected by the economic climate. For example, solvency ratios are higher when the economy evolves better than during economic crises

Financial supervisors are increasingly expected to be able to demonstrate the effectiveness of their actions. In practice, however, this is not an easy task as many different factors influence the attainment of financial supervisors' societal objectives. Challenges may occur in terms of causality, timing, confidentiality and capacity. [7, p.25]

1. **Causality.** In practice, measuring the effectiveness of banking supervision is difficult to achieve and it is complicated to prove causality. For example, a change in a bank's risk profile may have nothing to do with supervisory interventions, but may be the result of changes in economic conditions or other exogenous factors. It is difficult to exclude the influence of exogenous events. This is even more difficult when trying to measure performance at the strategic level where a wide range of external effects (e.g. global economic developments) can influence the desired outcome of supervision. The complexity of the financial sector also makes it more difficult to measure performance, because it is in continuous innovation and change. That is why financial supervisors tend to focus more on compliance objectives and less on societal goals. [7, p.7]

One way of getting a plausible answer to the causal question is to take into account the counterfactual situation. In other words, to consider what would have happened if there had been no supervision or the supervisor had not intervened. [14]

2. **Timing.** The second challenge in measuring the effects of supervision relates to the different short and long-term effects that supervisory interventions may have, and which in some cases may even be diametrically opposed to each other. For example, a supervisor may oblige a bank to sell off the previously acquired financial instruments because it does not have an adequate risk management level. Supervisor intervention brings in the short term an additional transaction cost that may further affect the bank's financial position. In the longer term, however, the bank's financial position may improve as the bank is no longer exposed to investment risks that it is unable to adequately control. If the financial position is taken as the indicator, the effect of the intervention is negative. However, if the supervised bank manages the situation correctly, the intervention of the supervisor may have a positive effect. [7, p.8]

3. **Confidentiality.** In many cases, the obligation of confidentiality imposed on supervisors makes it difficult to send a message to supervised institutions. It happens that supervisors are required to publish only the results of the interventions. However, depending on the surveillance objectives, the reporting of results may not be desirable. The so-called „near misses” phenomenon may appear. For example, if the supervisor intervened and managed to prevent a bankruptcy, the intervention was considered to have been effective. Communicating this intervention to the general public may have the opposite effect than increasing confidence in that bank or the entire banking system. The public may believe that if one bank is facing difficulties, so to, might others. [7, p.8]

4. **Capacity.** Measuring the effects of surveillance involves allocating time and capacity resources. In order to obtain a reliable measurement, an appropriate research method should be developed and the relevant data need to be collected. Supervisors also have to ensure the availability of sufficient internal or external expertise (e.g. through the academic world). Since resources are limited, supervisors must consistently set priorities; investing resources in measuring the effects of surveillance interventions implies that other activities cannot be performed. Therefore, the task of measuring effects should be explicitly included in the priorities of the supervisors. [7, p.8]

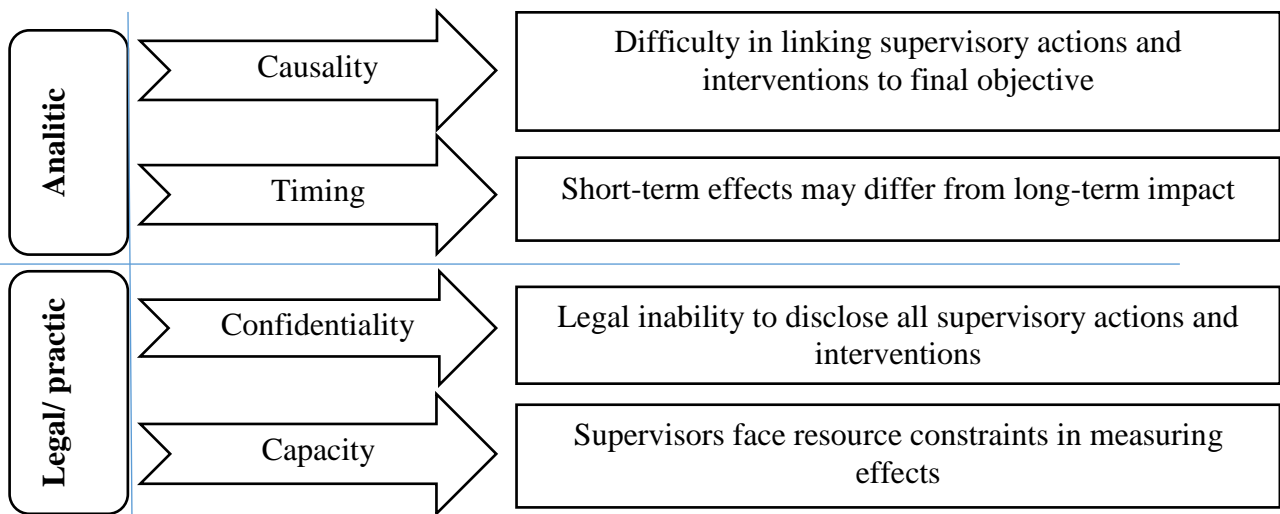


Figure no.2. Challenges in measuring effects of financial supervision

Source: HILBERS P., RAAIJMAKERS K., RIJSBERGEN D., *Measuring the effects of financial sector supervision*, DNB Working Paper No. 388, 2013, 32 p.

„Despite the limitations that make supervisory efficiency difficult to measure, supervisors in many cases need to accept some uncertainty when examining the causal relationship between their activities / interventions and their economic impact.

However, as Albert Einstein once said, and this may be some consolation to financial supervisors, „Not everything that counts can be counted. Not everything that can be counted counts”. [7, p.25]

IN CONCLUSION, measuring the effects of surveillance should become part of the surveillance process so that authorities can demonstrate that their efforts and actions are working. Although banking supervision is more in the context of crises, crises are not the only motivation for supervision. Supervisors must in many cases accept a certain degree of uncertainty when examining the causal relationship between their activities/ interventions and their impact. If the cost of surveillance resources is greater than the impact on impact, outcome and effect, the solution to market failure may be worse than failure itself (failure of supervision). A portfolio of indicators at all three levels – strategic, operational and tactical – will provide insight into the real performance of the supervisor.

BIBLIOGRAPHICAL REFERENCES:

- 1.Regulation No. 18/2009 on governance arrangements of the credit institutions, internal capital adequacy assessment process and the conditions for outsourcing their activities
- 2.European Commission, Communication from the Commission – *From financial crisis to recovery. – A European framework for action*, Brussels, 2008
- 3.Organization for Economic Cooperation and Development, *Policy Framework for Effective and Efficient Financial Regulation*, General guidance and high-level checklist, 2010
- 4.BEHN R.D., *Why Measure Performance? Different Purposes Require Different Measures*, Public Administration Review 63, 2003, pp. 586-606
- 5.DARDAC N., GEORGESCU E., *Model de evaluare a eficacității activității de supraveghere bancară*, Economie teoretică și aplicată, 2011, 153 p.
- 6.DAVIS E.P., OBASI U., *The Effectiveness of Banking Supervision*, Economics and Finance Working Paper No. 09-27, Brunel University and NIESR London, 2009
- 7.HILBERS P., RAAIJMAKERS K., RIJSBERGEN D., *Measuring the effects of financial sector supervision*, DNB Working Paper No. 388, 2013, 32 p.
- 8.KLOMP J., *Banking risk and regulation: does one size fit all?* DNB Working Paper No. 323, 2011, 57 p.
- 9.MAYNE J., *Addressing Attribution Through Contribution Analysis: Using Performance Measures Sensibly*, The Canadian Journal of Program Evaluation Vol. 16 No. 1, 1999, pp. 1–24
10. SHADISH W.R., COOK T.D., CAMPBELL T.D., *Experimental and quasi-experimental designs for generalized causal inference*, Boston/New York, Houghton Mifflin Company, 2002, 504 p.
11. SIJBRAND J., RIJSBERGEN D.R., *Managing the quality of financial supervision*. Financial Supervision in the 21th Century, Heidelberg, Springer, 2013, pp. 17-32
12. SPARROW M.K., *The Character of Harms*, Cambridge University Press, Cambridge, 2008, 271 p.
13. WEISS C.H., *Theory-based evaluation: past, present, and future*. *New Directions for Evaluation* 76, 1997, pp. 41-55
14. WILLEMSSEN F. *Programmeringstudie: Deel II, Designs effectmetingen handhaving entoezicht*, Startnotitie WODC-onderzoek, The Hague, 2009, 8 p.

DYNAMICS OF MIGRATION FLOWS IN THE REPUBLIC OF MOLDOVA IN THE EUROPEAN UNION

Doctorand, Moroza Stela,
Academy of Economic Studies of Moldova, str. Bănulescu-Bodoni 61
stelamoroza@gmail.com
+373 79249035

Abstract. After the collapse of the USSR and gaining independence from the Republic of Moldova, labor migration in the country has intensified. This phenomenon has gone through several distinct phases, with a progressive annual increase in the number of Moldovan citizens going abroad looking for jobs. Approximately half of Moldova's workforce flows to the EU Member States. Factors that lead to work abroad are largely of economic nature, generated by the lack of opportunities to earn adequate income for home living. In the current context, migration is a survival strategy.

Key words: Migration, active migration, illegal migration, labor migration, mature migration.

The Republic of Moldova was part of the Soviet Union, where the outward migration was practically forbidden. As a result, migration flows from the Republic of Moldova were limited to Soviet territory. With the first signs of liberalization of the Soviet Union and the proclamation of independence on 27 August 1991, the Republic of Moldova has undergone several migration periods in terms of dynamics, push-pull factors, direction and composition of migratory flows, duration and legal status stay of migrants in host countries. The Republic of Moldova is positioned at the intersection of two regional migration systems: post-Soviet (CIS) and European (EU). The most attractive country in the CIS is Russia. Over the past decade, the role of the European migration system has grown. At present, a growing proportion of labor migration is gained by the Western and South-Western European vector. In the European Union, the most attractive country for Moldovan migrants is Italy. In order to elucidate the causes and trends of emigration from the Republic of Moldova, social networks theory and neoclassical economic theory have a special importance.

The purpose of this study is to assess the flows and the determination factors of labor migration from the Republic of Moldova to the states of European Union. Taking into account the stated purpose, the following objectives were formulated:

1. Assessment of the intensity of population migration from the Republic of Moldova to the European Union compared to the CIS area.
2. Analysis of the positive and negative effects of migration in the Republic of Moldova.
3. Formulate conclusions and recommendations on the issue of labor migration to the EU.

The scientific novelty of the obtained results consists in: deduction of the current trends of labor migration from the Republic of Moldova to the European Union; highlighting the problems faced by Moldovan migrants in the context of their integration into the immigration states, analyzing the opportunities for capitalizing on the potential of labor migration for the development of the country

The important scientific issue solved in the researched field includes the evaluation of the positive and negative effects of the external migration of the Moldovan labor force. The study

confirmed the hypothesis of these effects for our country as a country of emigration, these being direct and indirect, socio-economic positive determined by remittances and the experience gained by migrant workers abroad and, on the other hand, the socio-demographic and negative social factors that have led to the deterioration of human capital.

In the Republic of Moldova a rich empirical and analytical material has been accumulated regarding the population's labor migration, identification of its trends and trends (V. Moșneaga [6,7,8], D. Cheianu-Andrei [4], Gh. Rusnac [7,11], V. Turcan [11], M. Vremis [13,14], V. Craievschii-Toarte [14]). At the same time, the historiographic analysis of the issue of labor migration has shown that the descriptive approach often prevails in scientific research, especially in native research.

The European institutions are aware of the need for a coordinated approach to the phenomenon of labor migration, which has led to the elaboration of an impressive number of directives, regulations, some of them in a project phase aimed at regulating, directly and indirectly, migration policies EU. Among the most important programs can be specified the Tampere Program (1999) which introduces the common asylum policy; The Hague Program (2005) for strengthening freedom, security and justice in the European Union, followed by the Solidarity and Management of Migration Flows Program 2007 - 2013 (2006); The European Job Mobility Action Plan 2007-2010, which provides for geographic and socio-professional mobility within the EU. The regional approach to the migration phenomenon, adopted by the European Council in 2005 and 2006, covers all stages of migration and seeks to use both the benefits of legal migration and insurance policies actions against illegal migration and trafficking in human beings.

Referring to the essence and regulation of the labor force migrating from Moldova to the EU, we consider that it is necessary to note that the study and analysis of the general tendencies of this process begins in the Republic of Moldova in the late 90s of the last century. Currently, the native academia of research and science has valuable empirical and analytical material on the labor migration of the population. With the exception of the "Statistical Yearbook of the Republic of Moldova", which includes references and statistical data on population migration, starting with the fourth quarter of 1998, the BNS "Labor Force Survey in Households" is conducted quarterly, in line with "EU Framework Regulation on Labor Force Survey in EU Countries". AFM is the main source of information on the situation and trends in the labor market, thus allowing the obtaining of conjunctural data on the size and structure of the offer and highlighting the seasonal phenomena that manifest themselves on the labor market.

At the beginning of the 21st century several sociological studies were carried out, with the subject of labor migration research: CBS AXA, CIVIS, etc.

Moldovan sociologist D. Cheianu-Andrei, in his study "Mapping the Moldovan Diaspora in Italy, Portugal, France and the United Kingdom of Great Britain" aims to assess the migrant's relations with the country of origin and the diaspora organizations, as well as the knowledge of the future projects, including the process of development and cohesion of these organizations.

Methodology of scientific research: Several methods have been used to compile this article: comparative, analytical, hierarchical, historical, geographic, statistical, cartographic, empirical. This study was conducted using qualitative approaches. The first method consists largely of desk

research, based on the in-depth review of existing data. In the literature review, reference is made to the following resources: IASCI-CIVIS 2010 datasets and reports, European Training Foundation materials, IOM reports, World Bank data, and other sources.

The notion of "migration" was introduced for the first time in the scientific circuit by English scientist E. Ravenstein in his study "The Laws of Migration", published in 1885. Although the paper focuses on data analysis only in the UK, the researcher has managed to formulate a universal set of "migration laws", which were later included in additional laws. According to Ravenstein's laws, the primary cause of migration is accompanied by external opportunities; the volume of migration decreases with distance; leaving an area by a migrant attracts a migrant from the immediate vicinity; migratory flows attract a countercurrent to migration; migrants crossing large distances head to industrial-commercial centers; city dwellers migrate less than those in rural areas; men migrate less than women; all people feel the need to improve their material living conditions. The overall cause of migration, according to Ravenstein, is the difference in development between the area of departure and the area of arrival. [1, pp. 9-10].

The neoclassical economy theory, founded by J. Arango, focuses on the differences in wages and conditions of employment, as well as the costs of migration. Generally, migration is conceived as an individual decision to maximize revenue [10]. Respectively, low wages are the result of the relative labor force surplus, and large ones are a consequence of the relative labor shortage.

The theory of migrant networks, formulated by M. Boyd, M. Douglas and J. Arango, F. Cases, in the second half of the 1980s of the last century, aims to explain the migration phenomenon by highlighting its dynamic and cumulative character. Social relations make connections conditional, providing potential migrants with access to information, support to identify the safest and cheapest arrangements to overcome entry bans in the destination country, support to find a job and a house, and possibly means livelihoods for the start of searches, emotional and social support [10].

Migration is not just an economic or social phenomenon, but also a historical reality with its own characteristics and stages. At present, the factors that have led to work abroad are largely of economic nature: the lack of opportunities to obtain adequate income for living. The migration process in the Republic of Moldova in the last 10 years has undergone a rising dynamics, the number of migrants rising by about 50-60 thousand annually.

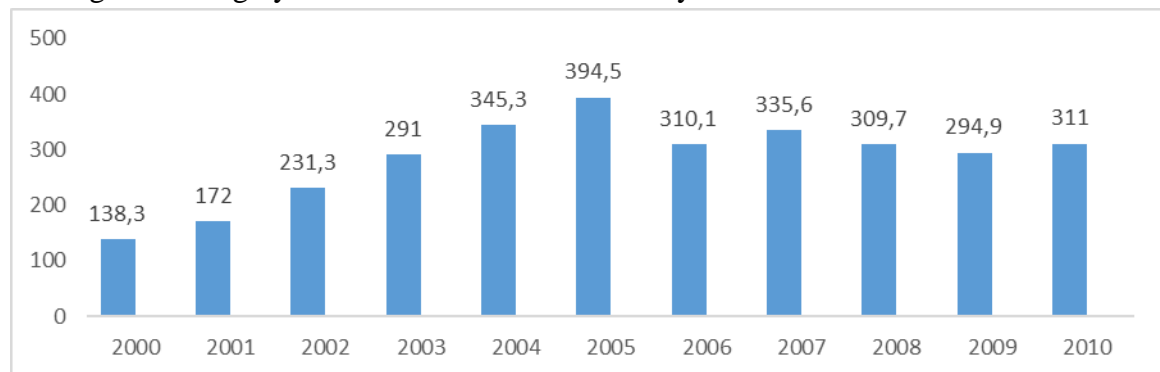


Fig. 1 Evolution of the number of migrants from the Republic of Moldova in 2000-2010 (thousands).

Source: National Bureau of Statistics.

Thus, according to the National Bureau of Statistics, the number of migrants increased from 138.3 in 2000 to 394.5 in 2005 or about 3 times (Figure 1). The data show that during the last decade the migration process had a considerable increase, especially between 2000-2005, when the annual number of migrants grew annually by about 40-60 thousand. Although the intensity of population migration has stabilized and even decreased over the last 5 years, it remains at a relatively high level (about 300 thousand annually), which represents about $\frac{1}{4}$ of the economically active population.

From the perspective of statistics, there are various national approaches to assessing the number of people involved in migration processes, which are different from international approaches in this respect. In this respect, the number of people in the country involved in migration processes is calculated differently. In the Republic of Moldova there are broadly used three approaches to the estimation of international emigration: "documented emigration", this form including the withdrawal of the residence visa and the declaration of long-term or forever emigration from the country, also known as emigration permanent; going to work or looking for work abroad, also considered to be "temporary / circular migration"; the leaving from the country registered at the border, including both: "documented / permanent emigration" and "temporary / circular migration" [14].

Years (2001-2006) - characterized by the measures adopted by the Government of the Republic of Moldova to promote the legalization and regulation of illegal migration flows, as well as the protection of migrants' rights in the countries of destination. During that period, illegal migration was caused by the difficulty of obtaining a visa, the lack of the possibility of going to work legally outside the country because of the small number of labor agreements concluded between the Republic of Moldova and other states, as well as by the high taxes that were due be paid to obtain legalization of the stay in the destination countries. During this period, bilateral agreements on labor migration were signed and consulates of the main recipient countries of illegal labor migrants (Portugal, Greece and Italy) [6] were established in the Republic of Moldova. The importance of reducing illegal migration is also highlighted in the 2005 Hague Program, which set out a balanced approach to it, combating illegal migration, associated with combating the fight against trafficking in human beings, especially women and children.

At present, the conceptual approach to labor migration regulation, institutional reform and closer cooperation with the European Union is being promoted. With the launch of the course towards European integration, the Republic of Moldova is making essentials efforts to regulate migration processes, and illegal migration at work is gradually being replaced by policies to regulate legal migration by signing agreements with countries of destination [6]. Referring to the geographical emigration destinations, we shall mention that if previously the tendency of labor migration from the Republic of Moldova to the CIS states was maintained, in the Russian Federation, relatively recently, the western and the south-western vector appears of labor migration. In this context, it is important to emphasize that there is a gradual shift of migrant workers towards EU Member States, especially to Italy, Portugal, Spain and Greece, which are characterized by the significant share of the informal sector in the economies of the countries [8, p. 126]. The forefront of the western labor migration was favored by a number of factors, the most important being the

following: the real geographical distance from the Republic of Moldova towards both the EU Member States and the Russian Federation ; the linguistic unit of Latin for Moldovans, the Turkish linguistic group for Găgăuzi, the Slavic linguistic group for Russian-speaking Moldovans; the network of known people created through the Jewish-Moldovan diaspora in Germany and other states; the liberalization of the visa regime between the Republic of Moldova and the European Union, starting with April 2014; a series of migratory amnesty and other migration regulation mechanisms in the Member States of the European Union, which allowed the transformation of the illegal status into the legal one; a high level of crime, entrepreneurship, police and bureaucracy in the Russian Federation [8, pp. 126-127]. Inside the two migratory flows, framed in the eastern and western corridor, three patterns of migration can be demarcated according to their duration: on the one hand, temporary migration, short or seasonal, is characteristic of the eastern corridor, and on the other hand, long-term or permanent migration is valid for EU countries. Thus, the travel abroad of persons who chose to leave in the former Soviet republics is explained by the predominance of rejection factors, which we equate with the needs induced by poverty and unemployment and the movements in the Western European states were determined by the attraction factors. In such cases, Moldovans have proposed to explore the opportunities structure in the destination countries (better living conditions, employment opportunities, higher earnings, exploitation of social contacts established with other migrants, etc.).

Higher earnings in the EU Member States, compared to those in the Russian Federation, are one of the key factors in this respect. According to sociological research data, a Moldovan migrant worker who works abroad earns 543 US dollars a month, in CIS countries-368 US dollars, while in western countries - in an average of 600-1000 US dollars and only in Germany - 1300 US dollars. Moldovan migrant workers working in the construction sector in Russia earn in the average from 450 to 750 US dollars and in the EU countries from 900 to 1500 USD [7, pp. 30-31].

With the increase of the number of people going to work, the amount of transfers of individuals abroad increased significantly, with a significant influence on the main macroeconomic indicators. At present, Moldova is one of the top remittance-dependent countries, ranked second in the world according to the World Bank's classification in 2016 (Fig. 2) Remittances represent 36% of total GDP. (PIB).

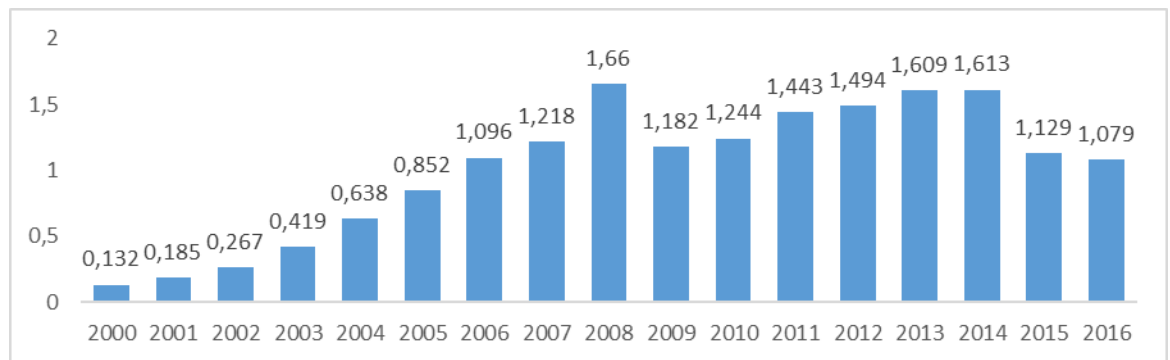


Fig.2 Dynamics of remittances in the Republic of Moldova, bln USD, years 2000-2016

Source: National Bureau of Statistics, NBM

Most Moldovan labor migrants legally enter the recipient countries, but there providing illegal work. The illegality of their work has a negative impact on the nature and conditions of work, salary, social security and law, the social status of the migrant. Due to labor migration, more than \$ 1 billion is transferred to the Republic of Moldova. International labor migrants' remittances are a source of foreign investments in Moldova. Money spills contribute to the macroeconomic stabilization of the country, strengthening the national currency, lowering the tensions of the social conflict, helping to increase the material status of labor migrants and their family members. However, these money is usually spent on consumption, and it is not allocated to the development and social-economic growth of the country. They contribute to rising house prices and are an additional stimulus for the labor migration of the non-financially supported population. [6]

Less than half of migrants hold a work permit - so they can potentially be connected to the social protection system in the form that is granted by the host country's legislation. (Figure 3). Of all migrants, they have a residence and work permit, 46.7% in the EU states, 40.6% in Russia.

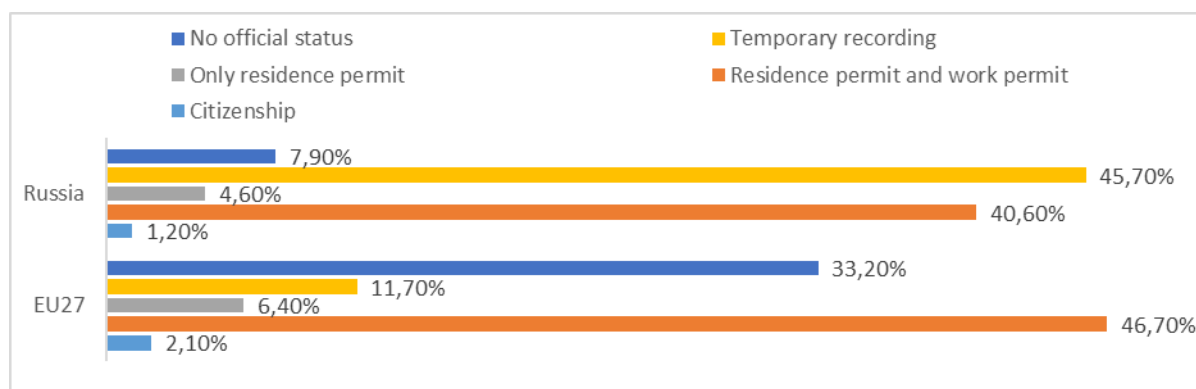


Fig. 3 Distribution of migrants by residence status, on groups of countries.

Source: *Migration of Labor*, NBS, 2008

But the data from the same survey indicates that holding a work permit does not even provide a connection to the social protection system in the host country. Exclusively 3.5% of migrants pay for contributions to the host country's pension fund, so from the total of 318.3 thousand migrants estimated in the study, they will only claim 21-22 thousand in the host country.

One of the characteristics of Moldovan migration is its relatively low "maturity". The maturity of migration is measured by several quantitative and qualitative indicators, including: the degree of residence regulation in the host country, the reunification rate of the family, the knowledge of the country's language and the level of integration / prosperity in the host society.

Thus, the study conducted in 2013 by IASCI-CIVIS on migration in Moldova showed that only 67% of long-term migrants consider their residence status and work regulated and family reunification among married migrants constitute only 21% and is quite low. Moldovan migrants do not frequently use banks in the place of migration: only 36% of the migrant households hold a bank account in the country of migration (predominantly the host countries of the European Union). Regardless of the level of training and qualification, most of them engage in unskilled labor in their country of migration, a situation that can be characterized as "sub-contracting" or "disqualification",

proof of the low degree of integration of Moldovan migrants in the destination countries. All this confirms the low level of maturity of the migration cycle from the Republic of Moldova. [12].

Another characteristic of Moldovan migration is the exodus of specialists from a number of sectors of the national economy, which caused the phenomenon of intellectual exodus for the country. [6] The economic and political instability of crises, poverty and low standards of living, unemployment or low wages, inadequate social protection and limited livelihood opportunities have caused people to leave. Migration of work is characterized by the presence of highly skilled labor and unskilled labor. The unemployed, workers, teachers, engineers, builders are the biggest share in this flow. All ethnic, age and gender groups of the country are present in labor migration. [6] Positive effects of "brain circulation" for countries of origin can be strengthened and used for country development.

The positive effects of migration for the Republic of Moldova contribute to the acquisition of: migrant workers with a new professional experience that improve their possessed skills, get acquainted with modern technologies and forms of production from abroad or from more developed countries. This contributes to the emancipation of the mentality, having a positive effect on the spread of new ideas and technologies; Money transfers in convertible currency in the country. Remittances can have a positive impact on macroeconomic growth and may favor long-term economic growth. In many countries, the volume of remittances significantly exceeds foreign direct investment and external development assistance.

In countries such as Albania, Bosnia and Herzegovina, remittances' contribution to the country's economy is almost comparable to export earnings, and Tajikistan, the Republic of Moldova and Kyrgyzstan were on the list of the top five countries after the share of remittances as a percentage of GDP in 2010, respectively 49, 6%, 31.4% and 27.9% [15, p. 185]. For example, in the period 2000-2012, net remittances in the Republic of Moldova grew more than 9 times, from 178.6 mln. US dollars to 1699 mln. US dollars in 2012 [9, p. 16].

At present, they account for around one-fourth of GDP, remaining the most important source of current account financing, and visibly outpacing foreign direct investment, government transfers and loans. World Bank experts confirm that the decrease in remittances has a direct impact on the rise of poverty in the country. For example, between 2010 and 2011, remittances reduced the poverty rate to 1.65 times on average in the RM [9, p. 19]. However, World Bank representatives say that the correct use of remittances, which are private resources for development purposes, is welcome, but adequate safeguards are required to attract adequate financial flows. Reducing pressure from surplus labor resources and social tensions; Receiving funding and aid from recipient states and international organizations specialized in social-economic development programs aimed at creating new jobs.

Among the negative effects of migration for the Republic of Moldova can be mentioned the following: the exodus of highly qualified specialists or the "brain drain"; the natural slowdown growth of the population and changes in the demographic structure; the emergence of national security issues and the worsening of the country's image on the international arena; the aggravation of a series of socio-political, economic, medical-sanitary, scientific-educational and other processes. Also massive inflows of remittances can become a real problem for poorly diversified and uncompetitive economies. The excessive dependence of the country on these financial inflows

creates more moral hazard situations, both at government level and at receiving families level of remittance (manifested by increasing wage claims to local employers and, respectively, by diminishing the supply of labor) [9, p. 18].

IN CONCLUSION, we note that:

1. Our country provides labor to both CIS countries and the EU. Improving the standard of living is the key reason that has prompted the vast majority of citizens to go to work abroad. The Republic of Moldova, being a small country, feels any fluctuation of people; about one third of the economically active population is involved in the emigration process and this has a negative impact on long-term demographic, socio-economic processes.
2. Starting with 2006, the main direction of activity is the valorisation of the phenomenon of migration, its positive effects and, first of all, the remittances of migrant workers for the social-economic development of the Republic of Moldova.
3. The Moldovan migrant's decision to stay permanently abroad or to return home will depend on the social, economic, political circumstances of the country of origin and the country of destination;
4. The phenomenon of labor migration generates a multitude of economic, demographic, social and political effects. This phenomenon also presents advantages and disadvantages for all involved in this phenomenon: starting from the migrants themselves and the members of their families, the native localities and the destination of the migrants, the branches of the economy in which they have activated and activate during the migration, the remaining population in the country of origin and the population of the destination country, the economies of the countries of origin and the economies of the countries of destination, propagating over the entire world economy.

BIBLIOGRAFIA:

1. BĂDESCU I. Migrația internațională ca problemă social. Studiu de caz: migranții pentru muncă din Italia. In: Sociologia Azi. Revista Institutului de Sociologie al Academiei Române, octombrie 2013, 87 p.
2. БУРДЕЛЬНЫЙ Е. Международная миграция в эпоху глобализации. In: Procesul de globalizare: provocări și soluții: USM, CEPO, 2004, 38 – 54 c.
3. CONSTANTINESCU M. Teorii ale migrației internaționale. In: Sociologie Românească, 2002, nr. 3–4, 93-144 p.
4. CHEIANU-ANDREI D. Cartografierea diasporei moldovenești în Italia, Portugalia, Franța și Regatul Unit al Marii Britanii. In: Ciclul de studii “Cartografierea diasporei moldovenești” II, realizat de Organizația Internațională pentru Migrație, Misiunea în Moldova în cadrul proiectului UE-OIM, finanțat prin intermediul Instrumentului European de Vecinătate și Parteneriat (ENPI), "Susținerea implementării componentei de migrație și dezvoltare a Parteneriatului de mobilitate UE-Moldova". Chișinău, 2013
5. IANCU N. Migrația internațională a forței de muncă: considerații teoretice și repere ale fenomenului migraționist în România în contextual European. Oradea, 2012. 30 p.
6. MOȘNEAGA V., Migrație și dezvoltare: aspecte politico-juridice. Chișinău, 2017, 117 p.
7. МОЩНЯГА В., РУЧАК Г. Мы строим Европу и не только... Chișinău: CEP USM, 2005. 195 c.
8. МОЩНЯГА В. и др. Проблемы реинтеграции и возвращения трудовых мигрантов из Европейского Союза в страны Пограничья. Вильнюс: ЕГУ, 2012. 344 с.
9. PROHNIȚCHI V. LUPUȘOR A. Opțiuni privind valorificarea remitențelor și economiilor emigranților pentru dezvoltarea Republicii Moldova. Chișinău: UNDP, 2013. 45 p.

10. TODARO M.P. A Model of Labour Migration and Urban Unemployment in Less Developed Countries. In: The American Economic Review, 1969, Vol. 59, nr. 1, 138-148 p.
 11. ЦУРКАН В. РУЧАК Г. Мотивы трудовой миграции: этнический аспект. În: Население Молдовы и трудовая миграция: состояние и современные формы, CAPTES, Chișinău, 2000, 158-170 с.
 12. VACULOVSCHI D. Migrație și dezvoltare: aspect soio-economice. Chișinău, 2017, 225 p.
 13. VREMIȘ M. Profilul femeilor migrante. Chișinău, 2016, 30 p.
 14. VREMIȘ M. CRAIEVSCHI-TOARTĂ V., HERM MICHEL POULAIN A., BURDELNÎI E., Profilul Migrațional Extins al Republicii Moldova, Organizația Internațională pentru Migrație (OIM), Chișinău, 2013, 320 p.
 15. World Migration 2008. Managing labour mobility in the evolving global economy. IOM: World Migration Report Series, 2009, 562 p.
- <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2000:0757:FIN:EN:PDF> (accesat 15.04.2019)
- [.file:///C:/Users/User/Downloads/Sociologia_migratiei.pdf](file:///C:/Users/User/Downloads/Sociologia_migratiei.pdf)
- <http://www.statistica.md/> (accesat 20.04.2019)
- sociologia-azi.ro/wp-content/uploads/2013/10/Chestiunea-sociala-a-migratiei-pentru-munca.pdf
- <http://siteresources.worldbank.org/INTMOLDOVA/Resources/ConsolidareaLegaturiiDintreMigratieDezvoltare.pdf>

NON-TARIFF REGULATIONS TRENDS IN THE CONTEXT OF BREXIT AND RELATION OF UNITED KINGDOM AND REPUBLIC OF MOLDOVA WITH EUROPEAN MARKET

Radu Lupan, doctorand
Academy of Economic Studies of Moldova
Email: lupan.radu.i@gmail.com

Abstract: This paper is designed in order to highlight the non-tariff regulations and barriers trends in the context of Brexit and European market trends.

While the effect of Brexit on trade between the UK and the remaining EU member states has received considerable attention, to date little work has considered the issue of non-tariff barriers. This column explores how increased documentary compliance and border delays will affect EU members' exports/imports to/from the UK. Time-sensitive goods are found to be most at risk of suffering from increases in non-tariff barriers.

On the other hand, an Association Agreement between the Republic of Moldova and the European Union, including its most important part DCFTA, was signed on June 27, 2014, however it entered into force on July 1, 2016. In accordance with provisions of the Association Agreement, the Republic of Moldova is obliged to take the necessary steps to ensure progressively consistency with the Union's regulations, especially with regard to the EU regulations on trade, since the free movement of goods is one of the four fundamental principles of the internal market and is guaranteed by the abolition of customs duties and other quantitative restrictions.

Timeliness of the topic: The world's competitiveness is due to the trade links between these countries and demonstrates how national economies manage in present, in the conditions of the crisis, but especially their future. The whole world is under the impact of globalization, and international trade is considered the main vector of its manifestation.

The proposed research methods are: scientific reading, analysis and synthesis, organization and systematization of information.

Keywords: Trade; Non-tariff barriers; Import; Export; Economics; EU

JEL CLASSIFICATION: F1

Affiliation to a strong economic, social and political union is an important opportunity and possibility for all developed and developing economies, especially in trade terms, to membership of the EU. First, there are no tariffs or customs duties between member states. Second, there are efforts to minimize 'non-tariff barriers' (NTBs). In particular, there are EU-wide agreements on product standards and rules of origin. This means that firms who import goods from outside of the customs union can then trade those goods across borders within the union without being subject to additional checks. Upon leaving the EU, the UK will no longer be party to these agreements and as such, there is likely to be a significant increase in NTBs.

Border delays and NTBs have been shown to be a potentially larger barrier to trade than tariffs. The importance of NTBs in the negotiations on the Transatlantic Trade and Investment Partnership and the EU-Canada Comprehensive Economic and Trade Agreement highlight their role as the most significant impediment to trade in developed markets with low tariffs.

NTBs reduce trade through two main channels. Firstly, they can increase the cost of doing business. NTBs that raise the cost of doing business may be quite specific – such as adherence to individual product standards – or more general, such as more stringent customs and documentary related procedures. Secondly, NTBs can restrict full access to markets (as in the case of quotas).

For EU member states conducting trade with the UK after Brexit, an increase in NTBs could reduce trade in two ways. First, outside of the customs union, British importers would be exempt from adherence to EU regulatory standards on goods imports from non-EU countries. This would harm

the competitiveness of exporters selling EU-compliant goods to the UK market. Second, under any scenario, delays associated with increased customs handling times and documentary compliance requirements will exceed the current arrangement of frictionless trade and therefore increase costs for EU exporters. While the extent of checks at the UK border is not yet clear, the EU Union Customs Code sets out procedures required for EU exporters when exporting to a third country. These procedures include declarations at point of export, outward customs arrival, outward clearance, import, inward customs arrival, and where goods consignments must be held in temporary storage. In addition to this paperwork, goods are required to pass UK customs inspection procedures and are likely to be subject to additional handling delays due to the increase in volume of imports subject to such procedures.

On the other hand it is estimated to have an effect of potential increases in border delays and documentary compliance on trade between Ireland and the UK after Brexit. Estimating the effect of potential increases in NTBs on trade requires two ingredients. First, we need the elasticity of trade to NTBs for high-income countries (both in aggregate and at the goods level). Second, we require an estimate for the likely increase in NTBs at the EU-UK border after Brexit.

From different studies, we can find a 9.6% decline in trade between Ireland and the UK, should the UK leave the Customs Union, as a direct result of an estimated increase in these delays. In particular:

- This equates to a 1.4% decline in total Irish exports and a 3.1% decline in total Irish imports under the current composition of trade between the two countries.
- Fresh foods, raw materials (such as metals and some intermediate inputs into firms' supply chains), and bulky goods are most exposed to delays.
- Trade in petrol and other fuels, and chemicals and related goods do not appear exposed to delays.

Also, to have a large-scale vision, we apply the approach to exports by EU countries to the UK. The extent to which countries are affected by increases in NTBs after Brexit depends on the volume and type of goods they trade with the UK. Certain goods, such as non-perishable foods, are found to be unaffected by NTBs. Countries whose exports to the UK are comprised of a larger share of these goods will be less affected. For example, Latvia appears most exposed to border delays due to its significant UK exports of Crude Raw Materials (in particular timber), goods that are highly sensitive to delays due to their role as intermediate inputs into supply chain networks and the fact that they are often perishable). The effect for Ireland is largely driven by its exports of fresh foods and manufacturing materials. Croatia and Slovenia appear least exposed. This is due to both the overall share of the UK market in their total exports the small quantity of their UK exports identified as being time-sensitive.

After decades of EU membership UK business regulations are already heavily harmonized with Europe, meaning that the UK could probably strike a very quick deal if – and it's a big 'if' – it was prepared to go on applying those rules in exchange for access to the EU single market, much as Norway does today.

In practice, the UK would be more likely seek to negotiate a novel form of Free Trade Agreement, but as Pawel Swidlicki of Open Europe notes, the trade-off is between "speed and scope". If the UK wants a broad deal, particularly one covering services, including financial services, it could take some time.

Past precedent for other deals suggests negotiations might take anywhere from four to 10 years. How long precisely might depend more on politics than economics.

German car makers and French winemakers might well be pushing for access to the UK, but given other tensions in the EU and the need for the deal to be agreed by a qualified majority vote, there would be plenty of scope for other nations to hold the process to ransom. In the absence of a deal

between the UK and the EU, the UK would then be required to follow World Trade Organization rules on tariffs.

The UK would pay tariffs on goods and services it exported into the EU, but since the UK would pay ‘most favored nation’ rates, that would prohibit either side imposing punitive duties and sparking a trade war. These WTO tariffs range from 32 per cent on wine, to 4.1 per cent on liquefied natural gas, with items like cars (9.8 per cent) and wheat products (12.8 per cent) somewhere in between.

John Springford, an economist with the Centre for European Reform, considers that the total cost of those tariffs would be large, ranging from a 2.2 per cent of GDP (£40 billion) to 9 per cent. Business for Britain, which campaigns for exit, estimates that at worst, tariffs would cost British exporters just £7.4 billion a year and says the UK would save enough on EU membership fees to be able to compensate exporters for that.

Damian Chalmers, professor of European Union law at the London School of Economics, says the bigger threat to the UK exports would not be from WTO tariffs, but other EU states imposing new regulations and other “non-tariff barriers” to keep UK services out. This is eminently possible, but is likely to take time. Having ceded responsibility for trade policy to the EU, the UK civil service may lack the capacity to strike major trade deals quickly. It is also possible, as David Cameron argues, that other countries will want to see what terms the UK receives in Europe before committing to their own deal, potentially leading to further delays.

A larger question will be about the UK’s bargaining power with countries whose domestic politics push them towards protectionism, not free trade. Professor Chalmers warns that striking trade deals with major economies such as the US, China and India would be “tough” for Britain. Brexit campaigners note that the EU has so far failed to secure such free trade deals, and suggest the UK would have a better chance negotiating in its own right with politicians in Washington, Beijing and New Delhi.

Other specialists consider that Britain is preparing to return to the 19th century in the event of a hard Brexit — or at least to experiment with unilateral free trade on a scale unseen since the repeal of agricultural tariffs in 1846 changed the course of history. But in the modern world, tariffs just aren’t as important as fans like President Donald Trump make them out to be. Other barriers, such as regulation, are likely to be the biggest obstacle to trade and cause of damage to the U.K. economy.

The government’s plan — temporary, of course, ministers assure us — is to allow 87 percent of the U.K.’s total imports in tariff-free, compared with about 80 percent today. Levies would only apply to meat, some dairy products, finished vehicles (although not car parts) and a small assortment of other goods. Since no customs controls will be applied at the, shall we say, porous border with Ireland, the U.K. seems willing to unilaterally allow all goods to be imported tariff-free, at least for a time. This is in line with advice the government has been getting from pro-Brexit economists. They argue that unilateral free trade will lower prices for consumers and force firms to compete harder, boosting their productivity. Before the U.K. repealed its protectionist Corn Laws, a similar argument was made: Cheap grain imports would drive bread prices down, allow industrialists to lower wages, and help industry flourish.

It’s politically impossible to make that case today, but a similar argument can be masked by verbiage about a boost to the U.K.’s international competitiveness that would offset the tariffs facing British exports. It all worked famously in the 19th century, helping to transform Britain from an agricultural into an industrial power. But the U.K.’s problem after Brexit won’t be the loss of the substantial tariff protections that come with being a European Union member; those, as free traders correctly argue, are as much of a curse as a blessing. The bigger danger is being kept out of

European markets by all sorts of other means applied to outsiders and even to some of the bloc's newer members.

In a recent paper, Erdal Yalcin from the University of Applied Sciences in Konstanz, Germany, and his collaborators calculated that non-tariff barriers such as import controls, subsidies, public procurement policies, and sanitary standards could reduce imports of affected products by up to 12 percent. That's not on the scale of the 50 percent drop in U.S. imports of German cars economists expect if Trump imposes a levy — but it's a substantial reduction nonetheless.

Lax U.K. import controls would lower one potentially costly non-trade barrier: border controls, with their delays and red tape. However, it looks like U.K. exports to the EU would still face that obstacle since the bloc hasn't committed to abolish customs checks. No economist, however, has a clear understanding of how regulatory obstacles on the EU side will affect U.K. companies trying to trade with Europe. That's because such barriers are numerous and differ between countries.

The Polish Economic Institute, a government-backed think tank, recently released a report on protectionism inside the EU. It argues that “old” members of the bloc often erect administrative barriers to stymie foreign rivals. They also protect their own firms with subsidies, even at the price of violating the common market's rules. According to the report, infringement procedures against the EU's longstanding members tend to drag on rather longer than they do against more recent entrants. Similarly, the EU more regularly orders its newer and less influential members to refund illegal state aid than it does the bloc's older and bigger ones.

With all that going on inside the supposedly free and single EU market, it's difficult to predict what barriers will be thrown up once the U.K. becomes an outsider. Most EU countries will be only too happy to push U.K. companies out of their markets after Brexit. Likewise, it's hard to estimate the impact of non-tariff barriers using those that already exist between the EU and U.S. as a benchmark. Britain will be in a far less powerful negotiating position than the U.S. when it tries to sign any trade agreement.

For Brexiters, much of the current exercise is about reliving the U.K.'s glorious history. The temptation to hark back to the days of the repeal of the Corn Laws is strong. The world, however, has changed too much for such time travel to address real-life problems. The reality of being outside the EU, dependent on it and yet having no say in its rules, hasn't quite dawned on the British yet. But hey, there will be tariff-free French, German and Danish marmalade to sweeten it all until the really painful trade talks with the EU and U.S. begin.

The current absence of political resolution and the fast-approaching date for Brexit means that there is a heightened chance of a no-deal Brexit. If so, World Trade Organisation rules will govern trade with the UK. Currently, the UK is part of the Single Market and the EU Customs Union. If there is a no-deal Brexit, EU law will cease to apply to the UK with the UK becoming a “third country” (i.e. a non-member of the EU) and as a result the UK would no longer be part of the Single Market or the EU Customs Union. As a result, World Trade Organisation (**WTO**) rules would begin to apply to trade between the EU and the UK with the EU's preferential trade arrangements with third countries ceasing to apply to the UK (in particular, Free Trade Agreements (**FTAs**)).

The WTO is a rules-based trading system, founded on a number of multilateral agreements between the numerous WTO Members and concerns trade in goods and (certain) services between the WTO member countries (**WTO Members**). Trading under the WTO rules is based on principles of “most favoured nation” (**MFN**) treatment and “national treatment”. The UK would need to change the terms of its WTO membership and the UK has submitted its own draft ‘schedule’ of trade commitments for goods (and most recently) for services to the WTO - these schedules determine the level of market access for imports of goods (i.e. tariffs) and services (i.e. the level of market access for particular types of services). The issue then becomes what trading under the WTO rules with the UK in a no-deal Brexit will mean for businesses in Ireland as part of the EU 27 in relation to trade in

goods and in services. The General Agreement on Tariffs and Trade (**GATT**) governs how tariffs are applied on goods and addresses certain non-tariff barriers on goods (e.g. product standards specifications, quotas and licenses).

Under GATT, WTO Members cannot normally discriminate against other WTO Members (i.e. the MFN principle) and therefore the UK would need to impose the same tariffs on goods coming from Ireland as from everywhere else – Ireland (as part of the EU) would also need to impose tariffs of goods from the UK according to the tariffs agreed by the EU with the WTO under its schedules (and again consistent with the tariffs it imposes on goods coming from other WTO Members such as the US and China).

While there are some exceptions to this principle (e.g. for FTAs (such as the EU/Singapore FTA) and customs unions (such as the EU Customs Union)), the MFN principle must apply to all WTO Members. Under GATT, each WTO Member (e.g. the EU (including Ireland)) must accord national treatment to other WTO Members (e.g. the US and China) - this means that WTO Members (e.g. the UK in a no-deal Brexit) must treat goods coming from other WTO Members (e.g. from Ireland) in the same way as their domestic goods (once the appropriate tariffs have been paid on the overseas goods).

In a no-deal Brexit, the UK's trade in services with the rest of the world (including Ireland) would be governed by the General Agreement on Trade in Services (**GATS**) – in broad terms, WTO Members have greater flexibility to restrict cross-border services under the WTO rules. The MFN principle applies to trade in services just as it applies to trade in goods but there are more exceptions when it comes to services than for goods (e.g. WTO Members can tailor their commitments under GATS in line with their national policy and schedule their commitments to limit the level of market access that foreign providers of services are permitted).

Services are also subject to the national treatment principle under GATS meaning that a WTO Member should not operate discriminatory measures benefiting domestic services or service suppliers (though a WTO Member can choose to impose national treatment restrictions on certain imported services). One complication is that the demarcation between goods and services for WTO purposes is often not clear and this will add to the post-Brexit challenge for businesses in Ireland.

As a third country in a no-deal Brexit, the UK would face various non-tariff barriers in trading under the WTO rules, including technical barriers to trade, quotas, import licensing, standards and rules of origin requirements as well as administrative and bureaucratic delays (e.g. at customs) - given the substantial trade between Ireland and UK (including between Ireland and Northern Ireland), the impact on business in Ireland of such non-tariff barriers to trading should not be understated.

Several authors point out that since 2006 Russia has understood that the Black Sea Basin's sliding towards Euro-Atlanticism will not be tolerated, imposing economic sanctions on Georgia and the Republic of Moldova. The Russian Federation gave a new blow to our country through the Russian Sanitary Service (Rospotrebnadzor), which on September 10, 2013, announced the ban on imports of Moldovan wines. The technical reasons invoked by Russia are questioned, given that Moldovan wines have passed all the EU health tests, where phytosanitary standards are stricter. So, according to the author, Russia, being a member of the World Trade Organization in 2012 after 18 years of negotiations, clearly violates the principles of the Organization. Academic research has shown that economic sanctions that affect bilateral trade relations increase the volume of trade with alternative partners.

Regarding the effects of the embargo, because of the excessive dependence on the Russian market, Moldovan wine producers remained abruptly without solutions. Other outlets were not sufficiently developed, and in order to overcome the crisis, it was necessary to develop new long-term economic development plans. Wine producers were forced to stop production and put wine on hold. Thus, in

the first half of 2014, the volume of wine and grape exported by Moldova was 4.8 million decalitres, which is a decrease of 30.4% compared to the same period of 2013. " more exports to the Russian Federation have suffered. If we are to make a comparison, then the volume of exports on the Russian market in the first half of 2014, decreased by 77%. During this period, wine was exported in the amount of 40 million euros, while in January-June 2013 the export volume amounted to approximately 63.8 million euros.

An important aspect to be considered in this context is the reorientation towards other outlets. The Russian market has been lost, but exports have increased in Poland and the USA, and during this period the emphasis was on the production of quality wines. On the one hand, in order to show its force, Moscow launched direct negotiations with representatives of wine factories in the autonomous region of Gagauzia and offered some the possibility to export wines to Russia. On the other hand, the European Union has liberalized the Moldovan wine import market to support domestic winemakers. However, Moldova needs to strengthen its presence on the EU market and access non-traditional markets for its wines.

Referring to the new economic sanctions imposed by Russia, several authors believe that Russia's decision to ban the import of fruits, cans and meat from the Republic of Moldova has speeded up the implementation of the Association Agreement between the Republic of Moldova and the European Union. Non-tariff economic sanctions are rusty tools that produce unwanted effects. The embargo is not a new method of political blackmail practiced by Moscow.

The biggest effect of restrictions imposed by Russia is on the ban on fruit imports, materialized in a 76% decrease in Moldovan exports. Stopping wine and spirits exports is less dramatic for 2014 than in 2013, the reason being the introduction of this measure as early as 2013. The effect was also felt, however, by reducing exports by 45 million dollars. Restrictions on meat imports caused a loss of USD 17 million, and the introduction of increased customs duties on 19 product categories reduced export to Russia by USD 7 million.

Thus, the result of measures taken by the Russian Federation against Moldovan products project Moldova's exports to this destination in the amount of US \$ 145 million or 25% for the whole of 2014. And the effect on GDP, as estimated GET Moldova declined by 2% for 2014.

Similarly, German Economic Team Moldova has the opinion that a substantial increase in exports to European markets could change Russia's behavior in trade relations by renouncing non-tariff economic sanctions as an instrument of blackmail against the authorities in Chisinau.

In this context, it is noteworthy that the EU has so far responded to Russia's aggression against Ukraine by introducing sanctions against those responsible for undermining the territorial integrity of Ukraine, as well as by adopting selective sectoral sanctions (restrictions on foreign trade in technologies - petroleum production and dual-use products - and the limitation of access for Russian banks co-owned by the Russian government to the European capital market). The question remains open whether and what else could be changed in the current EU policy towards Russia and how this could affect the existing format of the Eastern Partnership.

In 2018, the Russian Federation reached the fourth place in the top of the countries after the destination of Moldovan exports, after Romania, Italy and Germany. This reveals an optical change of the Moldovan companies and exports.

In 2018, exports of goods destined for the countries of the European Union totaled 1.9 billion US dollars, 16.6% more than in 2017. Moldovan goods deliveries to the EU account for 68.8% of total exports (65.8% - in 2017). CIS countries were present in Moldovan exports with a weight of 15.4% (2017 - 19.1%). Exports of goods to these countries declined by 10% compared to 2017, reaching a value of 416 million US dollars.

Last year, Moldova's exports to Romania (+ 31.9%), Italy (+ 31.2%), Germany (+ 32.4%), Turkey (+ 2.1%), Ukraine (+ 22.6%), Czech Republic (+ 43.0%), Serbia (1.9 times), the Netherlands (+

35.1%), United Arab Emirates (4.8 times). At the same time, exports to the United Kingdom (-42.1%), the Russian Federation (-14.1%), Bulgaria (-38%), Belarus (-20.7%), 7%), etc.

After four years have passed since the signing of the Association Agreement with the EU, there has been a complete shift in geographical direction on the export and import side and the exchange of positions among the top trading partners. At the same time, on the import side, the share of European countries is the top one and accounts for more than half of the total goods and products inputs in the Republic of Moldova. The trade relations of the Republic of Moldova with different countries which have a certain level of development are anyway influenced by the non-tariff barriers. This factor confirms one more time, that even if we speak about a high developed country or about a country from the „third world”, not everything is ruled through tariffs.

REFERENCES

MANUALS, MONOGRAPHS, TEACHING, BROWSING

1. Michel Rainelli. International trade. General perspectives. The New Theory of International Trade. ARC 2004. ISBN: 9975-61-356-X
2. International trade. Vol.1: Country Specialization and Multilateral Trade System. 2013. ISBN 978-606-505-776-0
3. Natalia Lobanov. International commercial transactions: university course. Chisinau, ASEM, 2012. ISBN 978-9975-75-598-6.

ELECTRONIC RESOURCES

1. Federation of Self Employed & Small Businesses Limited. [2019] Available: [https://www.fsb.org.uk/standing-up-for-you/brexit/what-small-businesses-should-be-thinking-about/trade-in-goods/sector-specific-non--tariff-barriers-\(e-g-sanitary-and-phytosanitaryrequirements\)](https://www.fsb.org.uk/standing-up-for-you/brexit/what-small-businesses-should-be-thinking-about/trade-in-goods/sector-specific-non--tariff-barriers-(e-g-sanitary-and-phytosanitaryrequirements))
2. Bloomberg. [2019] Available: <https://www.bloomberg.com/opinion/articles/2019-03-13/unilateral-free-trade-won-t-help-u-k-after-brexit>
3. CEPR Policy Portal. [2019] Available: <https://voxeu.org/article/impact-non-tariff-barriers-eu-goods-trade-after-brexit>
4. A & L Goodbody. [2019] Available: <https://www.algoodbody.com/insights-publications/brexit-and-the-world-trade-organisation>

EVALUATION ASPECTS OF THE MECHANISM OF FINANCING OF THE RESEARCH SECTOR FROM REPUBLIC OF MOLDOVA IN THE CONTEXT OF EUROPEAN TENDENCIES

drd. RAILEAN VERONICA

e-mail: veronica_pvp@mail.ru

Scientific coordinator: dr., conf. TIMUȘ ANGELA

e-mail: ince.timush@gmail.com

National Institute for Economic Research

Republic of Moldova, Chisinau, Ion Creanga, 45, Street

(+373 22) 50-11-01

Abstract: *This study reflects aspects of the evaluation and financing process of the scientific projects of the Republic of Moldova, as well as analysis of the European trends in the research-development-innovation sector.*

Keywords: *evaluation projects, funding science, research European trends*

JEL CLASSIFICATION: O320, O33, O39

INTRODUCTION

In most of the European countries, funding for the research sector is achieved through the research project competitions. The procedure for funding scientific activities varies from country to country and is exercised by different institutions. In Germany, the institution responsible for financing the research sector is the "German Research Foundation", which has the task to allocate the funds through methodologies specific to each funding instrument. In France, the "National Agency for Research" has the mission to implement the funding of research projects through competitive selection that respect international standards. In Romania, the "Executive Unit for Financing Higher Education, Research, Development and Innovation", that has the mission to evaluate and funding research projects for: higher education, research, development and innovation. In the Republic of Moldova, the responsible institution is "The Public Institution Agency for Research and Development", whose mission is to organize competitions for the financing of research projects.

From the 250 countries, only 70 allocate funds, for research and development, more than 2% of GDP. These includes: United States, Germany, Australia, Singapore, Slovenia, etc. Countries that allocate over 4% of GDP, to various forms of research and development, are South Korea and Israel. The Republic of Moldova allocates on average 0.35% of GDP per year, about 25 million USD, or 7 USD per capita. In Romania, the research sector is funded annually with 1.5 billion USD, or 75 USD per capita. In the year 2017, in the Moldovan science and innovation sector were active, 48 organizations, that includes: institutional members - 19, profile members - 27 and affiliated members - 2. Scientific and innovation activity took place within 457 scientific projects, that includes: at national level - 335, bilateral and multilateral - 55 and international - 67. [10]

The evaluation of the research sector funding is a subject dealt with by centuries of scientists and researchers of merit, from which we can remark the autochthonous authors: Gh. Duca, I. Petrescu [2], V. Fetiniuc, I. Luchian [3], T. Furdui [4], Gh. Cuciureanu [1], A. Șușu-Țurcan [11], and others. Studies and researches by these authors are a theoretical and practical value.

MATERIALS AND METHODS

The general research methods used, in the present study, are oriented primarily on the theoretical processes and after that on the presentation of the evolution of the Moldovan research sector, in the last five years. Was applied the following scientific methods:

- the method of scientific abstraction - which has allowed the elimination of what is not essential, irrelevant and random, and to establish what is essential, general and relevant to define the concept of evaluation and funding of the research sector;
- method of analysis - which marked the aspect of the financing process of the scientific activities deployed by the organizations in the field of science and innovation in the Republic of Moldova;
- the analogous and comparative method - with which were reflected the distinctive and similar aspects of the evaluation process and the volume of science funding in different states;
- the statistical and economical-mathematical method-that were achieved through periodic and exact observations of the dynamics of global research and development expenditures.

As an information basis used for the elaboration of the present study, were served a series of secondary sources, such as: Reports of CSSDT activity and the main scientific results obtained in the field of science and innovation for the years 2013-2017, EUROSTAT, WORLDBANK, R & D Magazine, Battelle, OECD and others.

RESULTS AND DISCUSSIONS

Evaluation of research-development-innovation projects in the Republic of Moldova

Evaluation is an assessment systematic and objective of the research and development project or program before to starting, ongoing or finalizing, of the structure of the implementation mode and its outcomes in order to determine the relevance and the degree of achievement of the objectives, the evolution of its efficiency, effectiveness, impact and its sustainability. [7]

The evaluation of the research projects is based on the evaluation sheets that appreciate the four important dimensions: the scientific and technological relevance of the project, the impact of the project, the project management and implementation, and the competence of the scientific team of the project.

Table 1 presents a comparative analysis of the general evaluation criteria of research development and innovation projects in the Republic of Moldova and the European Union.

Table 1 General criterion for evaluation of research-development- innovation projects in the Republic of Moldova and Framework Program Horizon 2020

Project evaluation criteria:	
Republic of Moldova	European Union
<ul style="list-style-type: none"> - Relevance - Efficacy - Efficiency - Sustainability - Impact 	<ul style="list-style-type: none"> - Excellence - Impact - Quality and efficiency of the implementation

Source: Tables 1,2 was developed by author after [8, 12]

According to the Methodological Framework for the Evaluation of Research and Development Projects and Programs in the Republic of Moldova, the five general criteria are on the basis of the evaluation of the scientific projects of the research sector in the Republic of Moldova,

that in the most part correspond with the criteria that were recommended for the evaluation of the projects from the Framework Program Seven of the European Union. At the moment, the Framework Program Horizon 2020, has on the basis of the evaluation of the scientific projects, the three following criteria: excellence, impact and implementation.

Methods of evaluation of scientific projects in the Republic of Moldova and the European Union are presented in Table 2.

Table 2 Methods of evaluation of research-development-innovation projects in the Republic of Moldova and the European Union

Methods of evaluation of scientific projects:	
Republic of Moldova	European Union
Economic rate of return	Cost benefit analysis
Peer evaluation	Process evaluation
Case studies	Evaluation of results
Logical modeling	Needs assessment
Benchmarking	The SWOT analysis
Bibliometric analyzes	Explanatory Models
	Systematic models
	Models oriented on theory

As can be seen from Table 2, methods of evaluation of scientific projects, which are stipulated in the Methodological Framework for the evaluation of research and development projects and programs in the Republic of Moldova, are different from those of the European Union. The evaluation methods of R & D-innovation projects are, in fact, economic indicators that do not reflect the performance of the results and these needs to be revised and adapted to the European ones.

Financing of the research sector from Republic of Moldova

The financing of the research sector in the Republic of Moldova is done centralized mode by the Ministry of Education, Culture and Research, which has the mission to elaborate public policies in this field. [5]

The sources of funding for research and innovation are:

- the resources of the national public budget;
- revenue collected from research and innovation organizations;
- the resources of projects financed from external sources;
- means of organizations interested in research and innovation activity;
- other legal sources.

Funding of scientific activities is achieved on types of scientific research: fundamental and applicative. *Fundamental research* is the activity aimed to obtain a new scientific knowledge, to formulate and to verify new hypotheses and theories. *Applied research* is activity aimed to broaden knowledge and use new knowledge for creating new processes, products and services or improving them.

The modalities for the allocation of financial resources for the research sector are stipulated in the Code of Science and Innovation [9], as well as in the Partnership Agreement between the Government and the Academy of Sciences of Moldova [7]. In 2017, according to the strategic directions for the research sector of the Republic of Moldova, expenditures were made, amounting to 336.4 million MDL, which accounted for 82.9% of the volume of expenditures by sector. The highest share of expenditures was for the strategic direction "Innovative materials, technologies and products" with a volume of 112.0 million MDL (33.3%), strategic direction "Biotechnology" - 109.7

million MDL (32,6%). Expenditures for the strategic direction "National Patrimony and Society Development" were also significant - 65.2 million MDL (19.4%), and the lowest values were "Health and Biomedicine" and "Efficiency, Energy and capitalization of renewable energy sources - 44.7 million MDL (13.3%) and 4.8 million MDL (1.4%), respectively. The "Management of Science and Innovation Management" program, in the reporting year, registered a quota 17.1% of the executed expenditures, with a volume of 69.5 million MDL. [10]

For the research sector budget allocations in volume of 419.4 million MDL were made and executed in a proportion of 96.8%, amounting to 405.9 million MDL. The fundamental scientific researches in the volume of expenditures for research and innovation were executed in a proportion of 32.0% (107.7 million MDL), scientific researches applied - 68.0% (228.7 million MDL).

The percentage share of GDP expenditure for science in the Republic of Moldova, on average, for the period 2013-2017, constituted 0.32%, thus decreasing by 0.12% or ≈ 1.5 times. This amount is incomparable to that of the developed countries, which represents 2-3% of GDP per year. The budget allocations for the financing of the research and development activities during the period 2013-2017 amounted to an average of 394.7 million MDL and registered an increase of ≈ 1.4 times. In the last five years, the volume of research funding increased by 113.1 million MDL and recorded an average annual growth rate of 106.7%.

In the years 2013-2017, from total research expenditure, the significant share of expenditures on general resources and domestic revenue, which is accounted still occupied 94%. Expenditures financed by European funds have an average share of 6%, which is characterized by the increase of the interest researchers in these funds.

For the development of the technical-scientific base, according to the Code of Science and Innovation, academic institutions must allocate 10% of the total volume of expenditure annually. During the analyzed period, financial resources for travel, equipment, investments and capital repairs were allocated in the amount of ≈ 6.2 million MDL or $\approx 2.3\%$ of the total public funds. In dynamic, these spending, from 2013 to 2017, decreased by ≈ 9.8 times. At the same time, there was a negative trend of decreasing the number of patents filed and registered. Thus, the number of depreciations submitted and those recorded during the study period decreased by ≈ 1.3 times each.

Another consequence of stagnant funding for the research sector is also the average age of a researcher. In 2017, the largest share is the researchers over the age of 65 (21.8%). The young people's lack of interest in the research activity is conditioned by their low stimulation, for example, their scholarship, in the doctoral school are ≈ 1140 MDL per month. [6]

It is necessary that the increase in budget allocations should not only contribute to the covering of labor and infrastructure maintenance costs, but also to help solve major problems, such as: renewing the technical-material basis, attracting young people to the research sector, working with the private sector for the development and implementation of innovations and others.

European trends in research-development-innovation

At the moment, widely recognized fact is that the investing in research and in human capital, generates medium and long-term benefits for the entire society, which is the key factor for ensuring growth and stimulating progress. [3]

Table 3 shows the dynamics of global research-development-innovation spending for the period 2013-2017 years in regional division.

Table 3 Dynamics of global research-development-innovation in Regional Division, for the period 2013-2017, billion USD

Region	2013	2014	2015	2016	2017
America	489	504	590,4	605,9	621,9
Asia	596	633	795,2	845,4	887
Europe	349	351	416,6	423	429,2
Therest of the world	83	87	124,3	124,5	128,2
Total	1517	1575	1926,5	1998,8	2066,3

Source: Developed by author after: R&D Magazine, Battelle, OECD, WoldBank

The dynamics of global research-development-innovation spending, during the last five years registered a general growth trend, which has increased by 549.3 billion USD or ≈ 1.4 times. Over the period 2013-2017 years, global allocations for the research sector were 1816.7 billion USD.

A positive dynamics of research and development spending is also present and in Europe. We mention that the European Union tends to maintain its position as a world leader and has had an average volume of funding of 393.8 billion USD, which from 2013 year to 2017 year, has increased by 80.2 billion UDS or by ≈ 1.2 times. The annual growth rate of funding for scientific activities was $\approx 105\%$. The share of European spending on science in total global spending was $\approx 21.8\%$.

For the year 2018, were established, the main priority directions of the European Union, and the amount of the financing from the Framework Program Horizon 2020 (Figure 1).

Figure 1 Distributing the Framework Program Horizon 2020 budget, on priority lines in 2018

Source: Research and innovation [12]

From the total budget of the Horizon 2020 Program, the largest share is for "Societal challenges" that is $\approx 38\%$ or 29.7 billion EUR, followed by the strategic direction "Excellent science", which is 24.4 billion EUR or $\approx 31\%$. Particular attention is paid to the European Commissions "Industrial Leadership", which represents $\approx 22\%$ or an amount of 17 billion EUR. The smaller shares of the strategic directions are: "Other", "European Institute of Innovation and Technology" and "Euratom (2014-18)", with a share of $\approx 4\%$ (3.2 billion EUR), $\approx 3\%$ (2.7 billion EUR) and $\approx 2\%$ (1.6 billion EUR), respectively.

The European Trends in Financing the Research and Innovation Sector for the period 2021-2027 are supported by European policies that involve a Multiannual Financial Framework with a budget of 102.6 billion EUR, which will to be distributed as follows:

- Research and Innovation Framework Program 2021-2027, Europe Horizon: 97.6 billion EUR of which 3.5 billion EUR for the InvestEU Fund and 10 billion EUR for research and innovation in food, agriculture, rural development and bio-economy.

- Euratom research program and training programs: 2.4 billion EUR.

- International Thermonuclear Experimental Reactor (ITER): 6.1 billion EUR.

- Other: 3 billion EUR.

The Horizon Europe program will have 3 pillars:

- Science opens.

- Global Challenges.

- Open innovation.

For research and innovation, opportunities will also be opened in other areas:

- European Cohesion Policy.

- European Defense Fund.

- The Digital Europe Program. [12]

CONCLUSIONS

1. The current methodological framework for the evaluation of research and development projects has been developed in other conditions than in those that has been present and requires a reformation and adaptation to that of the Horizon 2020 Framework Program.

2. In 2017, were funded the following national strategic directions: Innovative materials, technologies and products; biotechnology; Health and Biomedicine; Efficiency, energy and the use of renewable energy sources; and Management of Science and Innovation. According to these strategic directions for the Moldovan research sector, expenditures were made in the amount of 336.4 million MDL, which accounted for 82.9% from the volume of expenditures by sector.

3. The percentage share of GDP for the science of the Republic of Moldova on average for the period 2013-2017 amounted $\approx 0.32\%$, thus decreasing by 0.12% or ≈ 1.5 times. This percent is incomparable with that of the developed countries, which represents 2-3% of GDP per year.

4. Expenditures financed from the European funds have an average share of 6%, which is characterized by increasing the interest of the researchers for these funds.

5. The financial allocations for the development of the technical-scientific base decreased by ≈ 9.8 times. At the same time, there was a negative trend of decreasing number of the deposited and registered patents, which decreased by ≈ 1.3 times each.

6. Due to the Horizon 2020 Framework Program, the European Union tends to maintain its position as world leader in research. The European financial resources for science have an increasing trend.

7. European trends in the financing of the research and innovation sector for the period 2021-2027 are supported by European policies, which involve a Multiannual financial framework with a budget of 102.6 billion EUR.

REFERENCES

1. CUCIUREANU Gh., Teză, Perfecționarea managementului sistemului național de cercetare-dezvoltare în contextul proceselor de globalizare, În: <http://www.cnaa.md/thesis/22098/>
2. DUCA G., PETRESCU I., Managementul Academic, Tipografia Centrală, Chișinău, 2015. 680p.
3. FETINIUC V., LUCHIAN I., Tendințele globale ale cheltuielilor pentru cercetare și dezvoltare. În Akademos, nr. 1-2 (9), Chișinău, 2008, pp. 64-67.

4. FURDUI T., Finanțarea și valorificarea alocațiilor bugetare în sfera științei și inovării. În Akademos, nr. 1-2 (9), Chișinău, 2008, pp. 8-16.
5. HG 691 din 30.08.2017, Regulamentul cu privire la organizarea și funcționarea Ministerului Educației, Culturii și cercetării. În Monitorul Oficial nr. 322-328 din 01.09.2017.
6. HG nr. 1009 din 01.09.2006, cu privire la cuantumurile burselor, altor forme de ajutoare sociale pentru studenții din instituțiile de învățământ superior, elevii din instituțiile de învățământ profesional tehnic postsecundar și postsecundar nonterțiar, profesional tehnic secundar și persoanele care studiază în învățământul postuniversitar. În Monitorul Oficial nr. 142-145 din 01.09.2006.
7. HG nr. 1452 din 30.12.2016, Acordul de parteneriat dintre Guvern și Academia de Științe a Moldovei pentru anul 2016. În Monitorul Oficial nr. 19-23 din 20.01.2017.
8. IDSI, Cadru Metodologic pentru evaluarea proiectelor și programelor de cercetare-dezvoltare în Republica Moldova, Chișinău 2013, În: https://idsi.md/files/file/Cadrul_metodologic_Glosar_final.pdf.
9. LP nr. 259 din 15.07.2004, Codul cu privire la Știință și inovare al Republicii Moldova. În Monitorul Oficial nr. 125-129 din 30.07.2004.
10. Rapoartele privind activitatea CSȘDT și rezultatele științifice principale obținute în sfera științei și inovării, pentru anii 2013-2017.
11. ȘUȘU-ȚURCAN A., Методология исследования оценки развития научной деятельности в Республтке Молдова, Chișinău: Complex Editorial IEFS, 2010, 258 p.
12. www.europa.eu

LOBBYING: THE RELATIONSHIP BETWEEN STATE, MARKET AND THE PUBLIC SECTOR

MANTALUȚĂ ALIONA

PhD Student, Academy of Economic Studies of Moldova

e-mail: mantaluta.aliona@gmail.com

Abstract. *Lobbying has become an inseparable companion of the decision-making process and firms but also other social actors (non-governmental organizations, individuals, private and civil sector) are forced to reflect this fact, if they want to promote their interests effectively and if they want to avoid regulation that would harm their interests. The real modern lobbying in the EU is associated with the 80s of the 20th century. This is mainly due to the importance of the Single European Act, which involved the European Parliament in the decision-making process, accelerated completion of the single market and restored the qualified majority voting in the EU Council. This led to the strengthening of the supranational elements in the European Union. The power and influence of the supranational institutions was enhanced and the supranational methods of decision were restored (qualified majority, later veto of the European Parliament). The interests groups were also not any more limited by the national arena. The Single European Act and the following primary European treaties opened a new space for the interest groups and introduced new opportunities and possibilities for their actions. The increase in lobbying activities in Brussels therefore dates back to the second half of the 80s. The quantity of lobbying and its study further expands proportionally with closer European integration, along with higher level of transferring powers to Brussels. Currently Brussels is the second largest lobbying centre in the world, after Washington.*

Key words: *Lobbying, European Union, lobbying activity, government relations*

JEL CLASSIFICATION: G28

The lobbying activity in four types, leading to issues such as the origin of the interests, the type of interests represented organization of interests and origin of resources used.

The four types of lobbying are represented by the following professionals, entities or departments:

- (a) Parliamentary affairs advisory services or Social Communication of Ministries (public lobbying);
- b) Government relations executives located in departments corporate / institutional affairs (lobbying institutional);
- c) Class entities, (class-based lobbying); and
- d) Lobbying and consulting offices (private lobbying).

Public lobbying refers to the activities of Ministries, Companies State, Municipalities, Regulatory Agencies and other state bodies, the order to put pressure on the Executive and Legislative branches with secure their rights or plead new ones.

Generally, all organs have the Parliamentary Advisory Departments with the to influence decision makers on what is best for government itself, and this is because government often advocate diverse and conflicting interests, acting as pressure on the dispute over funds or skills.

Institutional lobbying refers to the performance of corporate or institutional affairs of private companies, which are dedicated to relations with the different spheres and levels governmental organizations.

Since the activity is not and due to the stigma of marginality that lobbying advertising agencies, communication agencies, advertising agencies, Public Relations, Law Firms and Political Consulting Act in the sector, but do not assume themselves as such. In this way, the universe of consulting and lobbying offices is broad and at the same time very difficult to grasp.

Usually these offices are run by a single lobbyist, who impresses his style on dealing with clients, who, most of the time, are private national companies and in smaller number, class entities.

It is noticed that the governmental lobby in the Legislative is, without shadow of prevailing doubt, either through parliamentary advisory Presidency of the Republic, Ministries, Municipalities and state enterprises, or through organs of the Judiciary and Public Ministry.

Entities of the business sector are the second group more numerous, followed by trade union and professional representations.

In the Legislative organ, there are several lobbyists representing segments of organized civil society, both from the public sphere, and of the private sphere; there are also private institutions created specifically to provide lobbying services to groups who wish to hire them.

Therefore, there is a high institutionalization of the Lobbying activities, although not regulated. However, as we can see, the discussion about lobby is not a simple task. The lack of knowledge about the activity, the and systematized analyzes of their exercise in the country, and the negative bias that access to reliable data and its strategies and more general.

It should be noted that the state has for a long time - there are some who maintain that until today - had a dilemma about the promotion of the capacity of the market to promote the effective search for social welfare, understood in the individual freedoms capable of generating an increase in the wealth of society in which was inserted, so much is that principles of classical economics in arguing in that sense remained unanswered.

Then, people began to look for a model of society and state, based on normative assumptions that would lead everyone to the consummation of the longed for social welfare without placing barriers to individual freedoms.

It was as a result of this search that theories were created placing solidarity as the foundation and objective of public action, consolidating the notion of public service as an instrument to resolve the questioning about which areas are strategic for social welfare and that should be targeted state intervention and which sectors should be left to regulate the market, and the State should ingest little, only in cases of obvious abuse.

It is not improbable to establish that public services are one of the answers, if not the most important one, to the realization, with certainty to the liberal economists, of the implausibility of individuals seeking the their interests tend to promote the general interest.

In this way it is possible to perceive the existence of a latent distancing between the role of the State in offering and constituting social welfare. A model put into practice in some countries based on competitive regulation was then created.

It can be affirmed that the public service was born from the need of the State to regulate and offer services to the population, that is, the social self-preservation. Insofar as public services are made available to the population, according to principles of equality they are potentially, as instruments aimed at economic integration, according to a logic of redistribution.

With regard to the delegation of jurisdiction to entities external to the organs and their advocates, the main point of the arguments used by them is the rapid evolution of the services and products offered to the population and by the economic agents demanding from the State quick action, which in practice is not due to the slowness of the legislative process.

It is important to keep in mind the definition of public service in the objective aspect.

In order to achieve collective satisfaction, the State provides services and creates the population. It is true that due to the modern relations and the crisis of the state apparatus in having quality services and efficiency, the company chose to delegate, in a broad sense, the execution of several services to private entities.

As the service, by legal definition is instituted and exercised by the State in search of the achievement of the collective welfare, is subject to the legal regime of public law.

The word Lobby, originating in the English language and referring to the lobby in a public building, adopted the conception of a particular group of people who represent a particular interest in persuading, influencing, government decisions.

The word lobby was adopted etymologically as lobbyists stood in the lobby of the American Congress in search of those who would be able to approve or reject measures that would benefit or harm the interests of a particular group.

Historically, the first (or one of the first) document found to make mention of the word lobby is dated 1820, found in England. However the origin of the lobby practice refers to the United States.

That is, regardless of the theory adopted, either of the accepted theories teaches that the origin of the practice of persuasion of parliamentarians, later denominated lobby, originated in the United States and expanded to the rest of the world.

Governmental relations have a set of actions aimed at achieving objectives, based on the ongoing dialogue with government spheres in an organized, transparent and legal manner, aiming to inform him about the business activities practiced and to collect information for the management of the enterprises, endowing themselves with knowledge that will allow them to defend interests and influence government decisions.

Thus, for those who similarly adopt the concepts of lobbying and "government relations", we seek to have an active voice on issues of interest. However, there are criticisms regarding the nomenclature, considering that government relations can be considered as the search for the orientation of congressmen in the exercise of their typical activities as well as in the regulatory activities of regulatory agencies, for example, whose method used would be the lobby as a means of dialogue of the subjects involved.

Another argument used is that this nomenclature would be related to the activity of information between the public entities, excluding the private ones.

As for the word advocacy - public support for an idea, plan or medium to do something refers to the meaning of advocating causes or ideas through the awareness of society, with a view to influencing the formatting of public policies.

The term advocacy is endowed with the conception of social control, in which society organizes itself to try to control the behaviour of the government, as asserted in popular councils. Therefore, that this term is not appropriate to replace the expression lobby considering advocacy if it is a kind of control and control as the gender of activity and lobby as a species.

Groups of Interest and Pressure Groups

In a democratic State of law, people with congruent interests and objectives seek to unite by seeking to gain strength in the defence of the ideals common to that group in the various sectors of society, trying to persuade the various state entities, whether regulatory agencies or one of the powers of the Republic. It is necessary to differentiate the concept of interest group and pressure group since they are not often used adopting similar meanings, resulting in an error and making it difficult to conceive how lobbying works in the various sectors of the State.

It is also important to bear in mind that the term "interest groups" has no similar connotation to the social classes considering that it is possible to have an interest group formed by people from different social strata who wish, for example, sector regulation favouring a group.

The basic difference between interest groups and pressure groups is the transience of the posture adopted by the two groups. Anything can stimulate behavioural change.

Starting from the definition of interest group, it is the group of individuals organized and gathered that, sharing common interest, whether concerned with regulating a sector or not with state intervention, seeks to influence government policies in their favour.

Not always the popular manifestation is moved desiring the public good, being able to be manifestations attempting the increase of power or obtain material goods. With the advancement of technologies and, consequently, the approximation of people leaving aside the distance between they have made it easier to identify social problems, to analyze legal provisions (broad sense) and to convince people about certain topics, thus, for good or ill, a facility for greater interaction of interest groups.

Interest groups, can be episodic, formed from the mobilization of society for or against determined government action, or can be organized, non-episodically, linked to some legal entity that can be philanthropic or aim at acquisition of profits.

Pressure groups would be species of the interest group, endowed with organization and resources that actively act towards the achievement of objectives, being able to act in a more ostensive or discreet way, depending on the position they defend with regulatory agencies or legislative.

Thus pressure groups would be temporary groups that may or may not use lobbying (tend to use this technique) to achieve the government's intended goals and then dissolve.

Lobbying X Corruption X Influence Traffic

It is important to delimit ethical and penal limits of the practice of pressure groups. Despite the confusion and criminal types, it is stated that the lobby, if used properly, does not make use of these criminal actions for the influence of the public agent.

Nonetheless, it would be immature to turn a blind eye to the factual reality by stating that there are no criminal practices of lobbyists with political agents.

Elements to prevent the collapse of the system of pressures in anarchy and corruption.

- The first factor presented is that lobbying is different from practicing corruption. That is the reproduction of thematic inclinations aiming at the achievement of a specific purpose, with specific clients and targets and companies respected by the practicing world.

- The second factor of differentiation is that the activity is a result of freedom of expression, or even the right of petition to public agencies.

- The third factor stems from legal regulation and institutionalization in countries such as the United States and Belgium (Brussels region).

- The fourth factor stems from the lobby as an employment bond between the lobbyist and the company that politically represents their interests.

- The fifth factor stems from mechanisms of social regulation coming from associations.

Finally, the last factor to avoid the collapse of society is that lobbying is not just pressure. Pressure is the ultimate factor in practice.

The great problem occurs when one does not discover the use of dark means to influence the holders of the power. There is often no news of employees who have been "pleased" to follow up on private interests or the drafting of bills or interim measures that are presented as a solution to a social problem but actually tend to solve problems in a particular sector.

Another negative point concerns the large financial amount invested by companies that try to legitimately influence the decision-making process of the Republic's powers, because in the face of the amount of money invested in this process it is expected that there will be a return in the future.

Thus, an unbalanced battle between capitalized pressure groups and lobbying groups such as unions is set in motion.

These are endowed "only" with the strength of the worker and constant threats of strike, which is sometimes not enough to avoid the adverse positioning of public agents against rights and guarantees of the category.

As information is the point of lobbying, he must know how to manage it and present it trustworthy, impartial and well structured, so that its objective can be fulfilled.

It should act credibly, offering reliable information, representative of broad sectors of interest, having knowledge of the legislative process. In addition, you must be discreet, honest, ethical, good communication skills and persuasion, should maintain a good network have a good academic background and be objective in the defence of the interests.

The characteristics of a good listed lobbyist:

- Good knowledge of the legislative process and the decision-making process;
- Discretion;
- Understanding of the political scenario;
- Understanding of the client's goals;
- Honesty and ethics;
- Qualified information;
- Provide reliable and well structured information;
- Power of communication and persuasion;
- Have good contacts;
- Serenity;
- Strong academic background; and
- Work the information in defence of your client and know how and where forward them.

CONCLUSION

It was also concluded that, despite being an instrument of social participation legitimizing and expanding the democratic process by articulating visions of different sectors, subsidize the formulation of public policies and guide state actions, the lobby suffers with the prejudice and the stigma of marginality when being associated, in a way corruption, and influence peddling.

However, it is undeniable that the lobby, exercised within the law and ethics, with clear and defined objectives in the influence of the decision-making process and the definition of the governmental agenda, imposes relations between the State, private entities and civil society, strengthening and thus perfecting democracy.

Its regulations, must contain greater clarity and scrutiny of negotiations between interest groups and pressure, and politicians, putting an end to clandestine and discrediting the activity and giving rise to the true lobby.

Establish binding principles, prerogatives and forecasting of sanctions is important and necessary in the various ways of the Power which often lacks the data and information definition of public policies, state actions and legislative and normative activity.

With the regulation of lobbying activity, professionals in the area would have rules of practice defined in relation to matters such as receipt of gifts, payment of personal expenses, electoral donations, as well as procedures to be followed by meetings between lobbyists and decision-makers and, therefore, a margin of performance with unequal advantages.

In this way, citizens would have greater access to information on negotiations and the decision-making process, influence in the search for insider information considerably.

It is therefore for decision-makers and society to legitimate defence of interests is a fundamental element of the exercise of democracy representative and participatory approach and good governance. Strong institutions are those that know how to listen to the interests of different sectors and take political and regulatory decisions based on the public interest.

BIBLIOGRAPHY:

BALANYA, BELEN & al 2000: Europe Inc.; Regional & Global Restructuring and the Rise of Corporate Power, London: Pluto Press, January 2000.

- CARPENTER, DANIEL/ MOSS, DAVID (eds.) 2013: Preventing Regulatory Capture, Special Interest Influence and How to Limit It, Cambridge: Cambridge University Press.
- FOUCART, Stéphane 2013: La Fabrique du mensonge. Comment les industriels manipulent la science et nous mettent en danger, Paris: Denoël.
- HOREL, STEPHANE 2015: Intoxication : perturbateurs endocriniens, lobbyistes et eurocrates : une bataille d'influence contre la santé, La Découverte, Paris (à paraître, 01/10/215)
- KRIMSKY, Sheldon 2004: Science in the Private Interest: Has the Lure of Profits Corrupted Biomedical Research? Lanham: Rowman & Littlefield Publishers.
- NESTLE, Marion 2007: Food Politics. How the Food Industry Influences Nutrition and Health, Oakland: University of California Press.
- STAUBER, JOHN, RAMPTON, SHELDON, 1995: Toxic Sludge Is Good For You: Lies, Damn Lies and the Public Relations Industry, Common Courage Press, Monroe, Maine
- CORPORATE EUROPE OBSERVATORY 2014: How to improve scientific advice to the European Commission?, Principles for Transparency, excellence and independence, 19 November 2014, <http://corporateeurope.org/power-lobbies/2014/11/how-improve-scientific-advice-europeancommission>
- CORPORATE EUROPE OBSERVATORY 2012: Agribusiness CAPturing EU research money?, 26 June 2012, <http://corporateeurope.org/agribusiness/2012/06/agribusiness-capturing-euresearch-money>
- GLOVER, ANNE, 2014: 1000 Days in the Life of a Chief Scientific Advisor (presentation) <http://www.slideshare.net/SciAdvice14/1000-days-in-the-life-of-a-science-advisor38529597>
- LIPTON, ERIC, 2015: Food Industry Enlisted Academics in G.M.O. Lobbying War, Emails Show, New York Times, <http://www.nytimes.com/2015/09/06/us/food-industry-enlisted-academics-ingmo-lobbying-war-emails-show.html>
- NESTLE, MARION, 2013: Conflicts of Interest in the Regulation of Food Safety, A Threat to Scientific Integrity, JAMA Internal Medicine 2013; <http://archinte.jamanetwork.com/article.aspx?articleid=1725122>

SECȚIUNEA II: Managementul și marketingul în economia contemporană

ASSESSING THE REPUBLIC OF MOLDOVA BUSINESS ENVIRONMENT THROUGH PRISM OF INTERNATIONAL RANKINGS

Cîrlan Ana, PhD student

Academy of Economic Studies of Moldova,
61 Mitropolit Gavriil Bănulescu-Bodoni St.,
Chișinău, Republic of Moldova
e-mail: anapavalachi@yahoo.com

Abstract. *Business environment is a complex set of legal, institutional, support and economic conditions that have impact on business creation and development. It is important to understand how these external factors affect and influence business success or failure. The assessment of business environment it is a complex process that can be performed through using of international rankings as far as these rankings provide quantitative data on a series of indicators. The purpose of this article is to analyze the Republic of Moldova position in international rankings and to identify exact indicators that contributed to business environment improvement or degradation. The actuality and importance of the research derives from the need to identify the position of the Republic of Moldova in the international rankings and use of this data for the monitoring, evaluation and improvement of business environment. The research methodology is based on the comparative analysis of the results of international rankings, as well as on the quantitative analysis of the indicators provided by each ranking.*

Keywords: business environment, international rankings, assessment of business environment.

JEL CLASSIFICATION: O20, O29, O57, P29.

INTRODUCTION

The level of a country economic development is directly linked to the level of business environment development. Favorable conditions for business creation and development contributes to gross domestic product growth, job creation, creation of globally competitive goods and services, as well as to the implementation of technologies and innovations. For the proper functioning of a company it needs to establish partnerships and contacts with suppliers, customers and different institutions. The activity of the enterprise implies a continuous and dynamic adaptation to the conditions of the external environment, the term "environment" encompassing all the external and internal factors that have impact on the activity of the enterprise. Donor Committee for Enterprise Development defines the business environment as a: *complex set of policy, legal, institutional, and regulatory conditions that govern business activities. It is a sub-set of the investment climate and includes the administration and enforcement mechanisms established to implement government policy, as well as the institutional arrangements that influence the way key actors operate (e.g., government agencies, regulatory authorities and business membership organisations, civil society organisations, trade unions, etc.)* [11]

The importance of knowing and analyzing the environment in which the company operates is useful for various reasons, such as: (i) taking decisions based on justified data; (ii) adapting offered products / services to standards and customer needs; (iii) developing short, medium and long term strategies; (iv) substantiating investment decisions, etc. Therefore, a correct and documented assessment of business environment can provide a wide range of valuable information for both the

company and the authorities, which are designed to create an environment conducive to business development. One of the instruments used to analyze the business environment is the international rankings, which provide a quantitative comparison of the level of entrepreneurial development between different countries. The purpose of these studies is to provide a comparative assessment of the position of countries in relation to the level of economic development, competitiveness, legal conditions and infrastructure, all of which are tangential and directly or indirectly part of the entrepreneurial environment. The main international institutions involved in the development of international rankings are: World Bank, World Economic Forum, Heritage Foundation, Wall Street Journal, etc.

The purpose of this article is to analyze the Republic of Moldova position in international rankings and to identify exact indicators that contributed to business environment improvement or degradation. The actuality and importance of such an assessment of the business environment derives from the need to identify the problems faced by Moldovan entrepreneurs. Knowledge of these issues gives us a vision of the stage of business environment development, but also suggests the directions in which the stakeholders should channel their efforts in order to improve the situation.

MATERIALS AND METHODS

Research methodology is based on the comparative analysis of the results of the international rankings, as well as on the quantitative analysis of rankings indicators in evolution. The information sources used to prepare the article are the annual reports of the international organizations such as: World Bank, World Economic Forum, Heritage Foundation, Wall Street Journal, etc.

RESULTS AND DISCUSSIONS

The main report that describes Republic of Moldova business environment is "Doing Business" produced annually by the World Bank. The Doing Business project was launched in 2002 and aims to analyze the activity of small and medium enterprises and their regulatory framework throughout their life cycle. The report presents quantitative indicators on business regulation: starting a business, obtaining building permits, electricity, registering property, obtaining credits, protecting minority investors, external trade, paying taxes, executing contracts and solving insolvency. By collecting and analyzing complex quantitative data, the aim is to compare the business regulatory environments between different economies, but also their evolution over time. At the same time, the report encourages economies to compete in order to achieve more effective regulation; provides benchmarks for reforms, and serves as a resource for academics, journalists, private sector researchers, and other business environment stakeholders.

The Doing Business Report 2019 includes 11 sets of indicators and analyzes the economy of 190 countries. In order to show country performance, they are ranked on a scale of 0 to 100, 0 being the smallest and 100 best performing. Thus, in 2019, Moldova ranks 47th out of 100, ranking between the Czech Republic (35) and Hungary (53).

The report is not limited just to the evaluation of the relative changes of the country's position in the ranking, but also uses the indicator "Distance to Frontier" score (DTF). The DTF score is based on a reference scale benchmarking economies according to regulatory best practice, showing the best performance, ranging from 0% in the case of the worst performance and 100% in the case of conformity with the best existing practice.

Table 1. Moldova's position in Doing business ranking

Indicators	Position		The change	DTF (% points)		Change in DTF (% points)
	2018	2019		2018	2019	
<i>Position of the Republic of Moldova in „Doing business” report</i>	44	47	-3	73.00	73.54	+0.54
1.Starting a business	23	14	+9	93.76	95.55	+1.79
2.Dealing with construction permits	165	172	-7	51.98	52.19	+0.21
3.Getting electricity	80	81	-1	74.65	74.88	+0.23
4.Registering property	20	22	-2	82.60	82.62	+0.02
5.Getting credit	42	44	-2	70.00	70.00	-
6.Protecting minority Investors	33	33	-	66.67	68.33	+1.66
7.Paying taxes	32	35	-3	84.55	84.55	-
8.Trading across borders	35	35	-	92.32	92.32	-
9. Enforcing contracts	62	69	-7	60.87	60.87	-
10.Resolving insolvency	65	68	-3	52.56	54.12	+1.56

Source: [9, 10]

According to the report, the business environment in the Republic of Moldova in 2019 worsened compared to 2018, down by 3 positions in the ranking (Table 1). This drop in the ranking is due to the worsening of the situation at all positions, with the exception of “starting a business” indicator, which recorded an increase of 9 positions. Moldova made starting a business easier by removing the requirement to file separately for registration with the national statistics bureau. The most significant worsening was registered for the “dealing with construction permits” and “enforcing contracts” indicators (-7 positions each). Moldova accumulated in 2019 a total score of 73.54 for the DTF indicator, which reflects a better position (+0.54 points) compared to previous year, 2018.

The Global Competitiveness Report is designed to help policy-makers, business leaders and other stakeholders around the world shape their economic strategies in the era of the Fourth Industrial Revolution. Covering 140 economies, the Global Competitiveness Index 4.0 measures national competitiveness—defined as the set of institutions, policies and factors that determine the level of productivity. Twelve pillars of competitiveness. There are total of 98 indicators in the index, derived from a combination of data from international organizations as well as from the World Economic Forum’s Executive Opinion Survey. These are organized into 12 pillars in the GCI 4.0, reflecting the extent and complexity of the drivers of productivity and the competitiveness ecosystem. These are: institutions, infrastructure, ICT adoption, macroeconomic stability, health, skills, product market, labor market, financial system, market size, business dynamism, and innovation capability. [7]

Table 2. Moldova's position in the Global Competitiveness Index ranking

Indicators	Position in the ranking		The change
	2017-2018	2018-2019	
<i>Number of countries in the ranking</i>	135	140	
Total, including	87	88	-1
Enabling environment			
1st pillar: Institutions	128	84	+44
2nd pillar: Infrastructure	86	79	+7
3rd pillar: ICT adoption	58	48	+10
4th pillar: Macroeconomic stability	100	95	+5
Human capital			
5th pillar: Health	95	92	+3
6th pillar: Skills	91	73	+18
Markets			
7th pillar: Product market	107	70	+37
8th pillar: Labor market	91	71	+20
9th pillar: Financial system	129	128	+1
10th pillar: Market size	124	126	-2
Innovation ecosystem			
11th pillar: Business dynamism	127	69	+58
12th pillar: Innovation capability	133	105	+28

Source: [7, 8]

According to the *Global Competitiveness Report*, Moldova ranks 88th out of 140 countries, ceding a position compared to 2017 (Table 2). During the analyzed period, the country recorded a significant improvement in all positions, except position, market size, registering a two-point worsening compared to the previous year. The best improvement of the situation is recorded in the chapters: business dynamism (+58 positions); institutions (+44 positions), product market (+37 positions); and innovation capability (+28 positions).

The Index of Economic Freedom is an annual ranking, created by The Wall Street Journal and The Heritage Foundation. The Index of Economic Freedom is a helpful tool for a variety of audiences, including academics, policymakers, journalists, students, teachers, and those in business and finance.

Table 3. Moldova's position in the Index of Economic Freedom ranking

	Position in the ranking		The change
	2018	2019	
<i>Number of countries in the ranking</i>	180	180	
Total rank	105	97	+8
Total score, including:	58.4	59.1	+0.7
Rule of law			
Property rights	53.5	55.2	+3.9
Government integrity	26.6	25.4	-2
Judicial effectiveness	26.3	29.6	+2.4
Government size			
Government spending	56.7	59.1	+1.9
Tax burden	85.3	85.4	-0.8
Fiscal health	90	92	-0.6

Regulatory efficiency			
Business freedom	66	67	+0.1
Labor freedom	39.9	39	+1
Monetary freedom	73.2	73.5	+1.2
Open markets			
Trade freedom	78.3	78	-1.7
Investment freedom	55	55	-
Financial freedom	50	50	-

Source: [5, 6]

The publication measures economic freedom based on 12 quantitative and qualitative factors, grouped into four broad categories, or pillars, of economic freedom:

1. Rule of law (property rights, government integrity, judicial effectiveness);
2. Government size (government spending, tax burden, fiscal health);
3. Regulatory efficiency (business freedom, labor freedom, monetary freedom);
4. Open markets (trade freedom, investment freedom, financial freedom).

Each of the twelve economic freedoms within these categories is graded on scale of 0 to 100. A country's overall score is derived by averaging these twelve economic freedoms, with equal weight being given to each.

Moldova's economic freedom score is 59.1, making its economy the 97th freest in the 2019 Index. Its overall score has increased by 0.7 point, with improvements in judicial effectiveness, government spending, and fiscal health outpacing a decline in labor freedom (table 3). Moldova is ranked 40th among 44 countries in the Europe region, and its overall score is below the regional and world averages. Five countries (Moldova, Russia, Belarus, Greece, and Ukraine) have economies that are rated "mostly unfree."

The Global Innovation Index (GII) provides detailed metrics about the innovation performance of 126 countries which represent 90.8% of the world's population and 96.3% of global GDP. GII is an annual ranking of countries published by Cornell University, INSEAD (European Institute of Business Administration), and the WIPO (The World Intellectual Property Organization), in partnership with other organizations and institutions.

Table 4. Moldova's position in Global Innovation Index ranking

	Position in the ranking		The change
	2017	2018	
<i>Number of countries in the ranking</i>	127	126	+1
Total, including:	54	48	+6
Institutions	72	79	-5
1.1 Political environment	96	99	-3
1.2 Regulatory environment	92	96	-4
1.3 Business environment	41	49	-8
Human capital & research	59	69	-10
2.1 Education	31	39	-8
2.2 Tertiary education	58	67	-9
2.3 Research & development (R&D)	81	83	-2
Infrastructure	82	81	+1
3.1 Information & communication technologies (ICTs)	62	56	+6

3.2 General infrastructure	98	99	-1
3.3 Ecological sustainability	87	111	-24
Market sophistication	62	60	+2
4.1 Credit	79	89	-10
4.2 Investment	15	10	+5
4.3 Trade, competition, & market scale	111	106	+5
Business sophistication	81	90	-9
5.1 Knowledge workers	71	67	+4
5.2 Innovation linkages	117	117	-
5.3 Knowledge absorption	73	80	-7
Knowledge & technology outputs	52	39	-13
6.1 Knowledge creation	19	16	+3
6.2 Knowledge impact	115	78	+37
6.3 Knowledge diffusion	59	69	-10
Creative outputs	39	83	-44
7.1 Intangible assets	9	5	+4
7.2 Creative goods & services	80	83	-3
7.3 Online creativity	71	46	+25

Source: [3, 4]

In 2018 Moldova is ranked number 48 among 126 countries included in the GII ranking. In the analyzed period Moldova's place has improved with 6 positions (table 4).

The most significant positive change in the country's position was recorded at the: knowledge impact (+37) and online creativity (+25). The most negative change was recorded for the creative outputs (-44) and ecological sustainability (-24).

Logistics Performance Index (LPI) report, presents the latest worldwide view on trade logistics performance across more than 160 countries as seen by logistics professionals. This biennial information on logistics infrastructure, service provision, cross-border trade facilitation, and other aspects is invaluable for policy makers, traders, and a wide audience of other stakeholders, including researchers and teachers. The LPI survey data provide numerical evidence on how easy or difficult it is in these countries to transport general merchandise— typically manufactured products in unitized form. The six main indicators of the international part of the LPI summarize on a five-point scale the assessments of logistics professionals worldwide trading with the country.

In the *Logistics Performance Index 2016* ranking, the Republic of Moldova ranks number 113 out of 160 countries. In the analyzed period, Moldova's situation has worsened by 20 position (table 5).

Table 5. Moldova's position in Logistics Performance Index ranking

Indicator	Position in the ranking		The change
	2016	2018	
<i>Number of countries in the ranking</i>	160	160	
Total, including	93	113	-20
Customs	99	122	-23
Infrastructure	100	131	-31
International shipments	94	90	+4
Logistic quality and competence	103	123	-20
Tracking and tracing	85	133	-48
Timeliness	86	90	-4

Source: [1, 2]

The lowest positions in the ranking Moldova has registered at the following indicators: tracking and tracing (133), logistic quality and competence (123) and customs (122), and the most significant worsening was recorded at the: tracking and tracing (-48), infrastructure (-31) and customs (-23).

CONCLUSIONS

Assessing the business environment of the Republic of Moldova through international rankings provides relevant information for decision-makers, investors and entrepreneurs.

Table 6. Summary of Moldova's position in international rankings

International Ranking	Position in the ranking		The change
	2018	2019	
Doing business	44	47	-3
Global Competitiveness Index	87	88	-1
Index of Economic Freedom	105	97	+8
Global Innovation Index	54 (2017)	48 (2018)	+6
Logistics Performance Index	93 (2016)	113 (2018)	-20

Source: *Elaborated by the author based on [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]*

This article purpose is to approach the business environment from a multilateral perspective, analyzing the evolution of different indicators, to reveal the areas where progress is made, but also the areas where the Republic of Moldova business environment is regressing (table 6).

Thus, in the "Doing Business" report, edition 2019, Moldova comes down with three positions, based on:

1. Dealing with construction permits;
2. Getting electricity;
3. Registering property;
4. Getting credit;
5. Paying taxes;
6. Enforcing contracts;
7. Resolving insolvency.

The "Global Competitiveness" report indicates a lowering of a position, which is determined by:

1. Market size.

The "Logistics Performance Index" 2016 ranking, the Republic of Moldova ranks number 113 out of 160 countries. In the analyzed period, Moldova's situation has worsened by 20 positions because of:

1. Customs;
2. Infrastructure;
3. Logistic quality and competence;
4. Tracking and tracing;
5. Timeliness.

The identified regression indicators can serve as a starting point for developing strategies, laws, projects that will come to address business environment issues and help entrepreneurs to deal with existing problems. As well this information can be used by police makers, entrepreneurs, investors to take important decisions and to create a better environment for business.

REFERENCES:

1. Arvis, J. et al. The World Bank. Connecting to Compete 2018 Trade Logistics in the Global Economy. The Logistics Performance Index and Its Indicators. Disponibil online: <https://openknowledge.worldbank.org/bitstream/handle/10986/29971/LPI2018.pdf>
2. Arvis, J. et al. The World Bank. Connecting to Compete 2016 Trade Logistics in the Global Economy. The Logistics Performance Index and Its Indicators. Disponibil online: https://wb-lpi-media.s3.amazonaws.com/LPI_Report_2016.pdf
3. Dutta, S. et al. GLOBAL INNOVATION INDEX 2018. Energizing the World with Innovation. Disponibil online: https://www.wipo.int/edocs/pubdocs/en/-wipo_pub_gii_2018.pdf
4. Dutta, S. et al. GLOBAL INNOVATION INDEX 2017. Innovation Feeding the World. Disponibil online: <https://www.globalinnovationindex.org/userfiles/file/reportpdf/gii-full-report-2017.pdf>
5. Miller, T., et al. The Heritage Foundation, 2019 INDEX OF ECONOMIC FREEDOM. Disponibil online: https://www.heritage.org/_template-assets/documents/publications/-IndexofEconomicFreedom2019.pdf
6. Miller, T., et al. The Heritage Foundation, 2018 INDEX OF ECONOMIC FREEDOM. Disponibil online: https://www.heritage.org/index/pdf/2018/book/index_2018.pdf
7. Schwab, K., World Economic Forum. The global competitiveness report, 2018-2019. Disponibil online: <http://www3.weforum.org/docs/GCR2018/05FullReport/TheGlobal-CompetitivenessReport2018.pdf>
8. Schwab, K., World Economic Forum. The global competitiveness report, 2017-2018. Disponibil online: <https://espas.secure.europarl.europa.eu/orbis/sites/default/files/-generated/document/en/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>
9. The World Bank. Doing Business. Reforming to Create Jobs, 2018. 312 p. Disponibil online: <http://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/-English-/DB2018-Full-Report.pdf>
10. The World Bank. Doing Business. Economy Profile of Moldova, 2019. 60 p. Disponibil online: <http://www.doingbusiness.org/content/dam/doingBusiness/country/m/moldova/-MDA.pdf>
11. White S., Donor Committee for Enterprise Development. Supporting Business Environment Reforms. 2008. 48 p., p. 2.

CHALLENGES OF STRATEGIC MANAGEMENT OF HUMAN RESOURCES IN THE CONTEXT OF EUROPEAN INTEGRATION

PhD Student, Guseinov Igor
author's e-mail: guseinov.igor@gmail.com

Academy of Economic Studies of Moldova
Republic of Moldova, Chisinau city,
Banulescu-Bodoni str. 59
tel.: 0 22 402 992
www.ase.md

Abstract. *The article explores the main challenges of the strategic management of human resources in the context of European integration. The main demographic indicators was analysed out, the problems of human capital of the citizens of the Republic of Moldova were identified. At the end of the article, conclusions are presented on the current situation both at the macro level and at the meso and micro levels of the country's activities.*

Key words: *strategic management, human resources, European integration, labor market.*

JEL CLASSIFICATION: L84, M12

INTRODUCTION

In the context of European integration and restructuring of the Moldovan economy, based on continuous technological and innovative improvement, in the production and export of products with high added value, human resources and the right strategic approach to their management play the leading role.

The main distinguishing feature of human resources is their individual and exclusive specificity. Unlike robots, machines and raw materials, people are endowed with intelligence, and their participation in the production process is meaningful.

The relevance of this topic lies in the fact that at present, in the context of European integration and in a period of accelerated economic globalization, demographic processes and the development of IT-technologies, in our country there is a gap between the pace of change in the structure of the economy and approaches to human resource management. Under these conditions, human capital and potential, creative and entrepreneurial abilities of employees are considered as the main resource for the development of the economy and the growth of labor productivity, improving the efficiency and competitiveness of an organization. The lag in the modernization of the strategic management of human resources, given the multi-level approach to the use of an effective system, slows down the development of not only enterprises, but also the state as a whole.

The economy of the European Union is the second largest economy in the world in nominal terms and in accordance with purchasing power parity. So, in 2017, the EU's GDP was estimated at € 15.3 trillion, which is approximately 22% of the world GDP. The European Union is the largest center of economic and political development and, undoubtedly, has great potential and experience in expanding foreign economic relations between countries and integration associations.

The Association Agreement strengthens Moldova's political and economic ties with the European Union. It contains a reform plan in areas vital to ensure good governance and economic development, and strengthens cooperation in a number of industries. By signing this Agreement, Moldova is committed to reforming its domestic policy in accordance with European Union legislation and practices. In this regard, the country receives significant support from the European Union.

Among the most important areas of the Association Agreement between the Republic of Moldova and the European Union are issues related to the rule of law and respect for human rights, promoting cooperation in a large part of labor legislation and related working conditions, most of which are closely related to the content of the International Labor Organization conventions, which Moldova has already ratified.

The strategic management of human resources in the Republic of Moldova is not sufficiently attractive and explored the area. But it is worth noting that in recent years, the interest and importance has taken a positive trend.

In international practice, human resource management has always been attractive and a special object of research. At various stages of the development of society, many scientists were engaged in the study of the strategic management of human resources. Among them are the following: A. Smith, Marx K., Ricardo D., Armstrong M., Jackson F., Manolescu A., Rosca K., Kibanov A., Gerchikov V., Fatkhutdinov R., Vikhansky A., Sokolova M., Belostenchik G., Kirke S., Byrke A., Onofrey A., Bilash L., Paladi I., Shavga L., Kotelnik A. and others.

The aim of the article is to examine the main challenges of strategic human resource management in the conditions of implementation of the processes of globalization and the context of European integration.

The objectives:

- identification of the main challenges of the strategic management of human resources in the Republic of Moldova in the context of European integration;
- analysis of the main demographic indicators;
- analysis of the local labor market;
- identification of human capital problems.

MATERIALS AND METHODS.

Writing the article we used scientific works of scientists and researchers in the field of management, economics and sociology, which paid special attention to the importance of human resources.

Official statistics were the basis for the analysis of the socio-economic situation in the world and in the Republic of Moldova.

The problem of strategic management of human resources was researched using various research methods, taking into account existing doctrines, concepts and principles developed by famous scientists in the field of human resources management, as well as the practical information.

Analytical and comparative method is used in the first part of the article in determining the strategic management of human resources, the dynamics of demographic indicators. The logical method is reflected in the study of the system from simple to complex.

General research methods allowed to analyze the current situation on the labor market, as well as to emphasize the problems of strategic management of human resources in the context of European integration.

There were applied methods of analysis and synthesis also, mainly in the definition of basic concepts, as well as in the analysis of key indicators, using, among other things, official statistics.

RESULTS AND DISCUSSIONS.

One of the most pressing problems at the macro level, which is the cause of the socio-economic development of the Republic of Moldova, is the demographic dynamics of the population.

The existing demographic dynamics of the population is one of the most pressing problems at the macro level, which is the cause of the slow socio-economic development of the Republic of Moldova.

The formation of the labor market is of great importance for the functioning of the new economic system. As it develops, the method and nature of the reproduction of labor force, the nature of ownership and the principles of social security in society are transformed.

The labor market is one of the production factor markets. It is through the labor market that the most important resource is: labor is distributed among organizations, industries, professions, regions and countries. The labor market forms demand and supply for labor, ensures the distribution of labor and the determination of prices for various types of labor activity.

The labor, as the most important resource, is distributed across organizations, industries, professions, regions and countries, precisely through the labor market. The labor market forms demand and supply for labor, ensures the distribution of labor and the determination of prices for various types of labor activity.

In any market there are sellers and buyers who individually and voluntarily enter into sales of goods. In all these respects, the labor market is no exception. At the same time, it is a specific market, that is, the product itself - labor - is unique. This is the only product that is inseparable from its owner - man. In this case, a person cannot be a subject of sale and purchase, since it is not the employee who is bought and sold, but his ability to work. Otherwise, he would not be a seller, but a commodity, and this in turn would mean that he was not a free citizen, but a slave or serf.

For sellers of labor, because it carries out the working process, it is important not only to the price of labor, but also the conditions and organization of labor, danger of work-related injuries, the degree of social comfort in the relations between the participants of the joint labor process, the character of its managers, etc. The carrier of labor force may have its own ideas about "justice" in employment relationship. In addition, he is able to form his organizations (trade unions) and defend his own views about wages and other issues by non-market methods (up to strike struggle) [4].

The labor market as an object of knowledge is considered as a system of relations, functioning in conjunction with its environment, affecting the interests of all the subjects of these relations at the macro and micro levels. The labor market transaction scheme includes labor supply, demand, mediation institutions, and the educational services market. At the same time, demand is dictated by economic and socio-political factors, and labor supply is dictated by demographic, socio-economic, migration and educational factors.

Human resources, as the most important condition for the functioning of any economy, in modern conditions are represented on the labor market by diverse human abilities. The labor market, as the main element of the distribution of human resources, has a complex structure. The labor market is a set of relations arising on a dialectical basis between employees, employers and the state. The state plays an important role in the labor market to achieve balance in it.

The national labor market is an inseparable part of the economic system as a whole and fully reflects its development trends. These include high unemployment, an inefficient system of social protection in the labor market, inefficient use of labor and available reserves in the organization of the wage system. Dispersion of a significant part of the labor force is due to migration, the execution of certain types of paid work in the "shadow sector" of the economy, part-time employment and economic discouragement of the working-age population.

Ratification of the main conventions of the International Labor Organization and accession to various international organizations makes it necessary to take clear decisions to promote the national employment policy of the labor force. In the context of European integration, the Republic of Moldova revises and brings national legislation in line with European standards [1].

In recent years, beginning in the '90s, the population has been inexorably decreasing. As of 01.01.2018, the population was 3 547 539 people. The structure of the distribution of the population of Moldova is presented in figure 1.

In 2018, the working-age population was 2 452.3 thousand people, or 69.1% of the total population, or 83.2% of the population 15 years and older.

The number of economically inactive population, including pupils, students, housewives, people supported by other citizens or the state, or who are supported by other income, amounted to 1 161.6 thousand people or 47.4% of the working age population.

In 2018, the economically active population of the Republic of Moldova (employed plus unemployed) was 1 290.7 thousand people, which is 2.5% more than 2017 (1259.1 thousand people).

Figure 1. Distribution of the population of Moldova by economic activity

Total population 100%			
up to 15 years 15,9%	15 years and older 84,1%		
	working-age population 83,2%		
	Economically inactive population 47,4%		Economically active population 52,6%
	Unemployed 3,0% →		Employed 97,0%
		Employees 65,2%	Self employed 34,8%

Source: elaborated based on the data "Statbank", section "Populatia", <http://statbank.statistica.md/> (date of the application 20.04.2019).

There are no significant gender deviations in the labor force: the rate of men is 48.1% and women - 51.9%. The rate of the economically active population in rural areas is higher than in urban areas: 56.5% and 43.5%, respectively.

The number of employed population amounted to 1252.2 thousand people, an increase of 3.7% compared with the level of 2017 (1207.5 thousand people). As in the case of the economically active population, there were no significant gender differences (50.3% of women and 49.7% of men). The rate of employed in rural areas was higher than among those employed in urban areas: 57.2% in rural areas and 42.8% in urban areas, respectively [7].

Structural changes in the country's economy, the expansion of opportunities for employment abroad provoked a massive labor migration of the population, especially young people. According to the National Bureau of Statistics, labor migrants comprise about 300.0 thousand people, or about 25% of the economically active population.

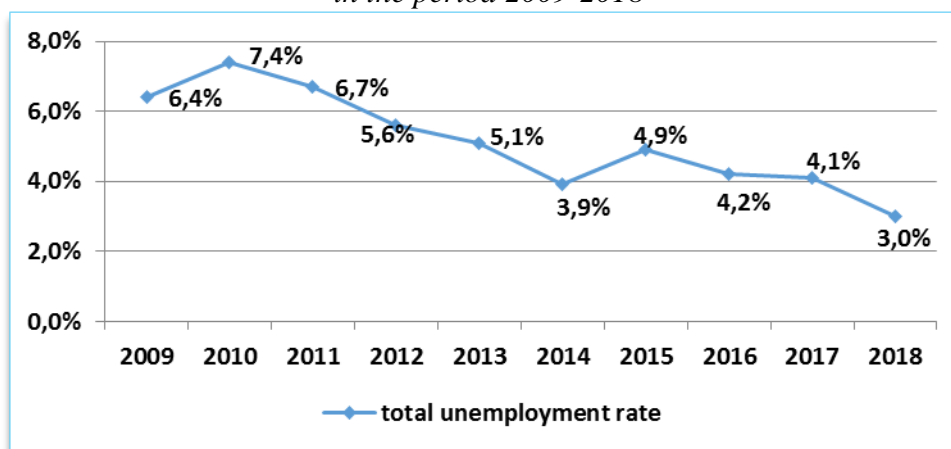
Migration is affected by a combination of economic, social, political and environmental factors: either in the country of origin of the migrant (push factors) or in the country of destination (pull factors). Relative economic prosperity and political stability in the countries of the European Union have a significant attractive effect on immigrants.

About 90% of Moldovan migrants are employed in three main sectors: construction, consumer services and trade.

The unemployment rate in 2018 was registered at the level of 3.0%, which is less than the indicator for 2017 (4.1%). Despite the low level of employment in the economy, official unemployment remains relatively low - 3.0% in 2018. The total number of officially registered unemployed decreased from 51.6 thousand in 2017 to 38.4 thousand people in 2018.

Unemployment mostly affected men - 58.4% of the total number of unemployed and urban residents - 65.6%, respectively. The unemployment rate for men was 3.5%, and for women - 2.5%; in urban areas - 4.5% and rural areas 1.8%, respectively. Among young people, the unemployment rate was 7.4%, and in the category of 15-29 years, this indicator was 5.6%. The unemployment rate is presented in Figure 2.

Figure 2. Dynamics of the unemployment rate in the Republic of Moldova in the period 2009-2018



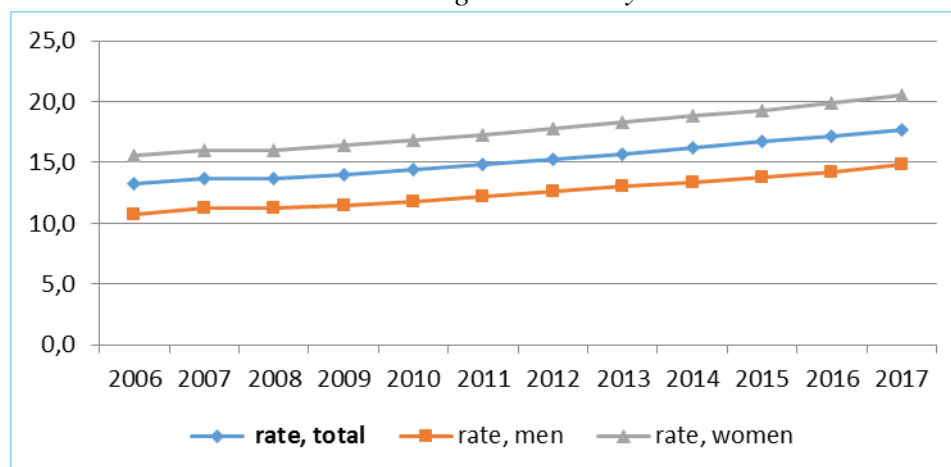
Source: elaborated by the author based on data from the National Bureau of Statistics of the Republic of Moldova, <http://statistica.gov.md/>

The demographic dynamics and changes in the structure of the population of the Republic of Moldova in recent years indicate difficulties that negatively affect the formation of human capital. There is a steady decrease in the total population due to negative natural growth and the phenomenon of migration.

Current and future demographic trends have a negative impact on the formation of labor supply in the Republic of Moldova, which indicates a steady decline in the working age population, as well as a steady growth in the third age population, while it is not possible to influence the situation in any way.

Statistical data indicate that the population of Moldova is aging particularly rapidly. According to the National Bureau of Statistics, the category of 60+ in 2018 was 17.7% of the country's population (629,579 people), which is 1.5 percentage points more than in 2015 (16.2% or 576,647 people), which corresponds to a high level of aging. The indicator is worsening too quickly, not only because of poor fertility, but also because of mass labor migration.

Figure 3. The dynamics of ageing factor of population in the Republic of Moldova during 2006-2017 years



Source: elaborated by the author based on data from the National Bureau of Statistics of the Republic of Moldova, *Anuarul statistic*, http://statistica.gov.md/public/files/publicatii_electronice/Anuar_Statistic/2018/Anuar_statistic_2018.pdf (date of the application 20.04.2019).

Over the past 12 years, the aging rate of the population (the number of people aged 60 years and older per 100 inhabitants) has been rigorously increasing. In 2018, this ratio was 17.7, which is 1 point more than the year 2015 and 4.5 points more than the 2006. On a scale of J. Beaujeu Garnier and E. Rosset's demographic aging scale, with a value of 12 and above, the process is qualified as “demographic old age” (Figure 3).

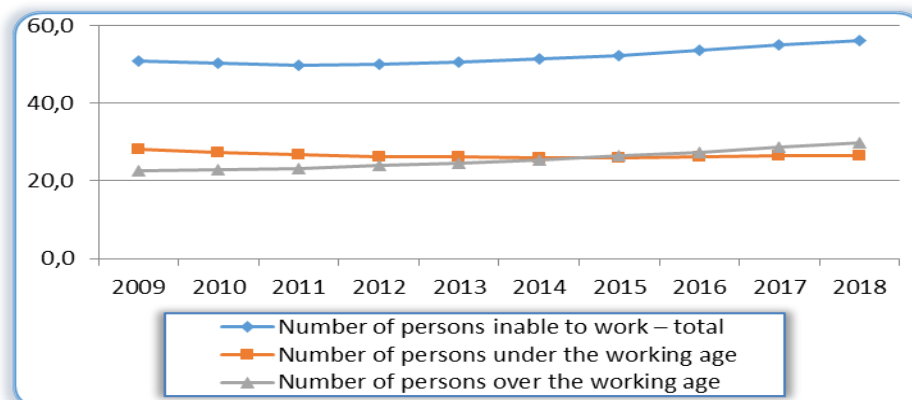
Another negative tendency is closely related to the problem of demographic aging: an increase in the demographic dependency on the working population.

The dependency ratio is a measure of the number of dependents aged zero to 14 and over the age of 65, compared with the total population aged 15 to 64. This indicator gives insight into the number of people of nonworking age, compared with the number of those of working age. The demographic dependency ratio, that is, the number of persons unable to the work per 100 working-age population, in 2018 was 56.2.

It is worth noting the change in the type of demographic dependency. If until 2015 there was a positive dependency, that is, the dependency of children exceeded the dependency of the number of persons over the working age, then after 2015 we observe the value of the negative demographic dependency, that is, the dependency of the number of persons over the working age already prevails.

The demographic dependency ratio, that is, the number of persons unable to work per 100 persons of working age, in 2018 was 56.2 (figure 4). The number of persons under the working age was 26.5 in 2018, which is 6% less than the 2009. The opposite situation is observed in the number of persons over the age working age, which was 29.7, up 30.8% of the same indicator of 2009.

Figure 4. The dynamics of demographic dependency ratio in the Republic of Moldova during 2009-2018 years



Source: elaborated by the author based on data from the National Bureau of Statistics of the Republic of Moldova, *Anuarul statistic*, http://statistica.gov.md/public/files/publicatii_electronice/Anuar_Statistic/2018/Anuar_statistic_2018.pdf (date of the application 20.04.2019).

After analyzing the structure of the employed population by age groups and level of education (Figure 5), it is possible to note the presence of education (higher, specialized secondary and secondary vocational) at 61% of the total number of employed in the Republic of Moldova in 2017.

Despite this, the results of a survey of 27 business executives from various sectors of the economy also confirmed and noted the problem of difficulty in finding workers in the necessary professions and qualifications.

In general, migrants have a relatively good level of education. Only 10% had no education, and more than 41% of the respondents have certificates of secondary education. Of the other respondents, 28% received additional education after graduation, while 20% have a higher education. There is also a large relationship between the country of destination and the level of education - migrants in the European Union have a higher level of education than migrants in the Commonwealth of Independent States or other countries in transition.

Figure 5. Structure of the employed population by age groups and level of education in 2017

Education	Employed population	Age group, years					
		15-24	25-34	35-44	45-54	55-64	65+
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Higher	24,7	19,3	37,5	24,3	18,2	18,8	16,4
Specialized secondary	13,2	11,1	8,2	11,3	17,7	17,5	17,8
Secondary vocational	22,9	24,3	16,1	21,7	30,1	26,5	13,3
Lyceum, general education	19,4	14,9	14,9	19,3	22,9	24,3	15,3
Gymnasium	19,4	29,6	22,9	22,9	11,0	12,7	34,8
Primary or no education	0,4	0,8	0,4	0,5	0,1	0,2	2,4

Source: elaborated by the author based on data from the National Bureau of Statistics of the Republic of Moldova, *Anuarul statistic*, http://statistica.gov.md/public/files/publicatii_electronice/Anuar_Statistic/2018/Anuar_statistic_2018.pdf (date of the application 20.04.2019).

Given the difficulty in obtaining adequate information on the scale of migration, the number of migrants and the volume of remittances, it is not surprising that it is problematic to accurately determine the impact of migration on economic growth. It should also be noted that an effect falling under the category of positive or negative may not always be mutually exclusive. For example, we cannot say that the “brain drain” or the decline in the quality of human capital in Moldova can be offset by increased financial flows from remittances: they are not interchangeable [5].

Studying and introducing into our economic and social practice the best examples of European and world labor experience suggests the need for a theoretical understanding of the “European labor market” phenomenon and related concepts such as “migration”, “social mobility”, etc. Methodologically, one should proceed from the fact that the European labor market is not only an economic mechanism for regulating the supply and demand of labor, but a very complex multi-faceted process, a complex of social interstate relations. Therefore, the term “labor market” itself is suggested by some researchers to replace the more capacious concept of “employment system”, since social, cultural and psychological factors play a less significant role in the labor market.

The European labor market gave an impetus to the formation of new types of social structures, including numerous groups of workers. An increasing proportion of them are represented by workers of a new type, possessing not only higher qualifications, mobility, but also installations for more active social and political participation. As a result, there are new opportunities for internationally equalizing differences in the process of reproducing labor and living conditions. For Moldova, which has embarked on the path of modernization, this process becomes a necessity [4].

CONCLUSIONS

The development of socio-economic relations is inextricably linked with human resources, and therefore is influenced by their changes. In modern conditions, any priorities for the development of society should proceed from the possibility of human resources when choosing the direction of movement. This means that the state, forming a socio-economic policy, should consider human interests as priorities and carry out market reforms in the economy with a priority of social protection of the population, justice over economic efficiency.

At the present stage of the socio-economic development of the Republic of Moldova, in the context of economic globalization and the introduction of European integration processes, problems related to the demographic situation, in particular migration, significantly affect the quantity and quality of human resources. The current situation contributes to slowing down the restructuring and development of the economy, especially the “smart economy”. In this connection, even more there is a need for a rapid change in the model and approaches of the economic development of the state. The inevitability of the development of the economy aimed at high-tech products, information technology and financial services, the human factor will play a key role in the prosperity of the state.

The situation at the macro level is directly projected onto the meso- (regional) and micro level, that is, at the enterprise level. At these levels there is a need to change approaches in human resource management.

Under these conditions, the human capital of workers is considered as the main resource for the development of the economy and the growth of labor productivity, increasing the efficiency and competitiveness of an organization. The lag in the modernization of the strategic management of human resources, given the multi-level approach to the use of an effective system, slows down the development of not only enterprises, but also the state as a whole.

Changing the approaches of strategic human resource management will allow modernizing the economy and capitalizing on human potential.

REFERENCES

1. Government Decree of the Republic of Moldova "*On approval of the National Strategy on employment policies for the years 2007 - 2015*" №605 of 05.31.2007.
2. Government Decree of the Republic of Moldova "*On approval of the National Employment Strategy for 2017–2021*" No. 1473 of December 30, 2016.
3. VOLOVICOVA M. L. Theory and practice of intercultural communication – Rostov-on-Don: PI UFU, 2009.
4. ONOFREY A. Z. Prerequisites for the integration of the labor market in the European Union. Comrat, 2004.
5. Statistical handbook *Moldova in figures*, National Bureau of Statistics of the Republic of Moldova, Kishinau, 2017.
6. Statistical Yearbook of the Republic of Moldova 2018, Kishinau, 2018.
7. www.staistica.md
8. www.anofm.md

FACILITY MANAGEMENT AN ALTERNATIVE METHOD OF ATTRACTING INVESTMENTS

Litvin Eugeniu

Academia de Studii Economice a Republicii Moldova

str. Banulescu-Bodoni 61

eugen1ulitvin@gmail.com

069529396

Abstract: *The scope of this article is to research the alternative methods to attract investments in companies. Attracting investments is hard due to numerous requests/conditions imposed by banks or investors. The research is highlighting the importance of administrating the organizations' costs to create a favorable opinion for investors. Also, it is important for managers to understand that the potential investors are paying additional attention to the management quality that can be easily established by analyzing the Profit or Loss statements. At the same time, it is important to understand that modern investors use scorecard systems to rate companies in order to create a vision about their potential default. In this way the interest rate for the funds that will be attracted will be directly influenced by the score that a company achieves. The main goal of the article is to present that the principles of the Facility Management can improve the management quality in an organization, indirectly affecting the process of attracting investments and can help the company benefit from a good interest rate. In the research were used qualitative methods (interview with the specialists and theoretic sources) and comparative methods.*

Key Words: Facility Management, Costs, Investments, Management, Investors.

JEL: M11, M12, M21

INTRODUCTION

In the 21st century, to achieve success, the entities have to satisfy the consumer needs fast and qualitatively, as well as survive on the market amid big competition. To be competitive, organizations have to pay attention to innovations and implement them. This type of strategy needs a good managerial culture and investments. The objective of the research is to present how can Facility Management bring innovation in the company and how to organize the managerial culture to be more attractive for investors.

In order to understand how can Facility Management attract investments, qualitative and comparative methods were used. Among qualitative methods were applied the following: interviews with specialist from banking and investing sector that had the scope to show the main principles of selecting clients in the investing sector, and theoretical sources like standards, literature and courses. Comparative methods were used to compare the offers and the requirements on the investment market.

Facility management (FM) is a profession that encompasses multiple disciplines to ensure functionality, comfort, safety and efficiency of the built environment by integrating people, place, process and technology.

Analyzing the special literature, we can find the definition according to the International Organization for Standardization: "Facility Management is the organizational function which integrates people, place and process within the built environment with the purpose of improving the quality of life of people and the productivity of the core business".

In addition to the above-mentioned definition, the International Organization for Standardization defines the main activities of a Facility Manager and the skillsets that a Facility Manager should have, namely: "They're responsible for making sure systems of the built environment, or facility, work harmoniously. Facility Managers contribute to the organization's bottom line through their responsibility for maintaining what is often an organization's largest and most valuable assets, such as property, building, equipment and other environments that house personnel, productivity, inventory and other important element of operation."



Fig 1. Required skills for a Facility Manager

Source: Elaborated by author

In line with the skillsets and the responsibilities of a Facility Manager, easily can be established that a Facility Manager has to operate at two levels: strategic-tactical and operational.

- The Strategic-tactical level implies that clients, customers and end-users need to be informed about the potential impact of their decisions on the provision of space, services, cost and business risk.
- The operational level refers to the fact that it is the role of a facility manager to ensure corporate and regulatory compliance plus the proper operation of all aspects of a building to create an optimal, safe and cost-effective environment for the occupants to function. That can be accomplished by managing the following activities:

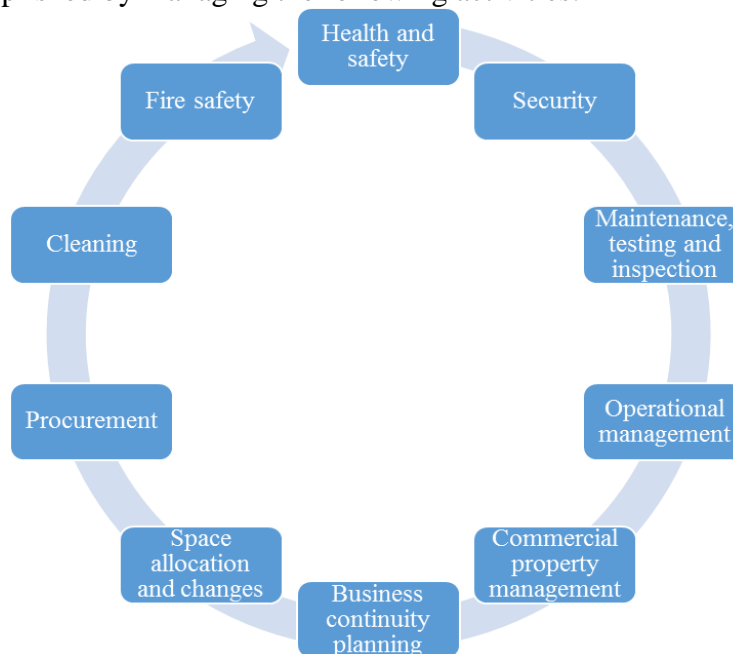


Fig. 2: Facility Management activities at Operational level

Source: Elaborated by author

In conclusion, the Facility Management focuses on developing the company, creating a safe environment and optimizing the costs. As an example of the above mentioned is company ELTASA that has made a research to understand how Facility Management affects the entity's revenue. The results show that, on average, a company benefits from a 3.3% reduction in overall maintenance costs, 3.5% reduction in lease costs and 5% reduction in total cost of occupancy.

This means that the costs decrease while the revenues increase, hence the company is becoming more competitive and has a possibility to attract more investments.

Next, the investment in a company represents the process of attracting funds for a certain scope. The most common type of investments are loans, grants and private investments. Depending on the type of activity and the needs of the client, banks and other organizations in Republic of Moldova are coming with large offers:

- To supply the working capital by using credit lines;
- Loans for commercial activity;
- Loans for buying or constructing real estate;
- Loans for paying the commercial invoices in conditions of lack of funds in the clients' running account (overdraft)
- Bank guaranties

The required information that an entrepreneur must present to access investments in Republic of Moldova, includes:

- The scope of the investment which must be well defined;
- The timeline of the scope;
- The own funds (Ex. For loans must be 20% depending on the type of the loan);
- The financial report (that proves that the company in question has enough revenue to pay the principal and interest rate for 3 months)
- The contract of the technics (in case if the scope of investment is to buy a new technique for the company)
- The business-plan (must also be included the forecast for next years after the investment)

As collateral the banks accept securities, real estate, stock of goods, guaranties and insurance of the solvability of the company or for a stable bank.

Nowadays investors prefer to choose where to invest by selecting the risk profile of their portfolio. This means that when a company applies for a loan, grant or a private investment the company will be ranked.

The ranks represent how good a company is (a rank of 1 means that the company is a good company and the probability of default is very low. The rank 6 represents a high probability of default, this is caused by big costs, low profit, very bad liquidity, solvability, and EBIT, EBITDA indicators. In the latter case, the company can receive investments from investors with a high risk portfolio and this will imply a higher interest rate.

In addition to the mentioned indicators, the probability to receive an investment is influenced by the collaterals. Collateral is an asset that a lender accepts as security for a loan. If the borrower defaults on the loan payments, the lender can seize the collateral and resell it to recoup the losses.

Loans that are secured by collateral are typically available at substantially lower interest rates than unsecured loans. The borrower has a compelling reason to repay the loan on time. If the borrower defaults, the lender can seize the property and sell it to recoup some or all of the losses.

If a company has implemented the Facility Management and it is oriented on safety and developing the real estate and to maintain a good life cycle for the machines that the organization is using for production, then the market price for the collateral will be bigger which means that the need for a huge number of collaterals to secure the loans will be lower and the interest will decrease.



Fig 3 How Facility Management principles attract investments.
Source: Elaborated by author

A good example of how indirectly the Facility Management is affecting positively the process of attracting investments can be found in the practical exercise proposed by Tiberiu Mihai in his courses of Corporate Credit Risk Management. The expert is looking at 6 companies with different credit histories, different liquidity and solvability indicators, and different type of activities. The scope of the exercise is to understand how to rank the companies that are applying for a loan, in order to see how the client will evolve during the next years.

Table 1. Loans rating exercise

Organization	Profit or Loss	Collaterals	Other indicators
ALFA - 6	Turnover – 51300 Costs - 56200	Real Estate – 38000 Equipment's - 13500	Medium
BETA - 1	Turnover – 97000 Costs - 58000	Real Estate – 6800 Equipment's - 4000	Very good
GAMMA - 5	Turnover – 94960 Costs - 93000	Real Estate – 40 Equipment's – 0	Good
DELTA - 2	Turnover – 90000 Costs - 53500	Real Estate – 20000 Equipment's - 6000	Good
KAPPA - 3	Turnover – 65000 Costs - 49000	Real Estate – 29000 Equipment's – 50000	Medium
SIGMA - 4	Turnover – 98700 Costs – 90700	Real Estate – 0 Equipment's - 600	Very good

It is important to understand that the ratings obtained in the experiment are based on different types of indicators (other types of indicators), the author's goal being to prove how a good management of the costs, real estate and risk management can influence the company's image and the possibility to obtain a better investment.

Following the carried out researches we can conclude that Facility Management can be used beyond its traditional principles. In this way, even for Republic of Moldova where the Facility Management is a knowhow, implementing it can increase the competitiveness of local entities. It is important to notice that for Republic of Moldova where the market is in a development stage where can be implemented innovations with success, the Facility Management will have its place. The scope to keep people safe, to keep high life cycle for Real Estate and equipment, to adopt unusual

decisions, to administrate the risks and to create recovery business plans, are the missing forces for the local organizations to adhere easier to European standards and to compete on the European market.

BIBLIOGRAPHY

1. DiChiara, P, W Rowe, and P van der Have. *Cost Planning and Estimating for Facilities Maintenance*. 1 edition. Kingston, MA: RSMeans, 1996
2. EN 15221-1:2006, Facility management – Terms and definitions.
3. International Financial Reporting Standards – IFRS 9
4. Tiberiu M: Corporate Credit Risk Management.
5. Wirabhuana A. MSC CMPM – Facility Management: Definition and Scope.
6. <https://www.ifma.org>
7. <https://www.investopedia.com>

CONCEPTUAL PERSPECTIVES OF DEVELOPING A BALANCED SCORECARD: CONTENT AND RELEVANCE

PhD student Androsov Elena
Academy of Economic Studies of Moldova (ASEM)
Banulescu-Bodoni 61 str.,
MD-2005, Chisinau, R.Moldova
autor's e-mail: lena_nikoara@mail.ru
+37379551226

Abstract. This article defines the concept of a Balanced Scorecard (BSC). The purpose of the study is to demonstrate the need for building a BSC of the unprofitable enterprise in the Republic of Moldova. BSC is an important factor in achieving efficient performance of the enterprise, integrating the components of the activity into its single whole.

Keywords: *balanced scorecard, equilibrium, strategy, method.*

JEL Classification: M10 General

Introduction

The article is dedicated to the currently relevant problem, which concerns the balance between the short-term and long-term perspective of the organization, between financial and non-financial indicators, between the main and auxiliary parameters, as well as between internal and external factors of the organization. This is one of the most constructive systems that provides the strategic management of companies of any complexity, operating in different markets.

The purpose of this publication is to review the BSC and show its necessity and timely use at enterprises in the Republic of Moldova. To achieve this goal, the article:

- researches and studies the literature and world practice as well as the existing system of indicators for assessing the activity of an organization;
- analyzes different points of view on the topic under study;
- clarifies the value of an integrated approach to the performance of the enterprise;
- draws conclusions and recommendations for the development of the system on the principles of balance in a rapidly changing business environment.

A balanced scorecard is especially important and timely in the current context of dynamically developing market relations; it allows managers to focus on the most important indicators of an enterprise's activity.

Brief analysis of bibliography in the field of the problem under study.

The theoretical basis of this topic consists of numerous sources, among them we will highlight the works of R. Kaplan and N. Norton, who consider the main indicators as four equally important components of the enterprise's activities: financial indicators, operational efficiency, human potential, and relationships with consumers. The main importance is attributed to the interaction of indicators and their balance [1, p.27]. That allows one to evaluate the positive dynamics of business development and determine the likely deviations from the chosen strategy. The company's strategy is transformed into an ordered scheme of step-by-step implementation of short-term tasks controlled by various levels of the administrative hierarchy.

Maurer R. explains in his book "One Small Step Can Change Your Life: The Kaizen Way": Kaizen is an ancient philosophy, concentrated in the wise saying of Lao Tzu: "The journey of a thousand miles begins with a single step". [4, p. 8] His work destroys the myths about the difficulties of change and removes the barriers that prevent individuals and groups from achieving

their goals. Change is not always the absolute answer to a dangerous situation. Kaizen gives two formulations to realize the objectives:

- using very small steps to improve a habit, process or product;
- using very small moments to inspire new products and inventions.[4, p. 9]

Authors Raef Lawson, Denis Desroches, Toby Hatch of the book "Scorecard Best Practices: Design, Implementation, and Evaluation" show an informative combination of concepts based on a scorecard and the best practices gathered around the world. Analyzing the obtained data about the company, they determine the advantages, direction, and methodology for its development [7].

In the work "Keeping Score: Using the Right Metrics to Drive World Class Performance" Mark Graham Brown [6] does not spend significant amount of time and business resources on collecting, explaining, and interpreting data. He interprets the way of identifying several significant indicators from a large number of business data and building the balanced scorecard system based on them. Such system gives the opportunity to effectively determine and optimize the company's activities. At the same time, he considers the past, present and future of a business, as well as the needs of customers, shareholders and employees of the company. The key to success is the identification of a small number of fundamentally important indicators.

Larry Bossidy and Ram Charan [3] consider three key business processes: personnel management, strategic planning and core activities — the three key business processes of the organization — were and remain the building blocks and the core of a good performance system. It is important to consider the discipline of performance of strategic indicators. This direction is developed by famous scientists Chris McChesney, Sean Covey, Jim Huling [5].

Thus, based on the analysis of theoretical sources of the BSC, we can underline the importance of four conceptual perspectives in assessing the effectiveness of a company:

- Customer Perspective. The main thing that worries customers is time, quality, performance characteristics, service, and costs. The duration of the production cycle reflects the time the company takes to meet customer needs. It defines the range of customers and consumer market segments where companies are going to work. Planned market segments act as a source of income for the enterprise.
- Internal Processes Perspective. Indicators of customer satisfaction should be translated into indicators of internal business processes in the company, which, in their turn, should be implemented to meet customer expectations. Internal indicators of a balanced scorecard should reflect the business processes, on which customer satisfaction depends most of all: these are factors affecting, for example, the length of the production cycle, quality, employee skills, and productivity.
- Learning and Growth Perspective. Indicators of customer orientation and internal business processes reveal the parameters that the company considers essential for competitive success. It is important to highlight that the company's ability to update, improve, and train its employees directly affects its market value.
- Financial Perspective. Financial performance indicators reflect the impact of the company's strategy and its implementation on improving the indicators of the final balance sheet. Usually, companies set financial goals such as increasing profitability, growth rates, and value for shareholders. It is very easy to formulate your financial goals: to survive, to work successfully and to flourish. Financial indicators assess the economic consequences of the taken actions.

Therefore, we can draw the following conclusion: a balanced scorecard provides for the analysis of strategies through the comprehensive evaluation of all activities in a company. (Fig. 1) It provides answers to four crucial questions:

- How do our consumers see us? (customer perspective)

- Where should we improve? (internal processes perspective)
- Can we continue to create and increase the cost? (learning and growth perspective)
- How do our shareholders see us? (financial perspective)

The key point of BSC is to translate the general provisions of working with consumers, which are contained in the statement of the mission, into the language of specific indicators reflecting the factors that are really significant for consumers.

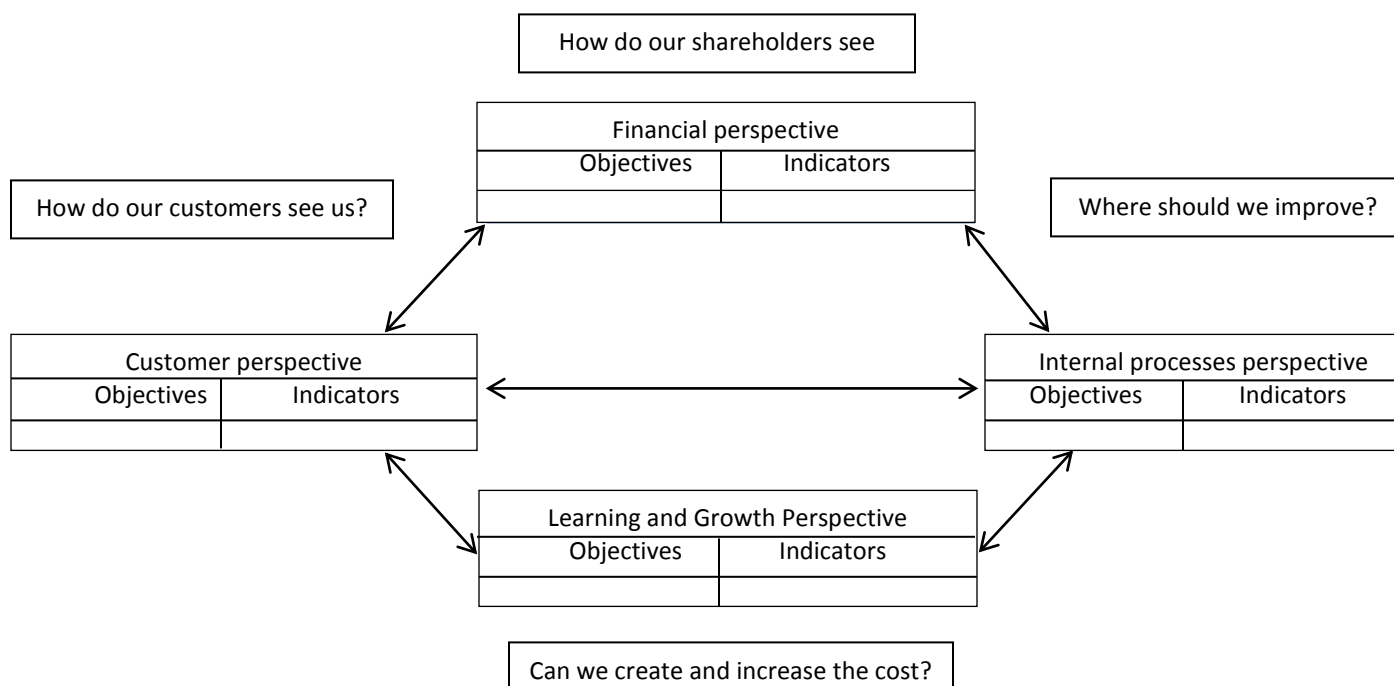


Figure 1. Basic interrelationships between conceptual perspectives.

Source: developed by Kaplan and N. Norton [3,4 p.27]

The balanced scorecard is an equilibrium ratio of values that allows managers to evaluate the company's work in key areas of development, answering critical customer and finance issues, as well as the perspectives of internal processes of organization, renewal, and training. BSC is a business valuation method that reflects the equilibrium that should be achieved by a company. BSC forces managers to focus on several key indicators of the enterprise. These indicators are oriented on customers, quality improvement, increasing the role of teamwork, reducing the response time to customer requests and the development of new products, as well as long-term management. The studied scorecard provides the leader with the tool and the opportunity for timely intervention and influence on the process of achieving high results under difficult conditions of tough competition. Therefore, it is vital that the managers and the employees have a clear understanding of the goals, strategies, objectives and methods of achieving them.

The description of the methods used in the research.

This article analyzes the main indicators of the company "Montatorul" LLC, clarifies the strategic goals and directions for their achievement. In our opinion, the implementation of strategic measures will contribute to overcoming the crisis at the company. When analyzing the company's activities in the context of a balanced scorecard, the methods of system analysis, factor approach, and empirical analysis were applied. "Montatorul" LLC provides services for the repair and

replacement of spare parts for cars of the brands "Audi", "Volkswagen", "Seat", "Skoda", "Porsche", and also deals with the supply and sale of new and used auto components. During the last year (from 2017 to 2018) the company "Montatorul" LLC turned from the successfully developing organization into a loss-making one.

The Results

The results obtained in the process of research are as follows: the services offered by the company need to be diversified, the main business processes should be properly built, it's important to learn how to create a demand, as well as strengthen the segment base and the internal corporate management as a whole. Based on the use of the above-mentioned methods, the other result of this study is clarification of the goals, strategic measures, and indicators of the activity of the enterprise "Montatorul" LLC in the context of a balanced scorecard (see table 1).

Table 1. Balanced scorecard in the context of the strategic measures of "Montatorul" LLC

Perspective	Objectives	Indicators	Measures
Financial	To leave the zone of loss of the enterprise	Minimize costs	Improve procurement management
	To increase profitability	Operating profit	Customer segmentation
	To increase the number of serviced cars	Gross income	Constant monitoring of the car market
Customer	To expand market share by attracting corporate customers	Market share of "Montatorul" LLC in the market of car services	Development of unique offers
	Focus on creating customer demand	Creating demand for car service in the Republic of Moldova	Identifying customer expectations empirically
	Service diversification	Reduced operating costs for customers	Express service for tire replacement and local diagnostics
Internal Processes	To improve the technological aspects of the provided services	Competitive advantages	Technical re-equipment of the body shop
	To increase the efficiency of using the existing technical equipment	Intensified operational condition factor	Maintenance of production units
	To improve the organization management system	Quality of Management at "Montatorul"	Coordination, balance of activities of various units in the company
	To increase labour productivity	Improving the car repair process	Time management and adherence to customer service procedures
Learning and Growth	To optimize the personnel structure	Human resource potential	Skills and management training
	To interest employees in high performance	Level of satisfaction with the accomplished work	Employee questionnaire and surveillance
	To keep the best personnel profile of the enterprise	Reduce the percentage of staff turnover	Investments in staff development and decent wages
	To introduce new types of services	The share of new types of services in the program of the enterprise and the market	Investment in equipment and staff

The source: Compiled by the author on the basis of the bibliography [1, 2, 4, 8]

CONCLUSIONS AND RECOMMENDATIONS

Based on the study of the questions raised in the topic, as well as on the research of the literature, the following conclusions and recommendations are drawn:

1. The balanced scorecard provides top-level managers with various sorts of information, without leading to its excess, since the number of indicators is limited and serves to show the reasons for achieving specific results.
2. The balanced scorecard allows managers to evaluate the company's work in key areas of development and answers the most important questions of client and financial perspectives, as well as perspectives of the company's internal processes and of its learning and growth.
3. The concept of the balanced scorecard combines within one report numerous and seemingly unrelated elements of a company's competitive strategy: customer orientation, quality improvement, increasing the role of teamwork, reducing response time to customer requests and new product development timelines, as well as long-term management.
4. In order to run their business successfully, the managers need to have solid knowledge in their field of work, they need to translate objectives and indicators into results within a strategic context.
5. The balanced scorecard prevents the achievement of efficiency in one area at the cost of reducing efficiency in another.

BIBLIOGRAPHY

1. Каплан Роберт С., Нортон Девид П., Сбалансированная система показателей: от стратегии к действию – третье издание/ пер. с англ. – М.: издательство Олимп-Бизнес; 2017-320с. – М., ISBN: 978-5-9693-0358-4
2. Каплан, Р., Нортон, Д. *Измерение результативности компании.* – перевод с английского, Москва: Альпина Бизнес Букс, 2006 – 220 с. ISBN: 5-9614-0074-5
3. Боссиди Л., Чаран Р. *Исполнение: Система достижения целей.* – Перевод с английского – четвертое издание. Москва: Интеллектуальная литература, 2017 – 324 с. ISBN: 978-5-9614-6363-7
4. Маурер Роберт, *Шаг за шагом к достижению цели: Метод Кайдзен.* – перевод с английского – пятое издание. Москва: Альпина Паблишер, 2018 – 192 с. ISBN: 978-9614-722-2
5. Кови Шон, Макченси Крис, Хьюлинг Джим, *Как достичь цели. Четыре дисциплины исполнения* - Перевод с английского – пятое издание. Москва: Альпина Паблишер, 2016 – 308 с. ISBN: 978-5-9614-5654-7
6. Марк Браун, *Сбалансированная система показателей: на маршруте внедрения* - Альпина Бизнес Букс, 2005-232с. ISBN: 5-9614-0115-4, 0-8144-0327-1
7. Раеф Лоусон, Тоби Хетч, Денис Дезрочес, *Сбалансированная система показателей — лучшие практики. Разработка, внедрение и оценка* – перевод с английского – BestBusinessBooks, 2015-208с. ISBN: 978-966-415-053-5
8. <http://izvestia.asu.ru/2009/2/econ/TheNewsOfASU-2009-2-econ-02.pdf>

THEORETICAL ASPECTS IN CHANGING THE EFFECTIVENESS OF ORGANIZATIONAL CHANGES WITHIN SERVICE PROVIDERS

Author:
Țurcanu Gheorghe
Domnișor Victor

Summary: *The ability to control organizational changes is indispensable for major achievements in the modern economy. Changes have always been seen by scholars in various fields of philosophy, medicine, economics, etc. That has contributed to motivating the continuous development of companies, the anticipated and voluntary adaptation of the organization to the internal and external factors of the companies.*

Key words: change, management, competition, system approach, etc.

In a competitive economic environment, companies' success depends on their skills, to survive, to adapt to a changing situation, efficiency, productivity and competitiveness that are determined by the level of modern management. To survive and respond flexibly to a dynamic of changing market conditions, the company must intentionally, sometimes "before time, before being suitable" to make organizational changes. This goes beyond inertia and stagnation in management structures in the existing system. The relevance of studying change management issues is growing as the competitive environment becomes more complex, as well as people's awareness of their role in the life processes of organizations and society.

A company is a complex entity that combines individual interests and group interests, motivations and restrictions, established technologies and innovations, hard discipline and creative freedom, official standards and informal initiatives. As we know, companies are born, develop, succeed, weaken and, sooner or later, cease activity. Those who are able to adapt, change companies, bloom for a long time, and those who are incapable disappear. Some companies are growing faster and more intense than others, that is why there is a reasonable reason to have strategies and the efficient use of resources. The precepts of the term "change" (evolution, restructuring, modification, etc.) can be found in various papers, based on various fields of activity: management, economics, marketing, philosophy, medicine, etc. However, the subject chosen by us for analysis is an interdisciplinary one, which implies an extensive study of these broader concepts.

Some authors define change management through the strategic perspective: "... change management is the strategy of systematic and planned change whose implementation requires the influence of organizational structure, organization culture and individual behavior." [1]

Everything in the universe is exposed to changes, including the society as a whole, various organizations as functional units and people, Heraclitus for 500 years B.C. stated that "nothing in this world is constant except change."

E. Muldașev, a famous physician and researcher, referring to the development of the whole universe. "Evolution does not support stability, because there are two ways - progress or regress, and for progress a lot of effort is needed. [2].

In this context, we can also quote Charles Darwin, a nineteenth-century English naturalist who revolutionized the study of biology with the "theory of evolution" based on the natural selection of species. In his work "The Origin of Species" (1859) and "The Descendancy of Man" he claims that: in the process of evolution survive not the most intelligent, not the most powerful species, but the species with a high capacity to adapt to change. Darwin's theory of biology has been transposed

¹ Tantiu Adrian, Fundamentals of Organizational Change, ISBN 973-954-519-3, ASE Edition, Bucharest, 2004, no.p.165.p3.
2 Muldașev E., From whom did I appear ?, ISBN 5-224-033-26-8, Olma Publishing House, Moscow 2002, no. 448, p. 364

by theoreticians [³] and on organizations and societies - the phenomenon of "social Darwinism," with the idea that the struggle for survival takes place not only within the biological system but also within organizations and societies, adaptation by determining their effectiveness.

From the point of view of the author, rephrasing what Darwin mentioned, we can say that "in the process of evolution / change survive not the most intelligent companies, the strongest, but the companies / persons with a high capacity to adapt to changes " [⁴].

According to Lamarck's theory, "the evolution of organisms is a dual process: a type of evolutionary change that is due to the actions of internal forces, another being the result of direct accommodation to the environment" [⁵].

The first to contribute to understanding the theory of management were both practitioners and social science specialists. Principals - practitioners such as Taylor and Fayol, and social science specialists like Mayo and McGregor.

Specialty literature does not contribute much to clarifying the concept. The specialists in the field have a certain sense in their field of scientific interest: Gh. Negoescu (management - change) [⁶], Rosabeth Moss Kanter (change - innovation) [⁷], Kurt Levin (change-behavior) [⁸], Talwar (change – restructuring) [⁹], Tom Peters (change - excellence) [¹⁰] etc.

Thus, the Romanian scholar Gh. Negoescu defines the organizational change as a technical, economic or managerial transformation that takes place within the organization. [¹¹]. Change is the opposite of stagnation and constitutes in society a motor of economic and social progress, A. Leca [¹²].

Studying specialized dictionaries, we can determine a variety of definitions, for example, with Larouse - dictionnaire etimologique "The word change comes from Latin" biblical "- change [¹³] and from French" change "- replace, transform [¹⁴].

The term "Change" according to the explanatory dictionary of the Romanian Language - to replace one thing with another or someone with another (of the same nature), to yield a thing, a good, to take in its place another (equivalent in value) give up an object for another, exchange, give another thing another form, another aspect etc; (modify, transform) [¹⁵].

E. Burduș: "organizational changes are responses to certain external forces, such as changes in markets, different competitive pressures, etc." [¹⁶]. And in the opinion of the American

³ ALBANESE, R. Management. Suoth - Western Publishing Co, Cincinnati. Ohio. 1988, nr.p. 811, pag.38-39

⁴ Designed by the author based on Charles Darwin concepts.

⁵ NICOLAE, M. Introduction to the philosophy and methodology of science. Chisinau: Ed. ARC, Chisinau 1996, no. 159, p.107;

⁶ Negoescu Gh., Opaț G. Management of change, PRO JUVENTUTE Publishing House, Galați, 1999, no.172, pag. 80;

⁷ Moss Kanter R. The Change Masters-Corporate Entrepreneurs at Work, Allen & Unwin, 1984, ISBN 9780046582418, nr.p. 432;

⁸ Levin K, Field Theoriz in Social Science, Harper, 1951, ISBN 0046582444, nr.p.432;

⁹ Talwar R. Reengineering – A Wender Drug for the 90 s? In Coulson Thomas (ed). Business Process Reengineering myth or reality, Kagan, 1994;

¹⁰ Peters T. Thriving on Chaos – Handbook for a Management Revolution, Mac. Millan, 1988, ISBN 0-06-097184-3, nr.p.720;

¹¹ Negoescu Gh et al. Management: conflicts, change, personnel, salaries. Algoritm Publishing House, Galați, 1999, no. 131, p. 45;

¹² Leca A. Principles of Energy Management, Technical Publishing House, Bucharest, 1997, ISBN 973-31-1030-4, nr.p. 584, p. 99;

¹³ Grand Larouse Enciclopedia. Librairie Larouse. Paris. 1960;

¹⁴ DAUZAT, A., DUBOIS, J. Larouse – dictionnaire etimologique. Paris. 1964, nr.p. 806;

¹⁵ Change, definition., <http://www.dex.ro/schimbare>, accessed 27.02.2019

¹⁶ BURDUȘ E., ANDRONICEANU A. Management of change. București: Ed. Economică. 2000, ISBN 973-590-417-9, nr.p. 540, page 17;

researcher R. Daft, "organizational change is a process of assimilation of new ideas and / or patterns of behavior". [17].

The starting point in studying change management is - the change, which is: "replacement, modification, transformation or transformation into form and / or containing an object, product, work, service, activity or process", to which the management of the company must have a positive attitude. C. Florescu and N. Popescu in the paper "Moving to a new quality through the scientific leadership of change" [18], highlight the relationship between change and the development of the organization.

Thus, the problem of change is also approached by specialists from the Republic of Moldova, such as Prof. Univ. Zbârciog V., invoking the need to review contemporary management approaches, refers to efficient management of change [19]. Based on knowledge, professional techniques, performance, which ensures the company's transformation into organizations that are sensitive to the requirements and conditions of the competitive market, prof. R. Hîncu points out that "change is the increase of awareness among changing managers and specialists that all efforts to change must balance the internal dynamics of subsystems in which change occurs (for example, an organization or a division of a company) and the context in which these subsystems operate. [20]

However, from the author's point of view, we accept that the change is of a systemic nature, that the change starts from the recognition that there are close links between interconditioning between the elements of a system. At the same time, change is a process and not an increase, as the author points out. Whether or not specialists are aware of these moments, the process of change can not be stopped. Other, there is pressure in favor of and against change.

The more vigorous the promotion of change, the more rapidly the renewal takes place, the life of products, technologies, methods and techniques will be reduced, resulting in a dynamic and accelerated development of the organization.

Organizational change has been the subject of analysis for more management specialists such as J. Ivancevich, James H. Donnelly, James Gibson. They consider the management of change as a systemic process that can be divided into several processes as follows [21]: Identifying the factors that trigger change; recognizing the need for change; diagnosing the problem; identifying the methods and alternatives through which change will be made; presentation of existing conditions; selecting the method; overcome resistance to change; implementation and coordination of change.

Regardless of the form of change, it leads to the destabilization of the existing state in the organization. The more stable an organization is the harder it is to change. The most important feature of an organization is its ability to adapt to new environmental requirements. Change must become a natural function of an organization.

In the theory of change, planned and unplanned changes are addressed. A. Levy and U. Merry (1986) ²² consider as the trigger factors of change and the crises or opportunities for change available. The planned change aims at increasing the organization's functionality and efficiency. It differs, however, from organizational growth. In practice, the organization has factors conducive to change and factors that generate resistance to change; the planned change reduces the action of

¹⁷ Daft R., Management, Ed. Piter, Moscow 2006, ISBN 5-94723-014-3, no.p. 864, p. 371;

¹⁸ Florescu C., Popescu N. The transition to a new quality through the scientific leadership of change. Political Publishing House, Bucharest, 1988, nr.p. 207;

¹⁹ Zbirciog V. „, The necessity of creating the company's management adequate to the information economy”. Scientific Symposium "Industrial and Commercial Policies in the Republic of Moldova", Chisinau, 1997

²⁰ Hîncu R. Information Economics: Managerial and Investment Issues, ASEM CIP; Chisinau, 2002, ISBN 9975-901-39-5, no. 470, p. 192;

²¹ Androniceanu A., Change Management: Valuing the Creative Potential of Human Resources, ALL Educational Publishing House, Bucharest 1998, ISBN 973-9392-16-4, nr.p. 170, p.

²² Levy, A., Merry, U. Organizational Transformation: Approaches, Strategies, Theories, New York: Praeger, 1986.

resistances to change. The change agent can be internal or external. We can also call upon the so-called pilot groups in the direction of change..

The organizational change takes into account two distinct situations: the change system and system change. Change can be planned. Change is often spontaneous. It involves the continuous adaptation of the organization. The change is stratified and corresponds to an organization's anticipated and voluntary adaptation behavior. On the other hand, the system is a balance between the different components of social life. As principles of system change we retain: the principle of strategic choice and the principle of alternative and sustainable approach. Over time, system resistance limits the ability to change. However, successive or simultaneous interventions at different points in the system give a cumulative effect, making the change more sustainable and reducing the resistance to change in the mass of the system.

Spontaneous change. This second form, much more convenient than the first, corresponds to a "reactive" organization that has developed, thanks to the professional formation of flexibility and innovation, a strong ability to adapt to environmental developments, whether these developments are expected or not. In this case, we are in a general perspective of continuous adaptation of the organization and the existence of some limits (organizational, financial, technological ...) of adsorption of exogenous shocks.

Strategic change (selected). It corresponds to an anticipated and voluntary adaptation behavior of the organization in the hypothesis of a more or less predictable future environment and the use of important information means and innovation forecasts (learning technological and competitive developments, developing managerial capabilities, important spiritual investments ...). In this case, the organization not only increases its adaptability but also provides its means of influence on its future environment.

Current forms of organizational change. Organizational change can be defined as any change, planned or not, of the structure and the working procedure.

There are natural changes resulting from the transformations of the organization. Sometimes they stem from the appearance of internal conflicts associated with some competitions. There are other changes caused by crisis situations (internal or external). Factors of organizational change In the literature, when it comes to organizational change, it is considered that it depends on:

- changes in the external environment in which the organization operates (such as changing the competitive environment or the preferences of the main beneficiaries served);
- when legislative changes are registered;
- as a result of technological progress;
- under the pressure of political or social events.

Among the internal factors that determine the change one can notice:

- diminishing competitiveness or efficiency ;
- loss of prestige, financial difficulties, lack of staff motivation, absenteeism, changing the structure or size of the organization.

Activating within a commercial company in the Republic of Moldova, which has a vast field of activity: Providing services for the distribution of periodicals, commercialization of books and consumer goods through its own kiosk and libraries network, subscriptions to newspapers and magazines as well and their delivery, we have conducted a preliminary study of changes and factors that have conditioned. I would like to mention some of them:

- The change achieved through the implementation of a quality management system, which led to the accountability of a large number of employees at the management level;
- The meticulous systematization of all processes in the company;
- Changes at the legislative level, which had a negative impact on the development of the

company, by relocating the booths;

- Changes in public administration, which brought a degree of uncertainty for the company;
- Increase of the store's own shops, which has had a positive impact on fiscal value.
- Develop and implement a new "Pavilion" shopping point concept for marketing the press and books, office and food.

As a result of the implementation of the quality management system, the company's employees in the process of work fulfill all the established stages without being circumvented or unexecuted. But at the same time it has reduced the coordination of the execution of the unplanned activities with all the departments involved in the process. These changes, as well as others, are to be studied, including in terms of efficiency and effectiveness in the management system, in later articles.

BIBLIOGRAPHY:

1. ALBANESE, R. Management. Suoth - Western Publishing Co., Cincinnati. Ohio. 1988, nr.p. 811, pp. 38-39
2. Androniceanu A., Change Management: Valuing the Creative Potential of Human Resources, ALL Educational Publishing House, Bucharest 1998, ISBN 973-9392-16-4, nr.p. 170, p.
3. BURDUȘ E., ANDRONICEANU A. Management of Change. București: Economical education. 2000, ISBN 973-590-417-9, nr.p. 540, page 17;
4. Daft R., Management, Ed. Piter, Moscow 2006, ISBN 5-94723-014-3, no.p. 864, p. 371;
5. DAUZAT, A., DUBOIS, J. Larouse - dictionaire etimologique. Paris. 1964, no.p. 806;
6. Florescu C., Popescu N. The transition to a new quality through the scientific leadership of change. Political Publishing House, Bucharest, 1988, nr.p. 207;
7. Grand Larouse Enciclopedia. Larouse Library. Paris. 1960
8. Hîncu R. Information Economics: Managerial and Investment Issues, ASEM CIP; Chisinau, 2002, ISBN 9975-901-39-5, no. 470, p. 192;
9. Leca A. Principles of Energy Management, Technical Publishing House, Bucharest, 1997, ISBN 973-31-1030-4, nr.p. 584, p. 99;
10. Levin K, Field Theoriz in Social Science, Harper, 1951, ISBN 0046582444, nos.p.432;
11. Levy, A., Merry, U. Organizational Transformation: Approaches, Strategies, Theories, New York: Praeger, 1986.
12. Moss Kanter R. The Change Masters-Corporate Entrepreneurs at Work, Allen & Unwin, 1984, ISBN 9780046582418, nr.p. 432;
13. Muldașev E., From whom did I appear ?, ISBN 5-224-033-26-8, Olma Publishing House, Moscow 2002, no. 448, p. 364
14. Negoescu Gh et al. Management: conflicts, change, personnel, salaries. Algoritm Publishing House, Galați, 1999, no. 131, p. 45;
15. Negoescu Gh., Opaiț G. Change Management, PRO JUVENTUTE Publishing House, Galați, 1999, no.172, pag. 80;
16. NICOLAE, M. Introduction to the Philosophy and Methodology of Science. Chisinau: Ed. ARC, Chisinau 1996, no. 159, p.107;
17. Peters T. Thriving on Chaos - Handbook for a Management Revolution, Mac. Millan, 1988, ISBN 0-06-097184-3, no.
18. Change, definition, <http://www.dex.ro/changing>, accessed 27.02.2019
19. Talwar R. Reengineering - A Wender Drug for the 90s? In Coulson Thomas (ed). Business Process Reengineering myth or reality, Kagan, 1994;
20. Tantau Adrian, Fundamentals of organizational change, ISBN 973-954-519-3, ASE Edition, Bucharest, 2004, no. p. 165, Pag. 3.
21. Zbîrciog V. "The necessity of creating the management of a company appropriate to the information economy". Scientific Symposium "Industrial and Commercial Policies in the Republic of Moldova", Chisinau, 1997.
22. Levy, A., Merry, U. Organizational Transformation: Approaches, Strategies, Theories, New York: Praeger, 1986.

SUPPLY CHAIN: KEY PERFORMANCE INDICATORS ANALYSIS

Condrațchi Liliana
kondratchi@yahoo.com

Academy of Economic Studies of Moldova,

Adresse: Republic of Moldova, Chișinău, str. Bănulescu Bodoni, 61,

Phone: 069274228

Web page: www.ase.md

Abstract. *Supply chains are fluid and are continuously adjusting to changes in supply and demand for the products they handle. To get the performance desired from supply chains requires a company to monitor and control its operations continuously. That is done through continuous measuring and monitoring their supply chain Key Performance Indicators (KPIs). Most organizations are ignoring the importance of analyzing their KPIs, and they stop at measuring and reporting them. That is not helping senior management to address root causes and understand what went wrong. We show here, how to transfer the quantitative into qualitative measures. So this paper is discussing some of supply chain KPIs, which are used in our practical case, what types of analysis are done on them, in which forums or meetings they are discussed, and the improved results. We started this concept as part of supply chain reengineering process in industrial international Fast Moving Consumer Goods (FMCG) Company by initiating Sales and Operational Planning Process (S&OP), and get use of much raw data and transforming it to meaningful analysis which helped the organization to improve their decisions. This process is being developed and implemented and after one year, results started to come.*

Key words: *Supply Chain Management, Performance Measurement, Inventory Management, Quality Data Analysis*

JEL CLASSIFICATION: Q 23

Increasing level of competition and globalization in the world economy has major impact on looking for improving supply chains performance. Companies pay millions of dollars in order to improve their supply chain performance using process reengineering, new systems, training employees (Douglas, 2004). As a critical result, the need of using raw data and measures to better understands their supply chain performance and improves decisions taken (Douglas et. al., 2004).

A supply chain exists to support the market that it serves. To identify the performance that a supply chain should deliver, we need to measure different indicators and analyze them. Linking supply chain KPIs by the proper analysis gives better understanding of the issues and mistakes happened in history and recording these changes and root causes is very important, as learning phase (Rui and Xiaomin, 2007).

Our project was mainly to improve the performance of the supply chain by giving better service to our consumers. First our target was to perform supply chain process reengineering by applying new sales and operational process (S&OP). We started by collecting KPIs measures in order to give us better understanding to the company performance. After that we concluded that we have many issues in customer service levels, stock levels, meeting our financial targets, and we discovered many market opportunities losses. That pushed us to start investigating what are the reasons behind that. And we started to search how to understand our issues, that was the reason behind thinking of linking KPIs together and making proper analysis. When we started applying this analysis, we started understanding our issues and relations. And then we started to take better decisions. After around one year of continuous improvements and analysis, we could have better KPIs measures.

A supply chain is a network of manufactures and services providers that work together to convert and move goods from the raw materials stage through to the end user. These manufactures

and service providers are linked together through physical flows, information flows, and monetary (Cecil, and Robert, 2006). Supply Chain Management is the active management of supply chain activities and relationships in order to maximize customer value and achieve a sustainable competitive advantage (Roger and Kristina, 1999). It represents a conscious effort by a firm or group of firms to develop and run supply chains in the most effective and efficient ways possible (Sunil and Peter, 2007).

In its simplest form, a supply chain is composed of a company and the suppliers and customers of that company. This is the basic group of participants who create a simple supply chain. Extended supply chains contain three additional types of participants. First there is the supplier's supplier or the ultimate supplier at the beginning of an extended supply chain. Then there is the customer's customer or ultimate customer at the end of an external supply chain. Finally there is a whole category of companies who are service providers to other companies in the supply chain. These are companies who supply services in logistics, finance, marketing, and information technology (Michael, 2006).

In any given supply chain there is some combination of companies who perform different functions. There are companies who producers, distributors or wholesalers, retailers, and companies or individuals who are the customers, the final consumers of a product. Supporting these companies there will be other companies that are service providers that provide a range of needed service. In the some other organizations all these entities exist in the same company even the providers such are finance (Sodhi, 2000).

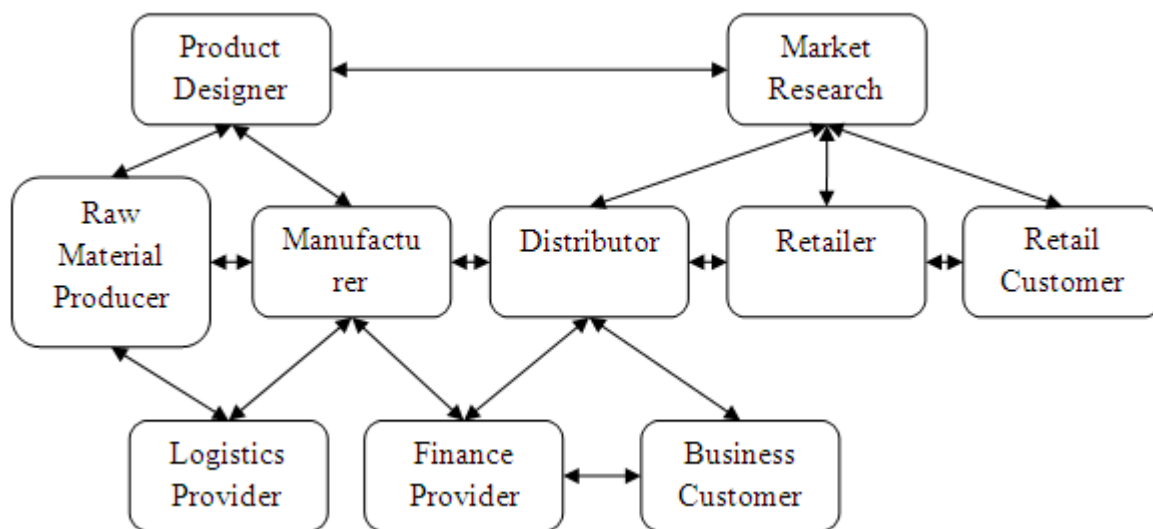


FIGURE 1: Example of Extended Supply Chain

Source: Elaboratet by author

APICS defines a process as “a set of logically related tasks or activities performed to achieve a defined business outcome.” For our purposes, these outcomes can be physical, informational, or even monetary in nature. Physical outcomes might include the manufacture and delivery of goods to a customer; an informational outcome might be registering for college courses; and, finally, a monetary outcome might include payment to a supply chain partner for services rendered. Of course many business processes have elements of all three (Martin, 2001). (Anderson, 1999) offers a similar definition, but he goes on to note that the receipt may be a downstream customer, someone within the firm (an internal customer), or even a supply chain partner. Anderson also distinguishes among three types of processes. Primary processes address the main value added activities of an organization. They include activities such as delivering a service and manufacturing a product.

These processes are considered “value-added” because some customer is willing to pay for the resulting outputs. In contrast, supports processes perform necessary, albeit not value-added, activities. An example is tuition billing. No student wants to pay tuition, and the university would rather not spend the overhead required to collect it, but the university would not be able to sustain itself for very long without monetary flows from the students. Lastly, development processes are those that improve the performance of primary and support processes (H. James, 1991). Table 1 gives examples of primary, support, and development processes.

TABLE1: Primary, support and development processes

Primary Processes	Support processes	Development Processes
Providing a service	Evaluating suppliers	Developing new products
Educating Customers	Recruiting new workers	Performing basic research
Manufacturing	Developing a sales & operational plan (S&OP)	Training new workers

Our focus in this paper is on sales and operational plan process (S&OP). Next section gives brief summary about our implemented process.

S&OP is the Business Planning framework within which all operational functions have visibility of plans, the results & risks. It is the right balance between Supply and demand plans to create a single achievable plan that delivers business goals. S&OP output is ONE plan generated from the Sales and Marketing and agreed by all functions and all levels(Cecil and Robert, 2006).

S&OP is a means of aligning targets, objectives and actions across functions.

We start our process by making the proper analysis for demand history and KPIs. Then first meeting is “Demand Planning” where we decide what our demand forecast is combined with agreed demand activities. Next we generate the according demand orders based on distributors stocks, lead times and weeks coverage. Next meeting is supply meeting, where we agree on the production plans and materials orders. Then calculating the financial reports based on previous decisions taken in these meetings, so that we can check and compare our forecasts with our targets. And then at partnership meeting we make gab analysis and discuss what our overall issues are and take decisions. Lastly, as S&OP is leaded by the company executive board, there must be meeting with the board member to present the supply chain results and decisions.

More better supply demand balance by incorporating all factors which affecting this balance, more improving customer satisfaction levels (Geary et. al., 2002). S&OP Expected Effects:

1. Unsystematic Under/Over Forecasting
2. Synchronization between functions on lead times and freeze points
3. Better capacity planning
4. Reduce inventory levels
5. Stabilize production rates
6. High Level of Customer Service
7. Shorten customer lead times
8. Transparent Organization
9. Optimum W/C, Improve profitability

Business Models in the area of logistics

The area of logistics is important for the European economy in two ways. First, major expenditures of businesses are in logistics, thereby affecting and being affected by other economic activities. In the EU 17 logistics contributed to 5.5% of the GDP in 1997 (total logistics volume of 420 bn euros), 7.6% of the GDP in 2004 (total logistics volume of 730 bn euros) and 7.4% of the GDP in 2007

(total logistics volume of 837 bn euros) (Klaus and Kille 2008, p. 159; Klaus and Kille 2006, p. 43; Klaus and Mueller-Steinfahrt 2000, p. 42; International Monetary Fund 2009) (***The EU 17 countries are Austria, Belgium, Denmark, Germany, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom. In 1997 the GDP for the EU 17 was USD 8,873.37 bn (equivalent to 7,600.97 bn euros at an exchange rate of 1 EUR equivalent to USD 1.1674 as of 1 January 1999 when the euro was introduced to world financial markets as an accounting currency). In 2004 the GDP for the EU 17 was USD 13,091.01 bn (equivalent to 9,594.7 bn euros at an exchange rate of 1 EUR equivalent to USD 1.3644 as of 31 December 2004). In 2007 the GDP for the EU 17 was USD 16,574.43 bn (equivalent to 11,253.3 bn euros at an exchange rate of 1 EUR equivalent to USD 1.47285 as of 31 December 2007).***). Improving the efficiency of logistics may result in lower prices for consumers, higher profits for businesses, or both. The result could be a higher overall standard of living and/or a higher tax base. Thus, the area of logistics makes an important contribution to the economy as a whole.

Second, the area of logistics is a significant activity in facilitating the sale of virtually all goods and services. It supports the movement and flow of many economic transactions. While brand products are well-known to the public, logistics is not. However, without logistics each business is like a car without an engine: if goods do not arrive on time, in the proper place, in the proper condition or in the proper quality, sales are impossible and economic activities throughout the supply chain will suffer. For example, if automobile production has to be suspended because of lack of inventory caused by unsatisfactorily-executed logistics, expenses of 335,000 euros per hour can be incurred (Heriot-Watt University 2008, p. 42) (***The report from Heriot-Watt University states an amount of £300,000. This amount equals 334,881 euros at an exchange rate of £1 equivalent to 1.11627 EUR as of 31 October 2009.***).

The latter is just one example demonstrating the real extent of the importance of logistics for businesses and thus for an economy. Without smoothly operating logistics, businesses are likely to struggle. Nevertheless, in politics and economics this industry is a neglected area. Yet it is undoubtedly one of the growth sectors in an industrial economy that has known a lot of retrenchment. In fact, as more production has been outsourced abroad, logistics has grown in importance.

Even when mentioned, news and discussions about the area of logistics tend to concern large size enterprises (LSEs) rather than small- and medium-sized enterprises (SMEs). However, an economy that is aligned to success and growth cannot permit itself to ignore this sector further, or treat it with neglect.

The increasing importance of logistics is justified in enormous changes in the macro economic environment in the last two decades. These changes have led to a decisive and profound redistribution of supply chain activities amongst producers and logistics service providers (LSPs). Globalization and developments in the European Union, for instance, dramatically impacted the ways of doing business. Locations for production plants have been centralized and/or have been shifted to Asia, resulting in a strong increase in transportation as well as shipping of raw materials and goods.

Besides this drive for centralization and economies of scale, producers have also started to concentrate on their core competences, with the consequence that services like transportation or warehousing increasingly were outsourced. Economic developments have caused pressures on producers' costs, leading to a rethinking of the focus of activities and resulting in a further broadening of the scope of outsourcing. In its utmost form, LSPs' scope of services covers the management of total supply chains. Consequently, the supply chain scopes of producers and LSPs have shifted. While the scope of producers' supply chains has decreased, the scope of the supply

chains of LSPs has increased. Outsourced activities by producers have been taken over by a network of partners that I refer to as the supply chain network or value network. LSPs have started to organize the physical, informational, financial and knowledge flows within these value networks. I describe the service scope of an LSP that covers the management of total supply chains as Total Integration or Integrated Supply Network Management. In this study I use both self-defined terms synonymously.

Furthermore, competitive pressures have increased. In particular, LSEs in logistics have been pushing commodity business. However, smaller LSPs that are open to innovation and transformation can keep up with the developments in the competitive environment. Overall and across industries, promoting innovations has been considered a key strength of SMEs, which themselves are considered the backbone of an economy (Haussmann et al. 2006, p. 1). Traditional LSPs identify chances to escape the low margin transportation business by gradually broadening their service scope.

This is where we must consider SMEs. By keeping pace with Total Integration, these logistical SMEs are often outstandingly successful and long-term survivors in an industry. Hermann Simon refers to such outstanding SMEs as “Hidden Champions”. He identified them as the backbone of the lasting German export strength, and has lauded their close relationships to customers as a pivotal element of their strategy (Simon 2007, p. 11, p. 159 et seqq.; Simon 1996a, p. 98 et seqq.). In fact, SMEs are of high importance for the economy. In Germany, for instance, more than 99% of the roughly 3.6 million companies belong to the small- and medium-sized economy. They represent about 45% of the total economic performance and their turnover amounts to close to 40% of the total of all German companies. Germany’s SMEs employ about 20 million persons (equivalent to more than 65% to 70% of all employees) and about 80% of the trainees (BMW 2009a, p. 7; BMW 2009b).

It is surprising in view of the importance of SMEs that research on SMEs in logistics is so limited. It is more than overdue. The two key reasons are their low attention in research so far as well as their power of innovation that is required to offer Total Integration solutions. I propose to search for Hidden Champions in logistics and to identify sources for success and long-term survival. The search for Hidden Champions is therefore also a search for ‘hidden success factors’ of SMEs in logistics, a field in industry research that is not yet covered in any depth and unfamiliar to the public. I will show that these SMEs have organizational capabilities that are unique and that distinguish them from the LSEs in their sector, whose offer is much more of a commodity service. I argue that in contrast to Hidden Champions with their power for innovations, LSEs are subject to the commodity trap as they are captives to existing solutions heading for economies of scale and economies of scope in their service offerings.

REFERENCES

- [1] Book - Bjorn Anderson, Business Process Improvement Toolbox, 1st Edition, ASQ Quality Press Publications, 1999, ISBN: 0-87389-438-3.
- [2] Book - Cecil C. Bozarth, Robert B. Handfield. Introduction to operations and supply chain management, 1st Edition. Pearson Education, 2006, Inc. ISBN: 0-13-944620.
- [3] Book - Douglas M. Lambert, The Eight Essential Supply Chain Management Processes, Supply Chain Management Review, 2004, pp. 18-26.
- [4] Scholarly Journal - Douglas M. Lambert, Martha C. Cooper and Janus D. Pagh, Supply Chain [5] Scholarly Journal - Management: Implementation Issues and Research Opportunities, The International Journal of Logistics Management, 9 (2), 1998, pp. 1-18.
- [6] Scholarly Journal - Geary, Steve, Paul Childerhouse, and Denis Towill, Uncertainty and the Seamless Supply Chain, Supply Chain Management Review, 2002, pp. 52-61.
- [7] Scholarly Journal - H. James Harrington, Business Process Improvement: The Breakthrough Strategy for Total

Quality, Productivity, and Competitiveness. New York: McGraw-Hill, 1991, ISBN: 0-07-026768-5.

[8] Scholarly Journal - Martin, Andre J., Capacity Planning: The Antidote to Supply Chain Constraints, Supply Chain Management Review, 2001, pp. 62-67.

[9] Book - Michael Hugos, Essentials of Supply Chain Management, 2nd Edition. John Wiley & Sons, Inc, 2006, ISBN: 0-471-77634-3.

[10] Scholarly Journal - Roger D. Blackwell, and Kristina Blackwell, The Century of the Consumer: Converting Supply Chains into Demand Chains, Supply Chain Management Review, 1999, pp. 22-32.

[11] Scholarly Journal - Rui Xu, Xiaoli Li, Xiaomin Song and Gang Liu, The Analysis of Bullwhip Effect in Supply Chain Based on Strategic Alliance, 2007, DOI: 10.1007/978-0-387-75466-6_51.

[12] Scholarly Journal - Sodhi, Mohan, Getting the Most from Planning Technologies, Supply Chain Management Review, Special Global Supplement, 2000, pp. 19-23.

[13] Book - Sunil Chopra, Peter Meindl, Supply Chain Management: Strategy, Planning, & Operation, 3rd Edition. Pearson Education, Inc, 2007, ISBN: 0-13-173042-8.

PERSPECTIVES OF CULTURAL DIMENSIONS RESEARCH PROJECT GLOBE IN THE REPUBLIC OF MOLDOVA

PÎRLOG ANGELA
angela.pirlog@yahoo.com
ASEM,
(Republic of Moldova, Chișinău,
str. Bănulescu Bodoni, 61,
069101316, www.ase.md)

Abstract. *The purpose of this article is to show the importance of the GLOBE project that is going to extend in the Republic of Moldova and that the notion of culture is, in fact, quantifiable by its dimensions. We have described each of nine dimensions of culture, namely: uncertainty avoidance, power distance, performance orientation, in-group collectivism, institutional collectivism, human orientation, assertiveness, gender egalitarianism, future orientation from the point of view of current **practices** (what is the situation at the moment) and **values** (as it should be), as well as prospects for the expected relationship between each dimension and management in the Republic of Moldova.*

Key words: *GLOBE, cultural dimension, management*

JEL CLASSIFICATION: M14, M16

Values distinguishing a culture from the others are predictors for cultural practices, as well as for leadership features and behaviours in that culture.
(R. House., 2002)

INTRODUCTION

GLOBE (Global Leadership and Organizational Behavior Effectiveness) is a research project that includes several phases and methods in which researchers from all the major cultural regions in the world collaborate to thoroughly investigate the interrelationships between the culture of society, organizational culture and leadership / management.

Culture is not just a set of beliefs, norms, models, projections, and institutions that shape the cultural aspirations of a particular group. That's why the GLOBE model distinguishes between cultural practices (such as it actually is in the society) and cultural values (how the culture should be). While practices describe the (real) cultural product of the analyzed community, the values describe the desired cultural product. In other words, practices show socio-cultural reality, while values concern the future of this community in the field.

After a rigorous literature review as well as two pilot studies, the team identified nine "cultural dimensions" that would serve as their units of measurement, or (in research language) "independent variables." Several of the cultural dimensions of GLOBE such as, uncertainty avoidance, power distance, human orientation, assertiveness, gender egalitarianism, were already known and had a vast history of critical research and evaluation. However, even in those cases, GLOBE researchers have carefully assessed whether it is necessary to redefine their meanings and / or modify the associated measurement tools. Other cultural dimensions have recently been developed, in-group collectivism, institutional collectivism, future orientation, performance orientation, although they have usually been linked to one or more of the dimensions included in the traditional cultural dimension, such as the one developed by Hofstede. [1, 2]

The initial purpose of the project was to create tools for measuring cultural and leadership attributes at both organizational and societal levels, tools that could be used in many cultures. Long-

term program designed to conceptualize, operationalize, test, and validate a cross-level integrated theory of the relationship between culture and societal, organizational, and leadership effectiveness. A team of 160 scholars worked together since 1994 to study societal culture, organizational culture, and attributes of effective leadership in 62 cultures. [6] The results can be found in Culture, Leadership, and Organizations: in [3] [Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies published in 2004.](#)

Culture and Leadership Across the World: The GLOBE Book of In-Depth Studies of 25 Societies published in 2007 is the second major publication of GLOBE a groundbreaking, large-scale project on international management research featuring contributions from nearly 18,000 middle managers from 1,000 organizations in 62 countries, perhaps the largest project of its kind ever undertaken. This volume effectively presents a complex collection of global research addressing the culture of particular countries, leadership qualities within those countries, and recommendations on how managers should conduct business in countries other than their own.[6]

The following phase of the ten-year GLOBE project, the research examined strategic leadership effectiveness for executive and top-level management based on data from more than 1,000 CEOs and over 6,000 top management team members in 24 countries. The results of this stage can be found in [4] [Strategic Leadership across Cultures: The GLOBE Study of CEO Leadership Behaviors and Effectiveness in 24 Societies published in 2014](#)

GLOBE 2020 is the next stage of the GLOBE project, consisting of two major rigorous studies. Study 1 focuses on the determinants and dynamics of cultural change and building trust in societies. Study 2 focuses on the relationship between national culture, leadership, and organizational practices, ie cultural influences on leadership in specific human resources practices, employee career strategies, attitudes and performance. At this stage the study of the cultural dimensions in the Republic of Moldova is included

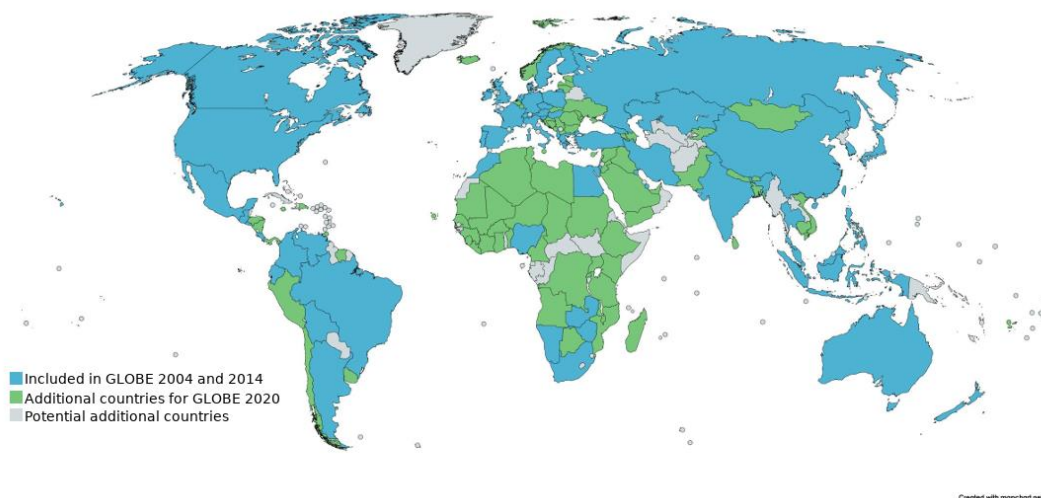


Fig 1. Extension of the project GLOBE according stages (source : https://globeproject.com/globe_2020)

MATERIALS AND METHODS.

From operational point of view, culture is defined by the use of measuring instruments that reflect two types of manifestations: (1) agreement among members of the community (society or organization) on values in the form of expressing opinion on what *should be* , and (2) the agreement between the exercise of observed and reported rights, such as family, school, organizations, economic and legal systems, political institutions measured by indicators that evaluate what is behavior or what are behaviors, institutional practices and common recommendations.

What exactly is a cultural dimension? It's a concept that is depicted graphically as a continuum. In most cases, only the two ends of the continuum are named. Bellow, we will graphically show, how are cultural dimensions actually used by the GLOBE research team.

To understand the process that GLOBE researchers used to collect the information needed to analyze and measure cultural dimensions, each of the sections below includes examples of questions addressed to respondents.

The respondents are asked to answer the current GLOBE survey questions on a scale from 1 to 7 to measure their level of beleif in the subject matter (for example, when a respondent was asked whether aagree or disagree with a specific statement, a "1" response shows "a strong disagreement," while "7" shows a strong agreement. The score of a society on a cultural dimension is calculated by aggregating the ratings (ie, scores) provided by all respondents in that society - for example, the score on power distance in the Republic of Moldova will be calculated as the average of the scores provided by all Moldovans in the respondent group on the questions regarding the actual practices the power distance in the Republic of Moldova.

RESULTS AND DISCUSSIONS

Power distance

As mentioned above, the power distance dimension appears in both Hofstede [1,2] and GLOBE models. GLOBE researchers have defined power distance as a measure in which a collectivity accepts and accepts authority, power differences and privileges. Typical questions for respondents in the GLOBE survey on this dimension would include the following:

1. In the Republic of Moldova, a person's influence is based (practices)/ should be based (values) primarily on:

one's ability and contribution to the society				the authority of one's position		
1	2	3	4	5	6	7

2. In the Republic of Moldova, rank and position in the hierarchy have (practices)/ should have (values) special privileges.

Strongly agree	Neither agree nor disagree				Strongly disagree	
1	2	3	4	5	6	7

GLOBE researchers also identified the characteristics of high-power societies that were similar to those explained by Hofstede 83, including the differentiation of members of society into classes; stable and limited power bases; the perception that power assures social order; a limited ascending social mobility; resources are only available for a few selected ones; and more stratification among the members of society in terms of power, authority, prestige, status, wealth and material possessions.[3, p. 536] GLOBE researchers also concluded that the survey data provided sufficient support to confirm the hypothesis that societies wirh high level of power distance tend to have less transparent governments. Some of the characteristics of the low-power companies identified by GLOBE researchers included the existence of a large middle class, the low power of corruption, ascending mobility is common, resources are available to almost all members of the society, the bases of power are transient as well as information is widespread among members of society.

Performance orientation

The performance orientation dimension developed by GLOBE researchers reflects the extent to which a community encourages and rewards innovation, sets and fulfills high standards, excellence and performance improvements.[3 , pp. 30, 239]

Typical questions for respondents in the GLOBE survey on this dimension would include the following:

1. In the Republic of Moldova, teen-aged students are encouraged (practices) / should be encouraged (values) to strive for the continuous improvement of performance

Strongly agree	Neither agree nor disagree	Strongly disagree
1	2	3
4	5	6
7		

2. In the Republic of Moldova, being innovative to improve performance is (practices) / should be (values) generally:

Substantially rewarded	somewhat rewarded	not rewarded
1	2	3
4	5	6
7		

Societies with high performance orientation have features such as value creation and development; assertiveness, competitiveness and materialism; feedback assessment is needed to improve performance, communication is direct and explicit; members of society have control over their own destiny. GLOBE researchers also concluded that the survey data provided sufficient support to confirm the hypothesis that high-performance oriented societies tend to have governments that are more supportive of economic development. Low-performance level societies value and highlight social and family relationships, age, loyalty and belonging; harmony with the environment instead of controlling it; the feedback is formal and informal communication is expected in such societies [3, p.245]

Uncertainty Avoidance

The uncertainty avoidance dimension appears in both the Hofstede and GLOBE models. Designers of the GLOBE Project Survey have defined the uncertainty avoidance as the extent to which a society, organization or group and is based on norms, rituals, rules, laws, institutions and social procedures established to mitigate the unpredictability of future events (ie avoid uncertainty) .[3 p 30]

Typical questions for respondents in the GLOBE survey on this dimension would include the following:

1. In the Republic of Moldova, it is placed (practices)/ should be placed (values) the emphasis on order and consistency, even at the expense of experimentation and innovation:

Strongly agree	Neither agree nor disagree	Strongly disagree
1	2	3
4	5	6
7		

2. In the Republic of Moldova, societal requirements and instructions are spelled out (practices)/ should be spelled out (values) in detail so citizens know what they are expected to do.

Strongly agree	Neither agree nor disagree	Strongly disagree
1	2	3
4	5	6
7		

The characteristics of societies with a high level of uncertainty avoiding identified by GLOBE researchers included the use of formalities in social interactions with others; documentation of agreements in legal contracts; maintaining orderly and meticulous records; trust in formalized policies and procedures; strong resistance to change, and preference for moderate and cautious risks.[3, p.618] GLOBE researchers also concluded that survey data provided sufficient support to confirm the hypothesis that high uncertainty societies tend to have more transparent governments. GLOBE researchers have found that low uncertainty avoidance societies use informality in social interactions; are less orderly and less formalistic; are willing to conclude agreements based on the

word people thought to be in good faith. In formal contracts, it is based on informal behavioral rules for most aspects; less risk is considered and there is amoderate resistance to change.

Performance orientation

The performance orientation dimension developed by GLOBE researchers reflects the extent to which a community encourages and rewards innovation, sets and fulfills high standards, excellence and performance improvements.[3, pp. 30, 239]

Typical questions for respondents in the GLOBE survey on this dimension would include the following:

1. In the Republic of Moldova, teen-aged students are encouraged (practices) / should be encouraged (values) to strive for the continuous improvement of performance

Strongly agree	Neither agree nor disagree	Strongly disagree
1	2	3
1	2	3

2. In the Republic of Moldova, being innovative to improve performance is (practices) / should be (values) generally:

Substantially rewarded	somewhat rewarded	not rewarded
1	2	3
1	2	3

Societies with high performance orientation have features such as value creation and development; assertiveness, competitiveness and materialism; feedback assessment is needed to improve performance, communication is direct and explicit; members of society have control over their own destiny. GLOBE researchers also concluded that the survey data provided sufficient support to confirm the hypothesis that high-performance oriented societieess tend to have governments that are more supportive of economic development. Low-performance level societies value and highlight social and family relationships, age, loyalty and belonging; harmony with the environment instead of controlling it; the feedback is formal an informal communication is expected in such societies [3, p.245]

In-Group Collectivism

In-group collectivism, one of the dimensions of "collectivism" used by GLOBE researchers, is the extent to which individuals express pride, loyalty, coherence and interdependence in their organizations or families.

Typical questions for respondents in the GLOBE survey on this dimension would include the following:

1. In the Republic of Moldova, children children take pride (practices) /should take pride (values) of the individual accomplishments of their parents:

Strongly agree	Neither agree nor disagree	Strongly disagree
1	2	3
1	2	3

2. In the Republic of Moldova, parents children take pride (practices) / should take pride (values) of the individual accomplishments of their children:

Strongly agree	Neither agree nor disagree	Strongly disagree
1	2	3
1	2	3

In societies with high level of group collectivism obligations are important determinants of social behavior; a strong distinction is made between in-group groups and extra-group groups; people have links with groups and are strongly committed to these groups; the pace of life is slower; love has little importance in marriage. Other features of high-level group collectivist societies include a fundamental idea of people that they are highly interdependent and are therefore required to make important personal contributions to their groups; long-term employment relationships and

the obligation for organizations to assume a major responsibility for employee welfare; and a tendency for major decisions to be made following group deliberations. [5] High-level collective societies tended to support and support charismatic / value-based and team-oriented leadership styles. The GLOBE researchers also concluded that the survey data provided sufficient support to confirm the hypothesis that stronger family-oriented societies (ie high-level group collectivist societies) tend to have less transparent governments. Instead, in a low-group collectivist society, personal needs and attitudes are important determinants of social behavior; a small distinction is made between in-group groups and extra-group groups; people emphasize the rationality of behavior; the pace of life is faster; and love has a great importance in marriage.

Institutional collectivism

Institutional collectivism, the second dimension of collectivism used by GLOBE researchers, is the extent to which organizational and societal institutional practices encourage and reward the collective distribution of resources and collective actions.

Typical questions for respondents in the GLOBE survey on this dimension would include the following:

- 1. In the Republic of Moldova, leaders encourage (practices) / should (values) encourage group loyalty even if individual goals suffer:**

Strongly agree	Neither agree nor disagree	Strongly disagree				
1	2	3	4	5	6	7

- 2. In the Republic of Moldova being accepted by the other members of a group is (practices) / should be (values) very important.**

Strongly agree	Neither agree nor disagree	Strongly disagree				
1	2	3	4	5	6	7

In societies with high degree of institutional collectivism, it is found that members assume that they are very interdependent within groups, group objectives generally take priority over individual goals and group loyalty is encouraged even in situations where it undermines the pursuit of individual goals, the economic system of the society tends to maximize the interests of the collectivities, the rewards are determined by the age, the personal needs and / or equity within the group and critical decisions are taken by the groups. While high institutional collectivist societies have not firmly endorsed any particular leadership style, being effective, they strongly disapprove autonomous leadership. Instead, in low institutional collectivist societies it is clear that members assume that they are largely independent of any group and responsible for themselves, that the self is viewed as autonomous, that individual goals often have priority over the group's goals and that the pursuit of individual goals is encouraged even at the expense of group loyalty, the economic system of society tends to maximize the interests of individuals, the rewards being largely determined by the contribution an individual brings to the successful accomplishment of a task, and the critical decisions are made by individuals. [3, p.459]

Gender Egalitarianism

Gender egalitarianism has been defined by GLOBE researchers as the extent to which a society minimizes gender inequality and promotes gender equality.[3, p.30] In high gender equality societies, there is an effort to minimize gender differences and more women at a workplace and and/or have authority positions. There is less gender segregation, similar levels of education are given for men and women, women are offered important roles in community affairs and a general feeling that women should benefit an equal status in society. Typical questions for respondents in the GLOBE survey on this dimension would include the following:

1. In Moldova, boys are encouraged (practices) / should be encouraged (values) more than girls to attain a higher education:

Strongly agree Neither agree nor disagree Strongly disagree

1 2 3 4 5 6 7

2. In Moldova people are (practices) / should be (values) generally:

physical non-physical

1	2	3	4	5	6	7
---	---	---	---	---	---	---

In low level of gender equity societies, sometimes referred to as gender-differentiated / discriminatory societies, gender differences are evident: fewer women find themselves in the workplace and authority positions of, gender segregation is more obvious, a lower level of education for women, little or no opportunities for women to get decision-making roles in community affairs, and a general feeling that women should not have the same status as men in society.

Assertiveness

Assertiveness has been defined by GLOBE researchers as being the degree in which individuals of a society are determined, asserted, confronted, and aggressive in social relationships with others.

Typical questions for respondents in the GLOBE survey on this dimension would include the following:

1. In the Republic of Moldova people are (practices) / should be encouraged to be:

Dominant Non dominant

1 2 3 4 5 6 7

2. In the Republic of Moldova people are (practices) / should be encouraged to be:

Tough Tender

1 2 3 4 5 6 7

In societies with high levels of assertiveness, competition, strength, aggressiveness, hardness, determination, success and progress are appreciated for all members of society, sympathy and praise for the more powerful members of society, communication is direct and unambiguous, individuals try to have control over the environment, it is sexpected subordinates to take the initiative, trust is built on the belief that success can be achieved through hard work. Societies with high assertiveness do not strongly support or disapprove of any particular leadership style. On the contrary, in low-assertive societies, cooperation and warm relations are appreciated, modesty and sensitivity are preferred to assertiveness and strength, sympathy for the weaker members of the society, communication is indirect, and efforts are being made to try to " save the face ". In communications and actions, individuals try to be and act in harmony with their environment, competition is associated with defeat and punishment, subordinates are expected to be loyal, and confidence built on predictability.[3, p. 405]

Human orientation

Human orientation has been defined by GLOBE researchers as the extent to which an organization or society encourages and rewards individuals to be correct, selfless, friendly, generous, caring and courteous to others. [3, p.569]

Typical questions for respondents in the GLOBE survey on this dimension would include the following:

1. In the Republic of Moldova, people (practices) / should be encouraged to (values):
they care about the others do not care about the others at all

1	2	3	4	5	6	7
2. In the Republic of Moldova, people are(practices) / should be encouraged to be (values):						
very generous				not at all generous		
1	2	3	4	5	6	7

In high-human societies it is found that the interests of others are important; people are primarily motivated by the need of membership and affiliation; the members of the society believe that they are responsible for promoting the well-being of others; people are urged to be sensitive to all forms of racial discrimination; emphasis is placed on social support and community values; and altruism, kindness, and generosity are appreciated. The need for belonging and affiliation in societies with high level of human orientation is also associated with a lower incidence of psychological problems.[5] Such societies have tended to support and sustain oriented human leadership style. On the other hand, it is found in low-level human orientation societies that the self interest is important; people are motivated by the need for power and material possessions; the state provides social and economic support for the welfare of individuals; child labor is a matter of minor importance; people are not sensitive to all forms of racial discrimination; and pleasure, comfort are highly appreciated. There is also a greater need for strength and possessions and a greater incidence of psychological and pathological problems in low-level human-oriented societies. [3, p.570]

Future Orientation

Designers of the GLOBE project survey have defined the time-oriented dimension, called Future Orientation, as the extent to which a community encourages and rewards forward-looking behaviors such as planning, delaying satisfaction and investing in the future.[3, p.282]

Typical questions for respondents in the GLOBE survey on this dimension would include the following:

1.The way to be successful in the Republic of Moldova is to:

plan ahead				take life events as they occur		
1	2	3	4	5	6	7

2. In the Republic of Moldova, official meetings are (practices) / should be (values) usually:
planned (fixed at least two weeks in advance) spontaneous (fixed up to one hour in advance)

1	2	3	4	5	6	7
---	---	---	---	---	---	---

GLOBE researchers have also identified the characteristics of future oriented societies similar to those of Hofstede's long-term orientation dimension, which includes a trend for the future, a focus on long-term success, organizations targeting are flexible and adaptable and a general view on material success and spiritual fulfillment is considered an integrated whole.[3, p. 302] There is also a greater emphasis on economic success and the value of intrinsic motivation in future-oriented societies [5] Future oriented societies have not strongly supported or disapproved of any particular leadership style. Some of the features of low future-oriented societies identified by GLOBE researchers, included less emphasis on economic success; a tendency to spend rather than to save for the future; a preference for immediate satisfaction and spontaneous action; organizations tend to be inflexible, bureaucratic, and poorly adaptive; and the general view is that material success and spiritual fulfillment are separate and require compromises. [3, p. 302]

CONCLUSIONS

Values that distinguish one culture from another are predictors of cultural practices as well as for behavioral characteristics and behaviors. This statement of the father of the GLOBE project, R.J. House and his first team is perfectly valid for the Republic of Moldova.

The purpose of this article was to render the importance of the GLOBE project and that the notion of culture is, in fact, quantifiable by its dimensions. We have described each of the nine dimensions of

culture developed by GLOBE, namely: uncertainty avoidance, power distance, performance orientation, group collectivism, institutional collectivism, human orientation, assertiveness, gender egalitarianism, future orientation the point of view of current practices, that describes reality at the moment and values, the opinion of respondents what it should be, as well as prospects for the expected relationship between each dimension and management.

It is our hope that international business managers and local business managers as well as policy makers at different levels will benefit from this additional perspective on culture, especially as the field of cultural dimensions research is a field less explored in the Republic of Moldova.

REFERENCES

1. *Hofstede, G., Hofstede, G.J.*, Cultures and Organizations: Software of the Mind, Revised and expanded 2nd edition (New York: McGraw-Hill, 2005);
2. *Hofstede, G.*, "Motivation, Leadership and Organization: Do American Theories Apply Abroad", *Organization Dynamics*, 9 (1980);
3. *House, R.J., Hanges, M., Javidan, P.J., Dorfman, P.W., Gupta, V.* (Eds), Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies (Thousand Oaks CA: Sage, 2004);
4. *House, R.J., Dorfman, P.W., Javidan M., Hanges, P. J.Sully de Luque, M.* Strategic Leadership Across Cultures: The GLOBE Study of CEO Leadership Behavior and Effectiveness in 24 Countries (Thousand Oaks CA: Sage, 2014);
5. *Nardon, L., Steers, R.* "The culture theory jungle: divergence and convergence in models of national culture", in *Cambridge Handbook of Culture, Organizations, and Work* (Cambridge, UK, Cambridge University Press, 2009);
6. <https://globeproject.com>
7. www.geerthofstede.eu

ORGANIZATIONAL CLIMATE APPROACHES AS A PERSONNEL RISK FACTOR

Scarlat Constantin, The Academy of Economic Studies of Moldova,

e-mail – scarlat.constantin73@gmail.com; phone- +40723289608

Abstract: *The human factor is considered by many scholars as a determinant of the dynamism of a contemporary society. Changing the role of the human factor, transforming it from the cost element into the main productive and social factor of development, has led to the need to form a new paradigm of development. This article addresses two key concepts: Human Resource and Risk. The risk of human resources is a relatively new concept, but with a particular timeliness. The aim I have put forward in the present research is to study the risks associated with the human factor at the organization level, highlighting the organizational climate as a risk element associated with the human resource. In order to achieve this goal, we have studied various bibliographic sources referring to risk, organizational behavior. As a result of this research, we have come to the conclusion that a "unhealthy" organizational climate can cause serious damage to both staff and the organization in general, so we have concluded that the organizational climate is a risk factor for staff.*

Keywords: *risk, human resources, personnel risk, organizational climate*

JEL CLASSIFICATION: M12

Risks are a growing topic discussed in the scientific environment, increasingly addressed in the business environment. It seems that this is the subject, which, at least at the level of interest and frequency of approach, determines unanimity between scholars and practitioners. We will not be challenged to fall into the trap of endless discussions about risk definitions. However, we should specify what we mean by this notion. Risk is a threat, a possibility of producing an event causing damage, characterized, on the one hand, by the gravity of its consequences and, on the other hand, by its probability of producing. The risk in the activity of a company refers to the probability of not meeting the objectives set in terms of performance (non-performance of quality standards), program (non-observance of the execution deadline), etc.

The purpose of this research is to study the risks associated with the human factor at the organization level. Before analyzing the subject we have proposed, we will emphasize that when it comes to personnel risk, we take into account both those risks (events) that affect the staff and the risks whose source (source) is the staff. So, conditionally we break these risks into two groups:

- *the risks to personnel* - that is to say the risks affecting staff as an object, the risks to which the human factor is exposed;

- *the risks associated with the human factor*, the risks that involve the human factor - the risks, the cause (the source) is the staff.

In this article we will address one of the components of the first group, namely the organizational climate "unhealthy" as a potential risk factor for the organization's staff.

Most businesses need to build their management from the human element. It has to be understood that people are the ones who can bring success to the organization, but they can also destroy it, bring it to bankruptcy. In order to form an elastic, solid, productive and real-life collective, the company's staff must be given enough confidence to share with them the information, authority and feelings of their managers. So it is very important for an efficient activity to ensure a favorable climate in the organization. This also involves studying employee attitudes towards work. The general attitude of the members of an organization to work has a particular importance on how work is actually done within an organization, being a direct determinant of individual and implicit

performance of the organization's performance. A determining factor of the general attitude towards work, mentioned above, is the organizational climate. The notion of organizational climate means the state of mind that tends to prevail in an organization in a given period, determined by employees' perception of how they have been treated in and by the organization and which influence the actual involvement of individuals in it [2, p. 125]. Synthesizing the existing concepts in the literature, we can say that the organizational climate is a collective psychic state, a relatively stabilized and generalized mental disposition in the group members. The organizational climate is also defined as an ensemble of employees' perceptions of the institution in which they work, that is, what they think about practices, policies, events in that organization. Therefore, trying to measure the organizational climate is useful because it has proven to be a variable that influences different aspects of institutional performance [3].

What happens when this environment or this collective state is not healthy, is it tense? We tried to outline the consequences in Figure 1.

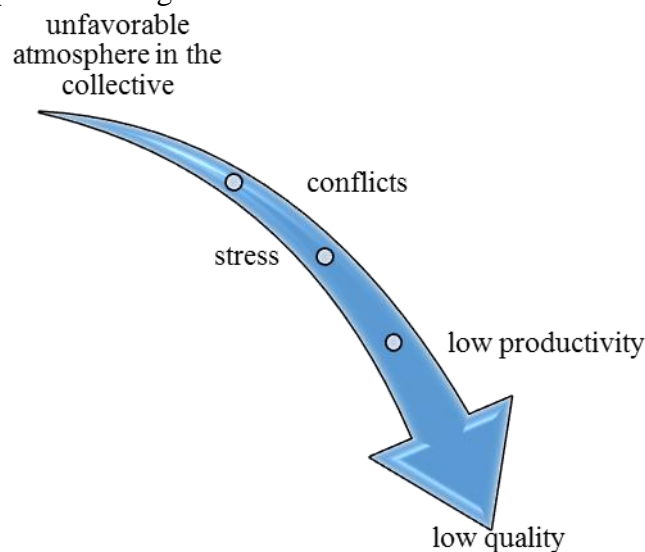


Figure 1. Consequences of an organizational climate "unhealthy"

So, it creates an unfavorable atmosphere for an efficient activity, the conflicts are at home, and as a result both the employees, the permanent stresses and the organization as a whole suffer. Labor productivity decreases, the quality of work is also decreasing. So, we could conclude that the organizational climate can be a risk factor for human resources in the organization. To diminish this risk it is necessary to know the factors that determine the organizational climate. Scientific literature in the field abounds with a lot of factors, of which we will highlight a few, such as:

- ✓ Organizational Factors (its organizational structure, size, profile of activity, age of the members of the organization, existing traditions),
- ✓ Factors of human resources (level of training, age categories, cultural level), working style of the organization's leadership.
- ✓ Physical-material factors (the physical and material conditions of the activity related to endowment, resources, techniques),
- ✓ Social factors (related to general social frameworks, legal system, normative and organizational framework),
- ✓ Psychosocial factors (resulting from the interaction of group members)

- ✓ **Psychic factors** (consisting of the psychic characteristics of the group members, defining their personality).

Relatively recently, on the basis of studies, Gratto F. [6, pp.180-181] defines, in turn, as significant factors of the organizational climate: internal communication, organizational structure, political climate, opportunities for professional development, evaluation, promotion, support for personal problems, work satisfaction (also defined by the sub-factors: participation in decision-making, autonomy, power and control, relations with colleagues, relations with subordinates, relations with superiors, salaries and benefits).

The relevance of the organizational climate to the overall organizational efficiency is obvious. Many authors, the opinion we support, insist on the importance of a "healthy climate", pointing out that it inevitably influences employee satisfaction and attitudes, and they also affect labor performance. Mullins [4] showed how the low level of employee satisfaction of an organization may be an indicator of their frustrating experiences. It is therefore important to observe them and act positively to remedy the causes by building a "healthy climate". Of course, this "healthy climate" does not in itself guarantee organizational efficiency, but it is more likely to achieve optimal operational performance when the climate evokes a spirit of cooperation and leads to motivating members.

To assess and mitigate this risk factor for human resources, the unfavorable organizational climate, we consider it necessary to perform a periodic radiography of the existing situation in the organization from this point of view (Fig.2), which will allow to describe the opinions, the fears, expectations or satisfaction of employees placed at different hierarchical levels. Typically, questionnaires, specifically designed for this purpose, are used for this purpose. Thus, the organizational climate analysis and assessment provides valuable information in the form of suggestions or solutions to solve certain problems, possible levers of motivation of employees, descriptions of possible future threats or opportunities for development or efficiency of the company's activity. The analysis carried out at this level provides a presentation of how the various problematic aspects of the company appear in the opinion of the hired personnel.

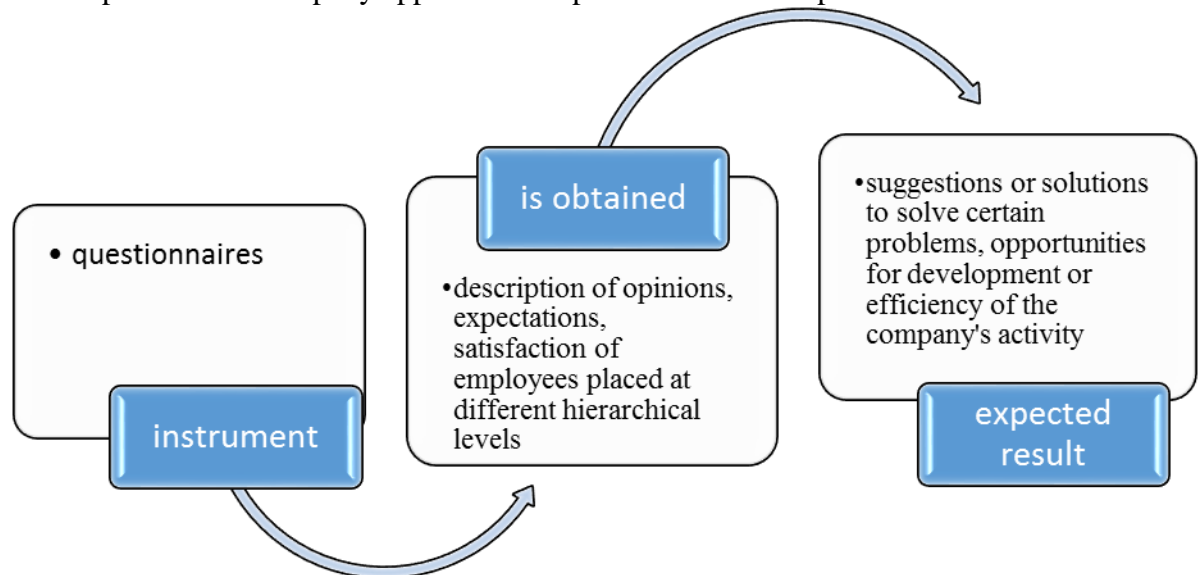


Figure 2. Radiography of the existing situation in the enterprise from the point of view of the organizational climate

Research over the last few years highlights an increased focus on the impact of organizational factors and on employee security and negative outcomes such as accidents and injuries, which we consider to be another risk factor for the organization's staff, and much of this research activity has taken place the areas of safety culture or safety climate [1]. Safety climate research has highlighted the importance of workers' perceptions of the characteristics of the work environment, ie the organizational climate [5].

IN CONCLUSION, we can mention the following:

1. The contemporary organization is permanently confronted with a wide variety of risks, whose action is permanent. The most recently approached, but extremely important, in our opinion, are the risks associated with the staff.
2. In a business world subjected to random risk chances, any business that wishes to thrive and survive changes in the economic environment must invest in human capital, educate them, develop a particular culture.
3. Properly assessing, knowing and analyzing the organizational climate allows anticipation of possible problems or difficulties and finding strategic options for action if such problems could really occur, thus offering the possibility of diminishing the risk to which they are subject human resources in the organization.

REFERENCES:

1. Dejoy, D.M., Schaffr, B.S., Wilson, M.G., Vandenberg, R.J., & Butts, M.M., Creating safer workplaces: Assessing the determinants and role of safety climate, *Journal of Safety Research*, 35, 2004, p. 81 – 90
2. Dicționar de management, Coordonator general O.Nicolescu, Ed. PROUniversitaria, București, 2011, pag.125
3. Liță C.Ș. , Scrieciu D., Țintea G. Validarea unui instrument de măsurare a climatului organizațional în unitățile militare, *Revista de Psihologie.*, vol. 64, nr. 2, p. 87–101, București, aprilie – iunie 2018
4. Mullins L.J.. *Management and Organizational Behaviour*, 11th edn. Publisher: *Pearson*, 2016
5. Seo, D., Torabi, M.R., Blari, E.H., & Ellis, N.T., A cross-validation of safety climate scale using confirmatory factor analytic approach. *Journal of Safety Research*, 35, 2004, p. 427–445.
6. Ticu C., Analiza climatului organizațional, in *Psihologie organizațional-managerială. Tendințe actuale*, ed. Avram, E. and Cooper, C.L. (Iași: Polirom, 2008), 180 – 181.

DEVELOPING NATIONAL SOCIAL MARKETING STRATEGIES IN THE REPUBLIC OF MOLDOVA

ALINA TIMOTIN, PhD student
alina.timotin@usmf.md

The Academy of Economic Studies of Moldova,
Republic of Moldova, Chisinau,
61, G. Banulescu-Bodoni str.
www.ase.md

Abstract. *In order to influence health behaviors of the population, it is necessary to develop national social marketing strategies. In the strategic documents of the health sector of the Republic of Moldova is mentioned the notion or some elements of social marketing, but there is no integrated approach. By analyzing the literature, the health policy documents of the Republic of Moldova and the experience of the UK, it was identified how social marketing strategies can be developed in the RM. A key policy priority should therefore be to develop a strategy in the field of social marketing, based on the National Public Health Strategy, that would include activities from national health programs.*

Key words: *social marketing, public health, national strategy, health promotion.*

JEL CLASSIFICATION: *M31, M38, I18*

INTRODUCTION

Social marketing is an important tool for influencing health behaviors of target groups, and plays a key role in public health. The literature provides examples that show the effectiveness of using social marketing in healthcare, but there is limited attention given to the process of developing strategies at the national level, that will have a greater influence and sustainability. In the Republic of Moldova there exist various strategic documents setting out objectives and actions to be taken in the field of public health, including on health promotion: National Health Policy, National Public Health Strategy, National Health Promotion Program. The National Strategy for the Prevention and Control of Non-Communicable Diseases is another implemented document. In addition, some public health national programs are developed, including: the National Alcohol Control Program, the National Program for the Prevention and Control of Cardiovascular Diseases and others. The aim of this paper is to analyze whether there is made a reference to social marketing in these documents, to study Great Britain's experience in applying the concept of social marketing at national level in the field of public health and to identify how social marketing strategies can be developed in the Republic of Moldova.

In 1971, P. Kotler and G. Zaltman introduce the notion of social marketing and provided a definition: "Social marketing is the design, implementation and control of programs calculated to influence the acceptability of social ideas and involving considerations on product planning, pricing, communication, distribution, and marketing research" [5, p. 5]. The health field was one of the first to find utility in social marketing. As Baker states: "The expansion of the marketing concept combined with a shift in public health policy towards disease prevention began to pave the way for the development of social marketing. During the 1960s, commercial marketing technologies began to be applied to health education campaigns in developing countries". [2, p. 695]. Since then, the concept evolved but the essence remains the same — social marketing is about using traditional marketing techniques in order to influence behaviors of target audiences. During the last four decades, a series of social campaigns have been organized to influence people's health behavior on various subjects: immunization, reproductive health, non-communicable diseases, and so on. Many

of them, however, are limited to the aspect of communication or promotion without including an integrated marketing approach. In this respect, Andreasen (2002) suggests six benchmark criteria in determining whether a particular approach can be attributed to social marketing or not:

1. Behavior change is the reference point in designing and evaluating interventions;
2. Projects are using research constantly (formative, pre-test and monitoring research);
3. There is careful segmentation of the target audience to ensure maximum efficiency and effectiveness in the use of scarce resources;
4. The central element is to create attractive and motivational exchanges with the target audience;
5. The strategy uses all four P's of the traditional marketing mix;
6. Special attention is paid to the competition faced by the desired behavior [1, p. 7].

But organizing isolated social campaigns once in a time is not enough. For a complex approach to social marketing, there needs to be a strategic vision at national level, that will be followed on a long term. There are several strategic alternatives for which one can opt, D.C. Walsh et al. present one that comprises three phases:

- I. Research and planning: planning, consumer analysis, market analysis, channel analysis;
- II. Strategy design: development of mixed marketing strategy, communication;
- III. Implementation and evaluation: implementation, process evaluation, evaluation of results. [6, p. 110]

In 2008, Philip Kotler and Nancy Lee with the support of a group of well-known authors such as Andreasen, Bryant, Lefebvre, Marshall, Rothschild, etc., developed a structure for the social marketing plan. This includes: executive summary; background, purpose and focus; situation analysis; target audience profile; marketing goals and objectives; factors that influence adoption of behaviors; positioning statement; marketing mix strategies; plan for monitoring and evaluation; budget; campaign implementation and management plan. [3, p. 25] J. French and B. Stevens present a number of features that can improve the impact of the social marketing plan, including: the use of a recognized planning format; setting clear and measurable goals for changing behavior; clear description of target audience and segments; testing intervention prototypes before implementation; clear justification of selected instruments; determining the methods of financing; identifying the mechanism for coordinating actions at local, regional, national and international level; description of the program's managerial, political, policy and institutional commitment; identifying the main barriers, impediments and potential risks, as well as actions to remove them. [4, p. 13]

It is important to mention that the national strategic documents implemented in the Republic of Moldova must comply with the provisions of the Government Decision no. 33 of 11 of January 2007 on the elaboration rules and the unified requirements for the policy documents [9]. According to this decision, the strategy is a policy document containing the indicative direction of activities for a medium (3-5 years) or long (6-15 year) period, which aims at identifying the methods and the mechanism of organizing the achievement of the objectives addressed. The strategy is to include a description of the situation; defines the problems that require the involvement of the Government through the application of the appropriate policy; states general and specific objectives; identifies the measures necessary to achieve the objectives and expected results; estimates the impact and cost (financial and non-financial) of implementation; presents the expected results and progress indicators; describes the implementation phases; and the reporting and monitoring procedures.

In view of all that has been mentioned so far, developing social marketing strategies at national level should take into account all the components specified in the Andreasen's benchmark criteria, should follow the phases of creating a strategy (from planning to implementation), and the components of the social marketing plan should be adapted to the structure accepted by the national

bodies. Further research should be done to investigate the responsibilities of the team members in developing and implementing such a strategy.

MATERIALS AND METHODS

The present study is a descriptive and applicative one, with a qualitative approach, based on the study of the literature, the observation, the analysis based on the logical-deductive reasoning and the graphical representation of the relations between the strategic health documents (with emphasis on the health promotion) of the Republic of Moldova, and presenting the model based on the United Kingdom example.

RESULTS AND DISCUSSIONS

The National Health Policy (2007-2021) is a set of health policy priorities and directions established by a 15-year political decision to strengthen population health and reduce inequalities between the different social groups and regions of the country [10]. The document, approved by the Government Decision no. 886 of 06 of August 2007 serves as a tool for addressing systemic health problems and integrating cross-sectoral efforts to improve the quality of life and health of the population throughout their lives, especially in periods of increased health risk: early life, adolescence and advanced age. An important aspect specified by the National Health Policy on Health Promotion is that it will focus on target population groups and will be achieved through health education, social marketing of ideas, promoting mutual support and mobilizing the community to promote public health policy. By mentioning here the notion of social marketing it is highlighted that in 2007 there was awareness of the necessity of implementing it in health promotion. However, after 12 years, the practical use of social marketing is still not noticeable.

The National Public Health Strategy for 2014-2020, approved by the Government Decision no. 1032 of the 20 of December 2013, contains a section on health promotion. According to this document, in Moldova the activities on health promotion, informing and mobilizing the communities for health action are in an early development stage and are carried out sporadically and mainly within national or local projects funded by donors. Although a number of projects have been developed and implemented at the community level, they are not implemented on a regular and national scale. The National Health Insurance Company financially supports a series of activities of health promotion, but they are not consistent and do not have a well defined purpose and the planning and assessment is not based on studies evaluating the knowledge, attitudes and practices. Also, the involvement of other sectors is insufficient, including local government and the media, in organizing and supporting locally health promotion activities. A specific objective set out in this strategy is the adoption of healthy behaviors through the implementation of effective and coordinated health promotion in different sectors at national and local level. [12]

Another important analyzed document is the **National Program for Health Promotion** for the years 2016-2020, approved by the Government Decision no.1000 of 23 August 2016, which identifies, similar to the National Public Health Strategy, a series of challenges for the field of health promotion. Although the interventions implemented by the Ministry of Health on information, education and communication cover a wide range of health-related topics, they are rather fragmented and focused on awareness and information, with little chance of inducing significant changes in behavior. Limited resources, insufficient cross-sectoral collaboration and the lack of a coordination mechanism at national and local level are among the most significant obstacles to achieving health promotion actions as efficiently as possible. The program aims to foster the adoption of healthy behaviors at all stages of life, to be achieved through four specific objectives. [14] Some aspects that can be attributed to social marketing are found in the actions envisaged for the achievement of the objectives, but in large part the emphasis is mainly on promotion activities

(in order to influence the behavior), but also on segmentation. A complex approach that uses social marketing in the planning and implementation process (recalling the criteria identified by Andreasen [1]) should also include: constant research of the public, generating attractive exchanges, the use of the traditional 4P's: Product, Price, Promotion, Placement (as well as the additional one: Personnel), competition analysis.

According to Law no. 10 of 3 February 2009 on State Health Surveillance, this oversight activity is also achieved by: initiating, participating in the design, monitoring and implementation of public health policies and programs; as well as the promotion of health through information, education and communication. [7] Two such nationally implemented programs, ongoing up to 2020, bring control of alcohol and cardiovascular disease to the fore. **The National Alcohol Control Program 2012-2020** aims to prevent and reduce the negative effects of alcohol-related harm on public health, social and economic status through effective policies and cross-sectoral measures at national and local level. One of the objectives of the program is to increase the share of the general population with knowledge of the risks of alcohol consumption for health up to 60% and of children and young people up to 90% by 2020 compared to 2010. [11] In order to achieve this objective, practical actions are enlisted, including: developing and implementing educational programs for various target groups; conducting information and communication campaigns; developing and distributing illustrative materials; establishing a free hot line for the population on preventing and reducing alcohol consumption, and so on. From the actions to be undertaken, it is important to emphasize the organization of social marketing campaigns on the promotion of alcohol prevention and reduction services among different categories of population, but the program does not provide details about these campaigns.

Concerning the **National Program for the Prevention and Control of Cardiovascular Diseases** for the years 2014-2020, it has the general objective to increase the life span of the population and reduce cardiovascular mortality by 10% by 2020. [13] In this respect, a series of specific objectives, including: reducing the risk of cardiovascular disease and increasing the early detection rate; modernization of specialized diagnostic methods and treatment; the development of vascular and valvular interventional cardiology; optimizing the diagnosis and treatment of cardiac arrhythmias; creation of cardiovascular rehabilitation service at hospital, outpatient and at home level; secondary prevention, tertiary and palliative care, etc. Unlike the National Alcohol Control Program, the National Program for the Prevention and Control of Cardiovascular Diseases does not expressly aim at changing the behavior of the target audience, nor does it describe concrete actions that could indicate the use of social marketing techniques. In contrast, the **National Strategy for Non-Communicable Disease Prevention and Control for 2012-2020**, another document approved by the Parliament of the Republic of Moldova, — includes among its long-term priorities: stimulating the citizen, regardless of age or social position, to take care of their own health and to cooperate effectively with health services; the unanimous acceptance of prophylaxis as a form of health investment that must take place throughout life; communicating effectively with the population and providing true information on the impact of harmful environmental factors and harmful individual behavior on health. [8] Such a priority formulation creates favorable prerequisites for the use of social marketing techniques in achieving the objectives and forms the ground for the implementation in the sphere of public health of the knowledge held by the marketing specialists.

It is welcomed that there are documents that regulate the directions of health development, including health promotion, but the lack of a clear connection and concordance between them is a major impediment to achieving results. Figure 1 presents the needed interdependence between health policy documents of the Republic of Moldova from the social marketing perspective: all

health policy documents should be based on the National Health Policy; the National Public Health Strategy should be practically applied through the National Program for Health Promotion, and has to be connected to the National Strategy for Non-Communicable Disease Prevention; national health programs have to be based on all the above mentioned policy documents. Also it is important that all of these documents find a place for the social marketing notion, not only a couple of them (mentioned with a green frame).

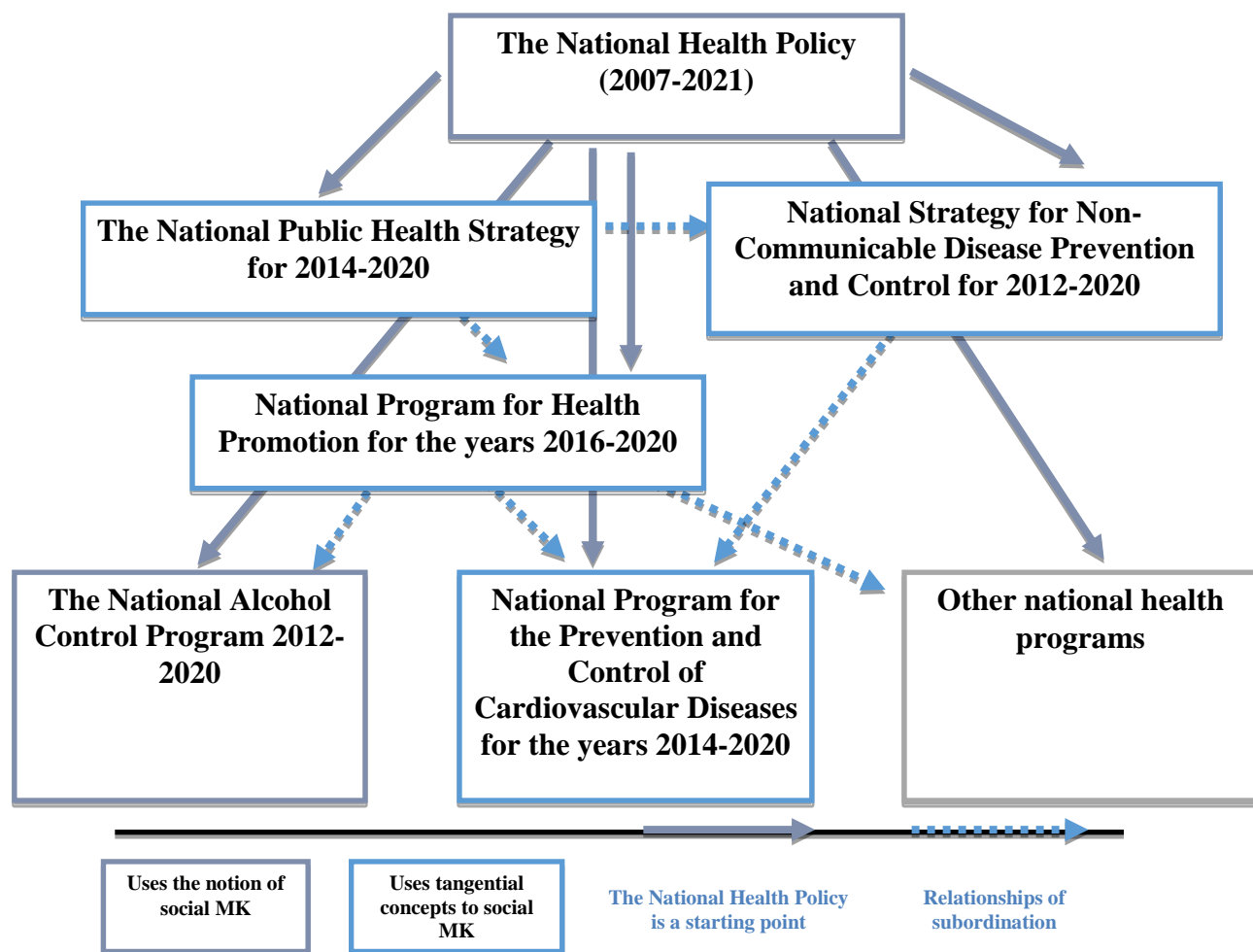


Figure 1: The needed interdependence between health policy documents of the Republic of Moldova from the social marketing perspective

Source: Developed by the author

At first glance, these premises seem to be unfavorable for the development of social marketing at the strategic level in the field of public health in the Republic of Moldova. However, the fragmented existence of social marketing elements in the above-mentioned documents (especially The National Health Policy and The National Alcohol Control Program), as well as the favorable international experience, open up the opportunity to complement the public health field with marketing techniques and contribute to a clearer orientation of programs towards behavioral change.

An example of the application of social marketing at national level is presented by **Public Health England**, an executive agency sponsored by the Department of Health and Social Care of the United Kingdom Government, providing scientific and professional support to state institutions, industries and the public. According to the *Strategic plan for the next four years: Better outcomes by*

2020, PHE provides support for the public in making decisions about their lives and their health through social marketing and behavior change campaigns [15, p. 4]. Among the planned campaigns are: One You, designed to encourage people over 40 to adopt a healthy lifestyle; Change4Life, provides information and tools for families to make healthier choices; Be Clear on Cancer; Stroke ACT Fast and Smokefree [15, p. 15]. In line with the above-mentioned strategy, PHE implements the Public Health England Marketing Strategy: 2017 to 2020 - a comprehensive document on what has been achieved so far by using social marketing in public health and what is going to be done. Marketing campaigns initiated by Public Health England come: to alert and inform the public, to ensure people know what they need to do in order to live healthy lives and are motivated to do so; to support the creation of an environment that is conducive to change, helping to drive cultural acceptance of healthy behaviors and supporting other government levers such as legislation; to offer tools, when needed, to help people to start or sustain a behavior change journey; to support the NHS, by helping people access the right services at the right time; to galvanize and amplify the efforts of those working to improve health across partners in the commercial, voluntary and public sectors. [16, p. 4]

According to the Great Britain model, Figure 2 shows how to develop the social marketing strategy in the Republic of Moldova, in a more organized framework than the existing one.

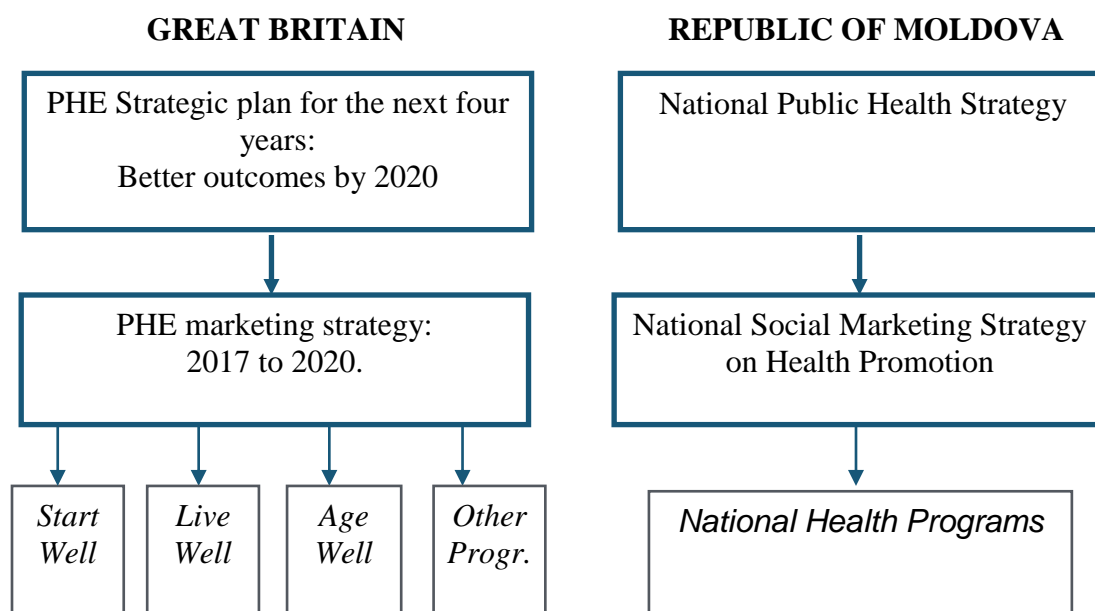


Figure 2: Development of the social marketing strategy in the field of public health in the Republic of Moldova following the model of Great Britain

Source: Developed by the author

Depending on the audience targeting, in order to address the life periods that each person goes through, the campaigns are grouped into three main groups: *Starting Well*, which aims to ensure a successful start in every child's life and reduction obesity among children; *Living Well*, aimed at preventing and encouraging adults to pursue regular investigations and adopt a healthy lifestyle; *Ageing Well*, comes to ensure that people know the symptoms of common illnesses and are motivated to quickly access appropriate services. *Starting Well* includes four complex programs: *Start4Life* that supports pregnant women and families with babies; *Change4Life* is targeting families

with children aged 3 to 11 years through physical activity campaigns, healthy eating, etc.; *Rise above* develops adaptive skills for young people aged 11-16 and includes topics such as smoking, alcohol, sexual health, etc.; *Talk to FRANK* - a reliable source of information on drugs and other psychoactive substances. *Living Well* aims to improve the lifestyle of adults, especially those aged 40 to 60. A great emphasis is put on prevention in the following main areas: obesity, tobacco and alcohol consumption, heart health. *Ageing Well* includes two large campaigns: *Be Clear on Cancer*, that aims to raise awareness amongst the population about cancer symptoms and to encourage people to contact their family doctor when detecting them; Act FAST for strokes — recognition of symptoms and emergency number to be called. Because there are health issues that affect all three categories of population during a life cycle, a cross-cutting approach is also needed. In this respect, PHE has been launching campaigns such as: *Stay Well This Winter*, which urges people, in particular those at risk, to vaccinate against influenza and contact the pharmacist for the first symptoms of coldness; *Keep Antibiotics Working* that helps reduce the public pressure on family doctors to prescribe antibiotics. It is important to mention that for each program is created and developed a brand according to the audience profile (identified and described through researches) in order to achieve the best results.

In the campaign planning process, the PHE marketing team applies behavioral science that helps understand how people act and what their behavior will be in the future. Several patterns of behavioral change are used, including COM-B (Capability, Opportunity, Motivation - Behavior). Capability refers to the individual's ability to engage in work with the necessary knowledge and skills. Opportunity includes external factors that influence behavior, such as social norms. Motivation involves brain processes that produce and direct behavior (inertia, emotional response, analytical decisions). With the COM-B model, smoking prevalence has been reduced over ten years (2006-2017), from almost 22% to about 15.5%: the capacity has been changed by legislation, opportunity through legislation, advertising and taxes, and motivation has been changed with the help of advertising. [16, p. 9] A practical planning tool used by Public Health England is OASIS, which involves setting Objectives, Audience insight, Strategy, Implementation, and Scoring. [16, p. 11] Since evaluation plays a key role in ensuring the success of campaigns, an evaluation framework has been set up, which includes the following elements: the context (the external factors to be taken into account at each stage), the inputs (the costs, including time and resources), the outputs (activities and target audience), outtakes (campaign responses, awareness and engagement, eg message comprehension, change in knowledge and attitudes, responses), outcomes (short- and long-term behavioral change), impact (on individuals, institutions, organizations and society).

CONCLUSIONS

In the area of health promotion planning in the Republic of Moldova substantial efforts are being made, a proof in this respect being the National Public Health Strategy, the National Health Promotion Program, as well as the national health promotion programs. However, this study have shown that although it is mentioned the notion of social marketing in some of the documents, there is no comprehensive approach to this, and there is no model to track behavioral changes in the evaluation of results. The following conclusions can be drawn from the present research: social marketing elements are used at national level, but they are fragmented, random and inconsistent. Health promotion programs are more geared towards diversifying the activities undertaken than defining and applying a clear concept (built on branding) that could be promoted at national level to achieve behavioral change and not just a shift in attitudes or knowledge. International experience shows us both the efficiency of using social marketing techniques and the ways in which they can be used as efficiently as possible. The example of Great Britain shows the importance of having a national vision in the implementation of social marketing in public health. At the same time,

branding must be present in all initiatives and match the profile of the audience identified by thorough and constant research. In addition, the diversity of planning methods, as well as the use of tailor-made tools for checking and evaluating outcomes is essential to ensuring continuity in the field of health promotion and, last but not least, a creative approach is essential.

A key policy priority should therefore be to develop a strategy in the field of social marketing (that could be entitled National Social Marketing Strategy on Health Promotion), based on the National Public Health Strategy, that will also include actions from the national health programs. The strategy should meet the Government Decision no. 33 of 11 January 2007 requirements on the structure of the policy documents, and the content needs to be adapted according to the recommendations presented in the literature and highlighted in this article. Another important issue is that a concordance and an interdependence between the strategic health documents in the Republic of Moldova is needed. Finally, it is worth emphasizing that by implementing social marketing in public health at a strategic level it is made a contribution to the development of this area, which will bring additional benefits to the public health field, without affecting other approaches currently used.

REFERENCES

1. ANDREASEN, A.R. *Marketing Social Marketing in the Social Change Marketplace*. Journal of Public Policy & Marketing: Spring 2002, Vol. 21, No. 1, pp. 3-13
2. BAKER, M. *The marketing book. Fifth edition*, Butterworth-Heinemann: 2002, 834 p.
3. CHENG, H., KOTLER, P., LEE N. R. *Social Marketing for Public Health. Global Trends and Success Stories*. Sudbury, Mass.: Jones and Barlett Publishers, 2011, 422 p.
4. FRENCH, J., BLAIR-STEVENSON, C., MCVEY, D., MERRITT, R. (editors) *Social Marketing and Public Health: Theory and Practice*, Oxford University Press: 2010, 366 p.
5. KOTLER, P., ZALTMAN, G. *Social Marketing: An approach to planned social change*. Journal of Marketing, Vol. 35, July 1971, pp. 3-12
6. WALSH, D.C., RUDD, R.E., MOEYKENS, B. A., MOLONEY, T.W. *Social marketing for public health*. In: Health Affairs: 1993, Vol. 12, no.2, pp. 104-119
7. Legea nr. 10 din 3 februarie 2009 privind supravegherea de stat a sănătății publice. Available at: <http://lex.justice.md/md/331169/>
8. Hotărârea Parlamentului nr. 82 din 12.04.2012 pentru aprobarea Strategiei naționale de prevenire și control al bolilor netransmisibile pe anii 2012-2020. Available at: <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=343682>
9. Hotărârea Guvernului nr. 33 din 11.01.2007 cu privire la regulile de elaborare și cerințele unificate față de documentele de politici. Available at: <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=319904>
10. Hotărârea Guvernului nr. 886 din 06.08.2007 cu privire la aprobarea Politicii Naționale de Sănătate. Available at: <http://lex.justice.md/md/324940/>
11. Hotărârea Guvernului nr. 360 din 06.06.2012 pentru aprobarea Programului național privind controlul alcoolului pe anii 2012-2020. Available at: <http://lex.justice.md/md/343538/>
12. Hotărârea Guvernului Nr. 1032 din 20.12.2013 cu privire la aprobarea Strategiei naționale de sănătate publică pentru anii 2014-2020. Available at: <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=350833>
13. Hotărârea Guvernului nr. 300 din 24.04.2014 cu privire la aprobarea Programului național de prevenire și control al bolilor cardiovasculare pentru anii 2014-2020. Available at: <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=352739>
14. Hotărârea Guvernului nr.1000 din 23 august 2016 cu privire la aprobarea Programului Național de Promovare a Sănătății pentru anii 2016-2020. Available at: <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=366387>
15. Public Health England, *Strategic plan for the next four years: Better outcomes by 2020, April 2016*, Available at: <https://www.gov.uk/government/publications/public-health-england-strategic-plan>
16. Public Health England, *Public Health England marketing strategy: 2017 to 2020*. Available at: <https://www.gov.uk/government/publications/public-health-england-marketing-strategy-2017-to-2020>

SECȚIUNEA III: ***Evoluțiile financiare contemporane***

FINANCIAL STABILITY IN THE REPUBLIC OF MOLDOVA

Ana Ionaș,
Academy of Economic Studies of Moldova
str. Banulescu-Bodoni
e-mail: aneta.ionas@yahoo.com
phone: 069243792

Abstract. *Financial stability is a key condition for the functioning of the national economy and can be defined as a situation in the economy, characterized by the lack of imbalances that could lead to a negative correction of financial markets, the emergence of a systemic financial crisis or the inability of financial institutions to maintain a uniform financial operations. Financial stability is maintained through appropriate regulation of current and potential risks, effective management of risk management and redistribution mechanisms, and confidence in the financial system.*

Key words: *financial system, financial stability, financial crises, instability, risk.*

JEL CLASSIFICATION: G300,G320,G380

Introduction

The intensification of the globalization process has led to profound transformations of financial systems under the influence of the strong technological innovation movement and market liberalization. The capital is constantly circulating in more sophisticated forms on globally integrated markets. In the long term, this development favors the allocation of increased capital efficiency, contributes to reducing the volatility of economic activity and facilitates the progress of emerging economies. At the same time, globalization has led to an increase in the frequency of financial crises. Thus, the financial sphere is imposed on destabilizing tensions and movements, generating risks for both the financial system and the economy as a whole. The main factors of globalization, associated with the emergence of financial crises, were the fixed currency regimes and the regulatory process. These factors constituted a land of financial turmoil in the conditions when the financial infrastructure was not sufficiently developed at the time of the liberalization of the capital flows or when the economic fundamentals were not sufficiently robust.

To mitigate the negative impact of financial crises, stable monetary and financial conditions are needed. The cost of financial crises has increased the efforts of authorities and academics to identify tools to prevent the occurrence of these events and to find the necessary solutions in the event of their occurrence.

Ensuring systemic financial stability has become a priority objective for authorities, as important as monetary stability and the guarantee of sound economic growth. The analysis of financial stability has become reality in the context of increasing interdependencies between markets and financial and non-financial institutions, the emergence of new financial instruments and the intensification of international capital flows.

The issue of maintaining financial stability becomes a very important and current one all over the world and in the Republic of Moldova, which is in the process of developing financially more quickly and is part of the international financial structure and international financial markets. That is why in order to promote sustainable economic growth in the Republic. Moldova, account must be taken of the relationship and factors that can affect financial stability and generate financial instability, respectively.

The objective of this article is to present the concept of systemic financial stability, to analyze the regulatory activities of the financial system, to identify the fundamental problems of financial stability. The basic content of the article investigated the concept of financial stability and the analysis of the phenomena leading to the emergence and disruption of financial stability, investigated prudent supervisory and regulatory activities of the financial system, and the role of the central bank in ensuring financial stability.

Analysis of bibliographic sources in the field of researched matter. The bibliography contains a list of 12 bibliographic sources used in the article. Developments in financial systems and financial crises have spurred the research into financial stability. The globalization that makes the world's economies become interdependent has made a major contribution to the emergence of new research into the stability of financial systems. During the 1990s, numerous papers emerged that explored a wide range of potential causes and mechanisms for transmitting states of financial stability, fragility and vulnerability to financial systems. In the 21st century, research on financial stability and systemic risk gained momentum. The theoretical and methodological basis of research is the contemporary concepts of systemic financial stability. The research was based on the scientific work of some foreign and autochthonous authors, including Mishkin FS, Crockett A., Schinasi, GJ, Gulde A.-M., Wolf HC, Heider F., Hoerova M., Holthausen C., White W. , Edwards RW, Minsky HP, Cerna S., Albulescu CT, Secieru A. As a result of the analysis of the concept of financial stabilization in the literature, it was found that the respective scientific researches in the Republic of Moldova are insufficiently developed, so practitioners do not possess the necessary tools for preventing financial crises and ensuring a stable financial system. In view of the above, the research on financial stability and systemic risk gains an important value.

Description of the research methods used. In order to achieve the research objective, the following research methods were used: the systemic method of analysis that was used to research the elements and factors that characterize a stable financial system; the descriptive method used to expose the concepts of financial stability; the synthesis method to establish the links between phenomena, including globalization and financial stability, between the different factors and constituents that influence systemic financial stability; the deduction method used to formulate the conclusions.

The main results of the research are the analysis of the concepts of systemic financial stability, the identification of factors with a major influence on the financial stability and the financial instability prevention instruments, the study of the regulatory framework at European and national level, the identification of institutions with responsibilities in the prudent regulation of financial sector, formulation of findings and conclusions regarding financial stability.

Obtained results. Globalization in general and financial in particular make the world's economies become interdependent through many channels of globalization. The integration of economies into the global economy is accompanied by the expansion of multinational firms, the intensification of trade and capital flows, as well as a framework conducive to the phenomenon of contagion, with multiple implications for the stability of the financial system. Financial globalization contributed to the development of international financial systems but at the same time made them more vulnerable to contagion. In the context of globalization, the issue of financial crises has increased. New risks related to capital movements and the use of complex financial products have emerged. The emergence of these risks has resulted in financial turmoil with significant economic and social costs, but has also given rise to growing solidarity among international financial institutions in order to counteract the adverse effects of crises. Globalization contributes to the diversification of risks and can also succeed in improving financial stability, especially in the face of relatively small shocks. But once national economies become part of a vast network of balance

sheets, often strongly interconnected through the financial sector, severe crises in the future could be more easily spread across borders and can therefore become wider and more manageable. For example, financial systems with a substantial foreign presence may be more resilient and more flexible to the conditions of traditional domestic banking crises, but more vulnerable to external shocks affecting parent banks. Generally, financial instability in a country can easily spread to other countries or affect developments in regional or global markets, as was the case, for example, during the Asian and Russian crises in the late 1990s, but also the recent international financial crisis triggered in 2007 in the United States of America and the Great Britain.

The analysis of financial stability is confronted with particular intellectual challenges, namely why, before the outbreak of the crisis, economists in academia and authorities have paid little attention to the issue of financial stability, namely how and to what extent financial instability affects the economy as a whole in particular, economic growth and consumer welfare; and why the repercussions in the real economy of the negative effects of the financial crisis were so strong.

A first explanation of the errors committed by economists and authorities in assessing the situation and anticipating future developments is that, in extraordinary circumstances, the future is really hard to predict [9]. Another explanation is that the standard macroeconomic models set out in the textbooks used in the major economic schools of the world and generally used for screening purposes do not contain a highly developed financial sector [5]. Also, in practice, cumulative effects and amplifiers of the kind mentioned may occur, which are not taken into account by classical approaches.

The issue of financial stability is not new, but has become one of the main authoritarian concerns, especially after the successive financial crises in Asia and Latin America in the 1990s. The analysis of financial stability has gained new valences in the context of increasing interdependencies between markets and institutions (financial and non-financial), the emergence of new financial techniques and instruments, the formation of financial and non-financial groups and the intensification of international capital flows.

Stability of the financial system means that the system is robust enough to deal with disturbances in the economy, and is able to mediate funding from the economy, manage payroll and redistribute risks in a satisfactory manner. Often, financial stability is perceived as a lack of instability, and no definition is unanimously accepted to date. Economic (or macroeconomic) stability refers to a state of the economy associated with a low inflation and low unemployment rate with a low fluctuation in asset and exchange rate prices that encourages investment by reducing uncertainty and contributes to economic growth and growth level of living. It can be seen that this notion includes both monetary and financial stability, which become necessary conditions for its realization.

For analytical reasons, there are a number of issues related to the statement that financial stability promotes economic growth. First of all, there is not much research that addresses this relationship. Additionally, in the economic scientific literature there are ambiguous definitions that explain precisely the meaning of the notion of financial stability. We know precisely what macroeconomic stability and monetary stability are, and the content of the notion of financial stability remains highly questionable. Monetary stability is usually associated with price stability and represents a situation where there is no significant inflationary phenomenon, but no deflationist, which in turn could cause imbalances. Foot (2003) defines monetary stability as "the stability of the value of the currency". Systemic financial stability refers to the stability of the system as a whole and is different from the financial stability of an individual institution or the stability of an asset, which translates into continuity and security enjoyed by that asset compared to other market assets. According to the Austrian National Bank, financial stability is a pre-instrument for an efficient growth of the entire economy [1]. A feature of a stable financial system is that it rather cushions

shocks rather than amplify them. It is more useful to consider financial stability as a property of a system and not as a state of affairs.

An extensive study on how to define financial stability is carried out by Schinasi G.J. (2004) which set out five key principles to be taken into account in defining financial stability. The first is that financial stability is an expanded concept, including different aspects of the financial system: infrastructure, institutions and markets. The second is that financial stability involves not only the allocation of resources by the finances, risk management, the mobilization of savings and facilitating the accumulation of wealth, development and growth, but also the proper functioning of the payment system. The third is that the notion of financial stability is related not only to the absence of current financial crises but also to the ability of the financial system to limit imbalances before they pose threats to the economic process through a self-correction mechanism. Fourth, it is that financial stability has to be seen depending on the potential consequences on the real economy. Turmoil on financial markets or individual financial institutions should be considered as possible threats to financial stability if they affect the real economy. Fifth, it is that stability can be analyzed when it is a continuous phenomenon [12]. From the results of the study, it can be noticed that the definition of the concept of financial stability is difficult due to the multitude of elements that influence it.

Various ways to define financial stability are encountered in the literature. There are both definitions based on enumeration of financial stability features and definitions that directly concern the concept but which do not always cover all aspects of the concept. Often stability is defined by the lack of instability, and some authors find it easier to identify the elements of financial instability. Financial stability does not refer only to bank risks. Financial stability can also be defined as a situation in which the financial sector operates without discontinuity, allowing an efficient allocation of resources and an adequate and sustainable resilience to potential shocks. Schinasi G.J. (2004) defines that "A financial system is in a state of stability when it is capable of facilitating (and not hampering) the performance of the economy, and of eliminating financial imbalances arising from it as a result of adverse and unanticipated events" [12].

Mishkin F.S. defines financial instability in terms of its consequences. He points out that financial instability "occurs when financial system shocks impinge on the flow of information so that the financial system can no longer fulfill its tasks of channeling funds to productive investment opportunities" [10], he considers that "the stability term the financial system reflects the state in which the financial system works effectively, being able to efficiently allocate resources, disperse risks and ensure the liquidation of debts, even in shock, crisis or profound structural changes" (Deutsche Bundesbank, 2003, p.8). The author indicates that the term financial instability is often replaced by financial fragility or financial vulnerability, all three notions representing a state of the financial system that does not allow its proper functioning or jeopardize proper functioning. We believe that a clear distinction needs to be made between the notions of instability, vulnerability and financial fragility. A financial system is more or less vulnerable and fragile, regardless of whether it is in the corridor of stability or instability.

Crockett Andrew, also analyzes financial stability in terms of lack of instability, which "is a situation where economic performance is potentially affected by the fluctuation of asset prices or the inability of a financial institution to comply with its contractual obligations" (Crockett, 2000). The author emphasizes four aspects of this definition: the existence of real economic costs, the importance of potential disaster rather than current losses, the consideration of other institutions outside banks, and the consideration of banks as a category of separate financial institutions. Crockett also distinguishes between two types of financial instability: institutional and market instability. Thus, Crockett A. defines "financial stability" as "absence of instability". There is a second definition formulated by Crockett A., former general manager of the Basel International

Banking Regulation. It makes a very important and interesting distinction between two types of financial stability, states that when discussing stability in the financial sector, there is a distinction between two types: the stability of financial institutions and the stability of financial markets.

Stability of financial institutions means that the institutions themselves - banks, pension funds, stock exchange - can comply with their contractual obligations without interruption and without the need for external support. In the case of financial market stability, it is the price stability of financial assets. In terms of these definitions, "financial stability" appears as a feature of the financial system that reflects its ability to determine an efficient space and time allocation of resources and to assess, divide and manage financial risk through its own self-correcting mechanisms. In particular, a financial system is stable if it meets two fundamental requirements: 1) it is capable of leading to improved economic performance; 2) allows the elimination of imbalances due to endogenous factors or adverse and unanticipated events.

Within the scope of the concept of "financial stability" so defined, the financial markets, financial institutions and related infrastructure are included. As a result of the multiple connections between these elements, any imbalance in the operation of one or other of these links undermines the operation of all others. "Financial stability" is a dynamic feature, as the state of the financial system changes over time.

Research reveals that in the literature, the terms "fragility" and "vulnerability" are commonly used as synonyms. The explanation lies in the fact that, in the 1990s, worldwide financial and currency crises have occurred, which, in most cases, have occurred at the same time. These crises affected mainly developing countries (Mexico, Asian countries, Russia, Argentina), but they were also present in developed countries sometimes. These crises have therefore been numerous enough to allow generalizations, including terminologically. Thus, it is considered that "financial fragility" refers to the vulnerability of a country's domestic financial system, while "external vulnerability" is related to the evolution of the exchange rate of that country's currency. Between 1996-1998, many papers emerged that highlighted various potential causes and mechanisms for transmitting "fragility" and "vulnerability" states. Studies have shown that these crises were characterized by the following: reducing the rate of economic growth; deterioration of the balance of payments situation; increasing the inflation rate; volatility of the exchange rate; the sharp increase in the number and value of transactions in financial markets; the sudden rise in price of some assets (price bubbles); excessive credit expansion; reducing the competitiveness of exported goods; deterioration of the terms of trade; and so on.

These studies also highlighted the role of qualitative factors in ensuring financial stability: the quality of banking supervision; the existence of adequate foreign exchange control instruments; the existence of a deposit insurance scheme; the legal framework; standards and codes of good practice; and so on. The concept of systemic financial instability. Literature shows that there are several mechanisms through which financial instability reaches systemic dimensions. These mechanisms are: contagion, slow accumulation of financial imbalances and the occurrence of systemic shocks [3, 4, 6, 11]. The bankruptcy of a financial agent (the collapse of a market) leads to the bankruptcy of other financial agents (the collapse of other markets), even if the latter have not assumed the same risks (they are not exposed to the same risks) and do not suffer the same shock. This is the so-called "blockade": an agent does not pay his debts, which makes his partner not even able to pay them and so on. The slow accumulation of financial imbalances gives rise to a systemic risk in that, uncorrected in time, these imbalances are generalized and then brutally resorted. For example, in the upsurge of the economy, consumption and investment are rising, which generates higher incomes; these additional incomes allow for a further increase in consumption and investment, but also the fact that the risks are becoming increasingly high. The emergence of global shocks (natural catastrophes, wars, profound recession, etc.) simultaneously affects a large number

of financial intermediaries and markets, which makes self-regulatory mechanisms of the markets unable to restore balance. Over the past two decades, there has been an increase in the level of financial instability of both types. Practically, specialized scientific literature identifies three general trends that cause instability: there is more financial instability because the volume of financial intermediation has increased dramatically, international financial institutions have become more integrated, thus contributing to increased systemic risk, financial systems have become more complex. There is an important problem to be considered, especially in countries like the Republic of Moldova, which are in the process of developing the financial sector, or when trying to induce stability in the financial sector: the financial sector is different from the rest of the economy [11, pp. 37-38].

Great research efforts to find a way to prevent crises are institutionally supported by the IMF and the World Bank, which launched in 1999 a vast "Financial System Assessment Program" - PESF. The PESF objective is to identify the potential vulnerabilities of the financial sector, whether domestic or foreign, and to help national authorities develop and implement the necessary remedial measures. The program focuses more on crisis prevention and mitigation than on solving them. At the same time, the program identifies ways of developing the financial sector of the participating countries and strengthening the architecture of the international financial system. For analyzing and identifying the risks and vulnerabilities of the financial and banking sector, various financial soundness (vulnerability) indicators, as well as various macro-financial resistance tests, are used.

Other structural elements of financial stability examined through this program are: the degree of liquidity of the system; the institutional and legal framework for crisis management and credit recovery; the degree of transparency; the existence of the obligation to audit; the quality of management; and so on.

In this process, the PESF allows for some assessments of how member countries respect various universally applicable financial rules, which therefore fall within a wider institutional and macro-prudential framework. The reports drawn up under the PESF are designed to assess "systemic stability", ie the stability of the financial system of a country as a whole, not of isolated financial institutions. (Goodhart C., 2004, p.8). As a result, these "Reports" pay particular attention to the links between the soundness of the financial system and its operations on the one hand and macroeconomic outcomes on the other, proposing policies designed to allow the financial system under assessment to withstand shocks, the likelihood and severity of financial crises, etc. With the agreement of the countries concerned, "Evaluation Reports" are often advertised. In this way, research work is facilitated by eliminating (or at least mitigating) a major difficulty: lack of data needed for scientific analysis. The main tools that can be used in the above mentioned policies to prevent, remedy and eliminate the consequences of vulnerabilities are the following: discipline of market-specific financial activity; implementing mechanisms for self-regulation of the financial system; the establishment of the regulatory and supervisory system of financial institutions; regulation of deposit insurance; the regulation of the position of creditor of last resort; regaining confidence in the financial system through decision-making transparency and ongoing communication with the public; promoting appropriate macroeconomic policies; reform of justice; and so on. These instruments are used both to keep the financial system in place and thus to maintain its ability to support economic development as well as to remedy or eliminate the consequences of crises.

At international level, however, it is more difficult to formulate appropriate responses to systemic risks. In order to prevent and analyze global imbalances, the G-20 established the Financial Stability Board (CSF), 2009, which aims to strengthen financial systems and enhance the stability of

international financial markets, promotes international financial stability through the coordination of national and international financial authorities, and international organizations.

In the Republic of Moldova in 2018 the National Financial Stability Committee (CNSF) was created with the following attributions [8]: manages systemic financial crises; defines systemic crises; presents the Government with proposals for policies and measures to protect deposits, capitalization and recapitalization of banks; Agrees on all the strategic aspects of the future Memorandum of Understanding; proposes additional and immediate measures in the event of extraordinary crisis in the financial system, etc. The National Bank of Moldova (NBM) is part of the nominal CNSF membership, and the NBM governor is chairman of the committee. Under the Memorandum of Understanding, the NBM is one of the key institutions responsible for maintaining the stability of the banking sector and supervised financial institutions through its legal powers. The role of the NBM in maintaining financial stability is of major importance, due to the significant weight of the banking sector in the financial system. Within the NBM, the financial stability attributions are exercised by the regulations issued and prudential supervision, the effective transmission of monetary and foreign exchange policy measures, and the oversight of the functioning of payment systems. The National Commission of the Financial Market with the objectives of ensuring the stability, transparency, safety and efficiency of the non-banking financial sector, preventing systemic risks and manipulation in the non-banking financial market, protecting the rights of participants in the non-banking financial market, carries out activities in order to better understand the factors generating systemic risks and their correlation with economic cycles.

The following tools can be used by national authorities to meet the objective of maintaining financial stability and contributing to economic growth:

- Reduce and prevent excessive growth of credit and indebtedness;
- Anti-cyclical capital buffer: creating additional capital buffers in case of increased risk due to excessive credit;
- Capital requirements at sectoral level: strengthening the capacity of institutions to manage risks from a particular sector of activity;
- Macro-prudential leverage: the share of Tier 1 own funds in total exposures;
- Loan/guarantee ratio requirements: limiting the amount of a loan against the guarantee (LTV);
- Loan/Income and Debt Reporting (Debt Service)/Revenue requirements: Service Disclosure on Disposable Income (STI).

CONCLUSIONS. The cost of recent financial crises has increased the efforts of authorities and specialist from academic sphere to identify tools to prevent the occurrence of these events and to find the necessary remedies when triggered. Ensuring systemic financial stability has therefore become a priority objective. Representing an ample, multidimensional concept, stability concerns both the solidity of individual institutions, but above all the institutional framework and macro-prudential measures taken to ensure it. Financial globalization has a major influence on the stability analysis framework, the increased interdependence between economies and financial systems has changed the nature of the risks, and this interdependence is much more intense within the European Union. Accordingly, the financial stability analysis should also take into account the economic climate at the international level. Under these circumstances, international financial institutions have a special role to play in strengthening the prudential supervisory framework and correcting financial imbalances.

The concept of financial stability is very broad, making it difficult to identify a unanimously accepted definition. Stability is a dynamic and multidimensional notion. There is a less pronounced consensus on financial stability. The concept of financial stability is often found in the economic literature, but it does not benefit from a unanimously accepted definition of specialists. However, a few elements need to be taken into account: the role of the financial sector in the economic system,

the soundness of institutions and markets, the importance of banks within the financial system and the ability of the financial system to respond to shocks. There is a narrow definition of financial stability: a system is stable when it is not in crisis. There is an expanded definition: a system is stable when it manages to a satisfactory extent: to cope with systemic risks without major disturbances and without translating or amplifying risk to other participants, efficiently allocating the financial resources collected from the economy to viable projects, identify and adequately manage the risks.

The outcome of the research on the concept of financial stability allows us to define that a stable financial system is a system that always goes to a state of equilibrium after it has been affected by internal and external shocks, being able to carry out its usual functions of efficiently allocating savings to investment, correct pricing and an efficient payment system, functions that contribute to economic growth and welfare. The term of financial stability is distinguished from the absence of systemic risk, vulnerability or fragility. The financial system is usually found within a stability corridor from which it can move into an area of instability following a severely destabilizing shock when the usual remedial measures have not proven effective. If, in the period of instability, imbalances are exacerbated, the system risks going into crisis. Exiting the crisis requires drastic measures to reform or re-regulate the financial system.

Thus, financial stability is a feature of the financial system, the goal of maintaining financial stability is to avoid important disruptions in the vital functions of the financial system (payment system, financial intermediation, risk insurance). Financial stability is a key condition for the functioning of the national economy and represents the situation in the economy, characterized by the lack of imbalances that could lead to a negative correction of the financial markets, the emergence of a systemic financial crisis or the inability of financial institutions to maintain the smooth execution of financial operations.

International financial institutions consider that the importance of regulatory and supervisory activity for the stability of the financial sector is indisputable. Ensuring financial stability must become a permanent concern of responsible national and international financial institutions. Financial stability is maintained through appropriate regulation of current and potential risks, effective management of risk management and redistribution mechanisms, and confidence in the financial system.

BIGLIOGRAFIE

1. The Bank of Austria (2005), Financial Stability, available at: http://www.oenb.at/en/finanzm_stab/finanzmarktstabilitaet/finanzmarktstabilitaet.jsp#tcm:16-1060.
2. Basel Committee on Banking Supervision, Basel III: A global framework for more resilient banks and banking systems, BIS, Basel, December 2010; Basel III: International framework for liquidity risk measurement, standards and monitoring, BIS, Basel, December 2010; Results of the comprehensive quantitative impact study, BIS, Basel, December 2010.
3. Cerna, S. (2008). The turbulence on international financial markets: causes, consequences, remedies. In: „Oeconomica”, Nr. XVII, Vol. 2, pp. 51-67.
4. Edwards Robert W., Policy and Statistical Issues Underpinning Financial Stability: The IMF Perspective, Chapter 20 of Statistics, Knowledge and Policy 2007.
5. ECB, Towards macrofinancial models with realistic characterisations of financial instability, Financial Stability Review, December, 2010.
6. FMI (2008), Financial turbulence clouds growth prospects, în „World Economic Outlook”, January.
7. Cerna, S., Donath, L., Seulean, V., Herbei, M., Barglazan, D., Albulescu, C. și Boldea, B. (2008), Financial Stability, West University Publishing House, Timisoara.
8. The Law on the National Financial Stability Committee no. 209 of 12.10.2018. Official Gazette no.424-429 / 668 of 16.11.2018.
9. Meet Dr. Doom, IMF Survey, Vol. 35, n0. 19, October 2006, p. 308.
10. Mishkin, F. S. (2001), The transmission mechanism and the role of asset prices in monetary policy, NBER, WP/8617.

11. Secieru A. Financial stability and economic growth: conceptual approaches and contradictions. ASEM Annals, VIII Edition, pages 35-40.
12. White, W., Procyclicality in the financial system: do we need a new macrofinancial stabilization framework? BIS Working Paper 193. Basle, 2006.

CAUSES OF SALARY PAY GAP BETWEEN WOMEN AND MEN IN THE REPUBLIC OF MOLDOVA

Mariana Robu

ASEM.

Chisinau, Republic of Moldova

ABSTRACT. Although there have been several attempts to adjust the situation through government policies and legal instruments [1], the gender pay gap presents a problem which still persists in the labor market. According to official statistics, for the year 2017 at the level of the European Union, the pay gap between women and men was 16.2% [2]. A similar situation exists in the Republic of Moldova, where, according to official statistical data, the gap between women and men was 13.5% for year 2017. With ageing, the pay gap between women and men is increasing. This is because, at the beginning of their professional career, both women and men are equally competitive on the labor market, inequities being determined by factors other than women's professional training. The average life expectancy in the Republic of Moldova is about 72 years, with women living longer than men by about 8 years, life expectancy at birth being 76.2 years for women and 68.1 years for men. This gap is due to the higher level of premature mortality among men, especially those who are able to work. As a result, women are less present on the labor market, working less hours and for less paid jobs, they ultimately have lower pensions because their social contributions have been lower. When women reach retirement age, they have a lower age pension than men, and because they have a higher life expectancy, they are at a higher risk of poverty than men. Thus women come to old age to live alone and financially un-secured. In rural areas, the situation of the elderly is at the highest risk of poverty. Women aged 75+ regardless of their place of residence are the poorest.

Key-words: labor, salary, pay gap, equal pay, gender equality

JEL: 38

In this article, we aim to identify the main causes for which women have lower salary than men. From a gender perspective, salary wage differences are primarily caused by unequal career opportunities. According to National Bureau of Statistics data, although the share of women in the employed population is virtually equal to that of men and has remained at the same level during the last years (50.3% women and 49.7% men), women are concentrated in the fields of activity with a lower net remuneration [3], for 2017 this difference was 13.5% (86.5% of the average male salary). In several sectors of the economy the average salary of a man is higher than the average salary of a woman for the same job. The area with largest deviation per economy sector it is in the financial sector, men receive salaries by 39.2% higher than women[4]. And, if we look at the representation of women and men, it does not differ per economy so much, but it differ in terms of representation of functions, where higher-level positions are more represented by men, and lower level functions are represented by women. This is a very important factor that affects the salary income of the woman at the end of the year.

So, when the woman is at the bottom of the financial pyramid, it is obvious that her salary is much lower than that of men, who often find themselves in the top positions of the company or enterprises. Where does this situation comes from? Obviously, what matters is the salary policy in the company where a woman or a man works. In the Republic of Moldova, most of the employees do not have a transparent payroll policy. It means that when a woman or a man engages into a job - she does not know what the estimated maxim salary for the applied position. When someone does not know this ceiling, she negotiates the salary that it is considered relevant to the position of application, and this is a very big problem.

If we look at the experience of European countries on how it is managed this issue, it has been noticed that in the European countries there are very strict regulations regarding a company's salary policy. Each employer has the obligation to ensure the transparency of the wage policy, which means that the wage confidentiality is excluded. If we speak about public companies, we can see some pay transparency, but if we go to the private sector - definitely no.

Another reason that leads to the pay gap is that female employees negotiate a lower pay compared to men for the same position and for the same qualification. Women tend to avoid wage bargaining, but on the contrary, men tend to long-term negotiations. This is confirmed by the level of unemployment amongst younger women than men, according to NBS data [5].

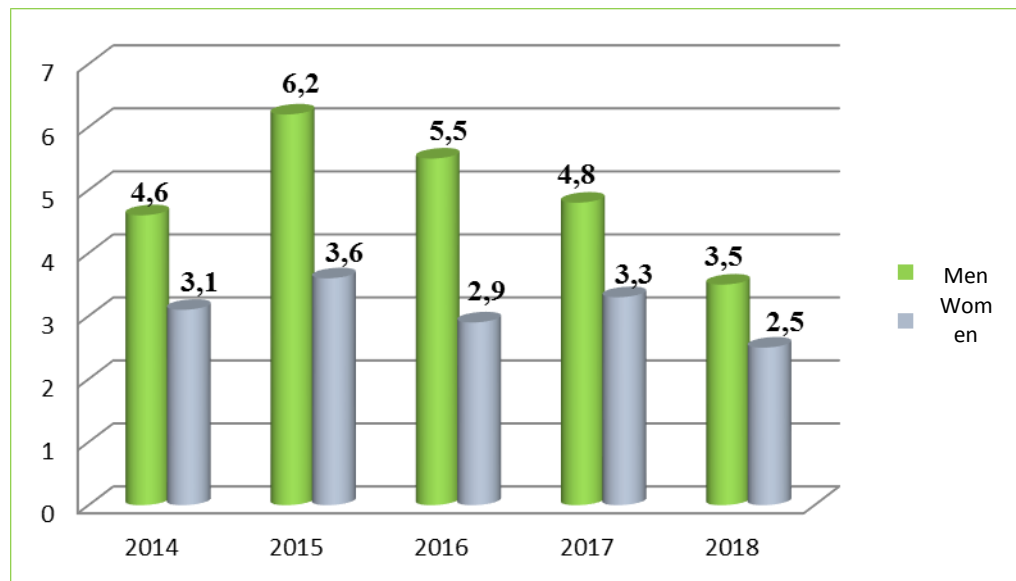


Figure 1. Unemployment Rate by sex, for years 2014 – 2018, %

Source: developed by author, based on data from NBS

Figure 1 shows a detailed description of unemployment among men and women in the Republic of Moldova. Thus, the maximum difference between unemployment of men and women was observed in 2016, with 5.5% for men and 2.9% for women, representing a 2.6% difference between men and women. Or, men have about 50% higher unemployment than women. This is due to the faster acceptance of women's low wage offerings.

In the Republic of Moldova, a study done in 2013 [6], shows that the average salary for which an unemployed man would be available to work was 3.7 thousand lei. While women easily accept a salary of 2.9 thousand lei - an ambition difference of 18%. For comparison, the average salary of a male employee was 2.8 thousand lei, and of a woman employed 1.7 thousand lei. This shows that women on the job are a little less confident in their skills and competences. Although women accept jobs with lower wages, statistics show that they are more skilled than men. According to the statistical portrait of women and men, we notice that women aged 25-64 have a higher level of training than men [7].

Where this mistrust comes from? It is probably related to social stereotypes that are not promoted but are perpetuated throughout the generations, that the man must be the one who brings the main income, and the woman has to take care of the house, children, and husband. In fact, this is absolutely incorrect, and these things should be treated and educated from small generations.

Another reason is that as soon as the woman becomes a mother, she takes maternity leave, some sick leaves, and this obligation is on the shoulders of women. Women reduce their work schedules and give up careers for family, namely to take care of children, home, and husbands. It is also often the reason why women cannot resume their full-time employment by opting for part-time work, and this also affects the hourly payment of salary and including pension contributions. Finally, the consequences of these career breaks for just two years come with a sacrificed salary and fewer chances in the future, and this leads to a decrease in women's earnings.

The impact of career breakdown has negative consequences that will be noticed in the future when the retirement age occurs, when women get lower pensions because their hourly pay, as well as the total number of hours worked during life was lower.

In the national legislation, paternity leave for men was introduced recently, through Law no. 71 of 14 April 2016, which provided for the first time that fathers could benefit from paternity leave. Currently, in Moldova, this leave is 14 days, in the first 56 days after the birth of the child, paid from the social insurance fund. Parental leave is officially paid 100% of the salary, according to an average salary of the man he has for that job. According to the data provided by the National Social Insurance, a considerable increase in paternal leave was observed of almost 4 times during 2014-2017 (see Figure 2). More and more fathers apply for paternity leave. Increasing the number of men opting for parental leave is an important policy objective, not only to improve gender equality in the labor market and family responsibilities, but also for the benefit of children for their good development. The legislative reform has had a very good and very good impact, the number of fathers enjoying this leave increases slowly but steadily.

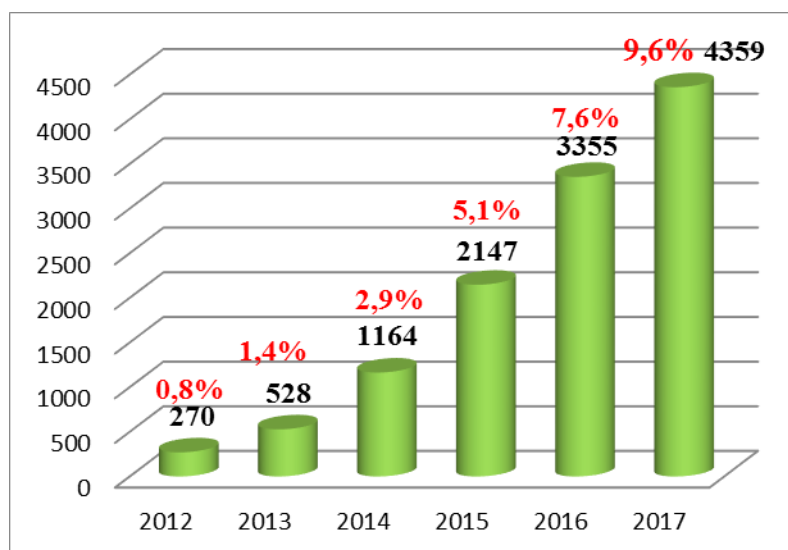


Figure 2. Number and share of men who benefited from the monthly child-raising allowance until the age of 3 years in the years 2012-2017

Source: https://msmps.gov.md/sites/default/files/raport_social_anual_2017_1.pdf

Based on some studies in this area [8], another barrier faced by women is the allocation of more time for unpaid household work. Only 3% of married women spend less than three hours with household chores in a week, and half of women surveyed spend about 13 hours or more a week doing cleaning, taking care of or taking care of children. [9]

Researchers therefore draw attention to the fact that the distribution of homework falls further, largely on the part of women, the family pattern evolving quite a bit over time. If we draw attention to statistical data, only 39.0% of women work compared to 43.0 men, of whom 6% of women work part-time compared to 5.2% of men [10]. This means that women are most often forced to leave the labor market.

Thus, to continue to encourage parental leave through concrete policies and to provide benefits to those fathers who choose to benefit from parental leave more than the minimum period laid down in Law no. 71 of April 14, 2016 are measures to be implemented to reduce wage differentials between women and men and these measures will encourage the return of mothers to work as quickly as possible. This can have a positive influence on gender equality at home and at work, and

may indicate changes in relationships and perceptions about the roles of parents and gender stereotypes that are dominant in our society.

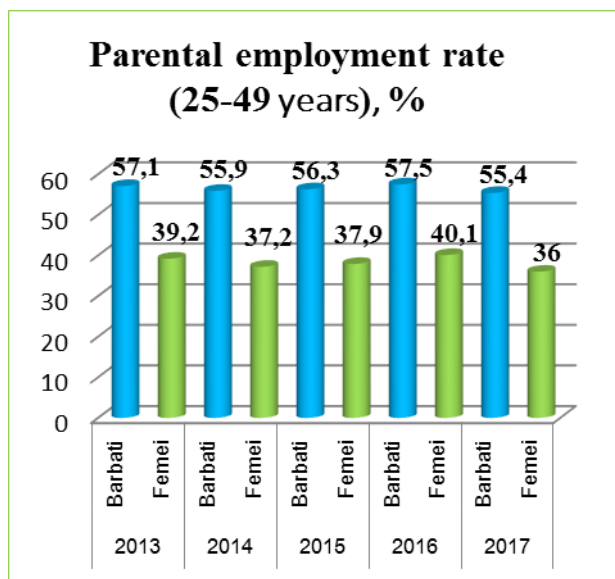


Figure 3. Parental employment rate (25-49 years) with at least one child of pre-school age.

Source: developed by author, based on data BNS

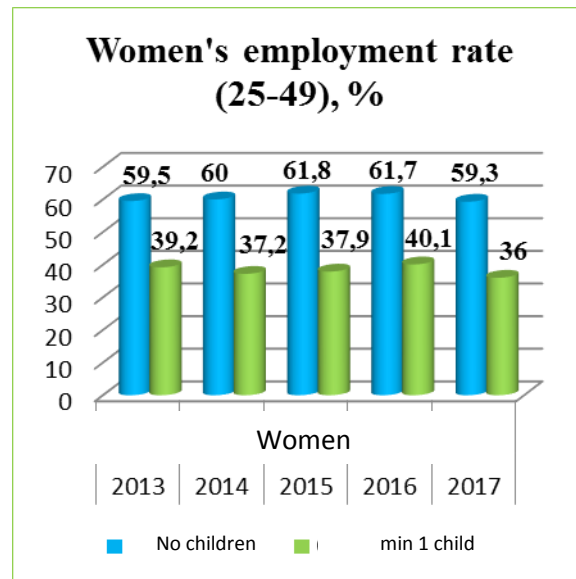


Figure 4. Women's employment rate (25-49 years) with and without pre-school child.

Source: developed by author, based on data BNS

According to NBS data, the difference between the occupancy rate of a woman without a child and the occupancy rate of a woman with a child for 2017 is 23.3% [11] (see Figure 4), this is another barrier on which women encounter when developing their career. So when the first child appears, 23.3% of women are withdrawing from the labor market, which for a state is very bad because it does not contribute to economic development, and if they retreat, it contributes to the poor economic development of the country.

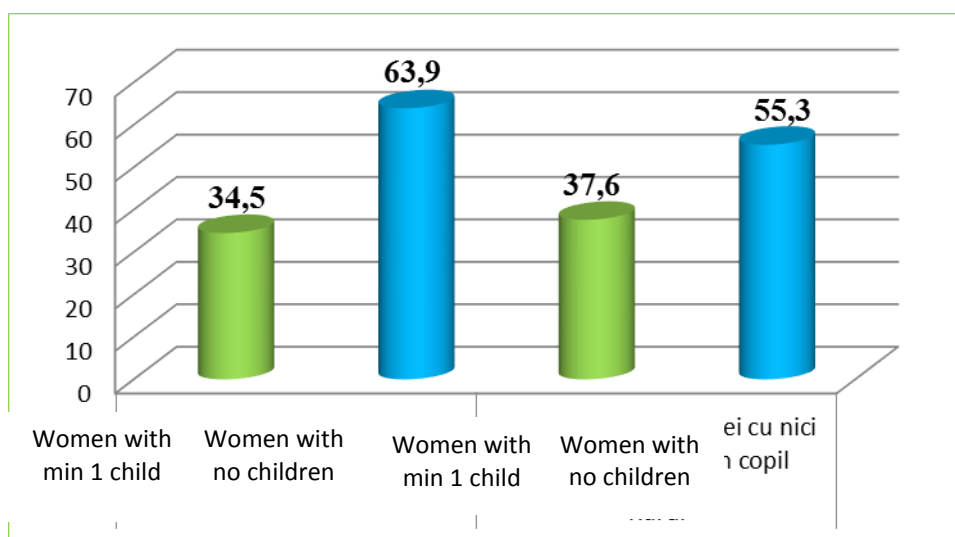


Figure 5. Female employment rates (20-49 years) with and without pre-school children, by area, year 2017

Source: developed by author, based on data from NBS

If we analyze the data in Figure 5, we notice that the female employment rate in the urban area is lower compared to the rural area. Despite the fact that there are more employment opportunities in

the urban area, the employment rate of rural women with at least one preschool age exceeds 3.1 pp in the urban area for 2017.

CONCLUDING, we say that fair and non-discriminatory gender pay can be achieved through changes to legislation and alignment with European standards on equal pay for work of equal value.

Since the employment rate among women in the labor market depends on several factors including the presence of children under 16, it is necessary to create proximity services, including nurseries, kindergartens and other forms of pre-school education, day-care centers, including at the level of business.

The diminishing gender pay gap contributes to a better profitability of the economy as a whole, due to the application of the professional skills and talents of women that are necessary for the economic and social development of the state.

BIBLIOGRAPHY:

1. Decision of the Parliament Nr. 415 of 24.10.2003 on the approval of the National Action Plan on Human Rights for 2004-2008. 28.11.2003 in the Official Gazette Nr. 235-238, art. No. 950 .; 2. 3; Law no.5-XVI of 09.02.2006, regarding the provision of equal opportunities for women and men. 24.03.2006 in the Official Gazette Nr. 47-50, art. No: 200; Labor Code. Nr. 154 of 28.03.2003. 29.07.2003 in the Official Gazette Nr. 159-162, art. Nr: 648. Article 5. (e) - equality of rights and possibilities of employees.
2. https://ec.europa.eu/eurostat/statistics-explained/index.php/Gender_pay_gap_statistics
3. http://www.statistica.md/public/files/publicatii_electronice/femei_si_barbati/Portret_statistic_femei.pdf
4. <http://genderpulse.md/ro/abilitare-economica/castigul-si-ecartul-salarial/castigul-si-ecartul-salarial>
5. http://statbank.statistica.md/pxweb/pxweb/ro/30%20Statistica%20sociala/30%20Statistica%20sociala_03%20FM_03%20MUN_MUN060/MUN060100.px/?rxid=2345d98a-890b-4459-bb1f-9b565f99b3b9
6. https://monitorul.fisc.md/analysis_and_statistics/studiu_femeile_din_moldova_prime_sc_salarii_mai_mic_i_decat_barbatii_pentru_ca_asa_le_negociaza
7. http://www.statistica.md/public/files/publicatii_electronice/femei_si_barbati/Portret_statistic_femei.pdf
8. Biroul Național de Statistică. Reconcilierea vieții profesionale cu viața de familie: rezultatele cercetării statisticea trimestrul II 2010. Sinteză. Chișinău 2010; http://www.statistica.md/public/files/publicatii_electronice/Reconcilierea/Reconcilierea_2010.pdf
9. Dragan, Flavia. Inegalitate de gen: Femeile petrec în continuare mai mult timp la cratiță decât soții lor. România Liberă.
10. <http://genderpulse.md/ro/abilitare-economica/ocuparea-forței-de-munca/ponderea-ocupării-cu-program-partial-de-lucru>
11. http://statbank.statistica.md/pxweb/pxweb/ro/50%20Statistica%20gender/50%20Statistica%20gender_GEN01/GEN010600mun.px/?rxid=b2ff27d7-0b96-43c9-934b-42e1a2a9a774
12. Directive 2006/54 / EC of the European Parliament and of the Council of 5 July 2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (reform); Directive 75/117 / EEC on the approximation of the laws of the Member States relating to the application of the principle of equal pay for men and women; Directive 76/207 / EEC on equal treatment for men and women as regards access to employment, vocational training and promotion, and working conditions; Directive 92/85 / EEC on the implementation of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding; Directive 87/80 / EC on the proving of discrimination in cases of discrimination based on sex; Directive 2000/78 / EC on the creation of a general framework for equal treatment in employment and occupation; Directive 2000/43 / EC on the implementation of the principle of equal treatment between persons irrespective of racial or ethnic origin aims at eliminating any direct or indirect discrimination on grounds of ethnic or racial origin.

REFLECTION ON THE ORGANISATION OF INTERNAL AUDIT IN THE PUBLIC SECTOR OF THE REPUBLIC OF MOLDOVA

PhD candidate, LUDMILA POPA,
ludmila.p.popa@gmail.com

Academy of Economic Study from Moldova
61, Banulescu-Bodoni Str.,

Abstract. *Internal audit is relative recently implemented in the public sector of the Republic of Moldova. However, the development of this activity is rather determined by the conditions mentioned in ART. 49 of the EU-Moldova Association Agreement, than by the development of managerial culture in the correct perception of the internal audit role and functions in the public entity. This publication aims to analyze the allocation of the resources for the internal audit subdivisions and its impact on compliance with quality assurance conditions recommended by the international professional standards. In this respect, it can help us to carry out studies of external evaluation of some internal audit structures, which provide useful information about the need of resources and performances in the field.*

Keywords: *public internal financial control, internal audit, public entity, sizing criteria, quality assurance, international standards for the professional practice of internal auditing.*

JEL CLASSIFICATION: H83

INTRODUCTION

The implementation of the internal audit function in public sector is one of the key conditions for ensuring a modern public finance management system. With the approval of the Law on Public Internal Financial Control no. 229/2010, the organization of the internal audit subdivision becomes a mandatory condition for the Ministries and other central public administration authorities, as well as for local public administration authorities of the second level. Since then, the Ministry of Finance, as the authority responsible for the policy-drafting in this field, has worked to create the conditions for the organization and development of the internal audit function in the public sector.

The main principles for conducting internal audit work in accordance with International Standards for Professional Practice of Internal Auditing were approved. The normative and methodological framework of activity was established. Trainings for the internal auditors from different public entities are systematically organized by Ministry of Finance and other specialized institutions. The obtain performance and knowledge of the internal auditors can be confirmed by succeeding the certification exams. Moreover, the current system of certification in the field has basically importance for determining the conditions of occupation and promotion in the position of superior and principal internal auditor. Its aim is to ensure the appropriate level of quality in the internal auditors' activity, corresponding to the assigned tasks.

The analysis of the situation regarding the internal audit activity in the public sector shows that, despite the made efforts, this function is still in its early stage of development. Heads of public entities are not fully aware of the role of this managerial tool and its added value, brought by evaluation of the internal control system and improving the effectiveness of risk management, control and governance processes.

During this period, the only form of the organization of the internal audit activity, provided by the legislative framework, is the internal audit subdivision integrated into the organizational structure of the public entity. According to the data reported by the Ministry of Finance, at the December 31, 2018, 103 internal audit subdivisions are created in the public sector of the Republic of Moldova, with 126 internal auditors. The majority of these, about 58%, are concentrated in the structures of the Ministries, central administrative authorities and their subordinated entities. (see Figure 1)

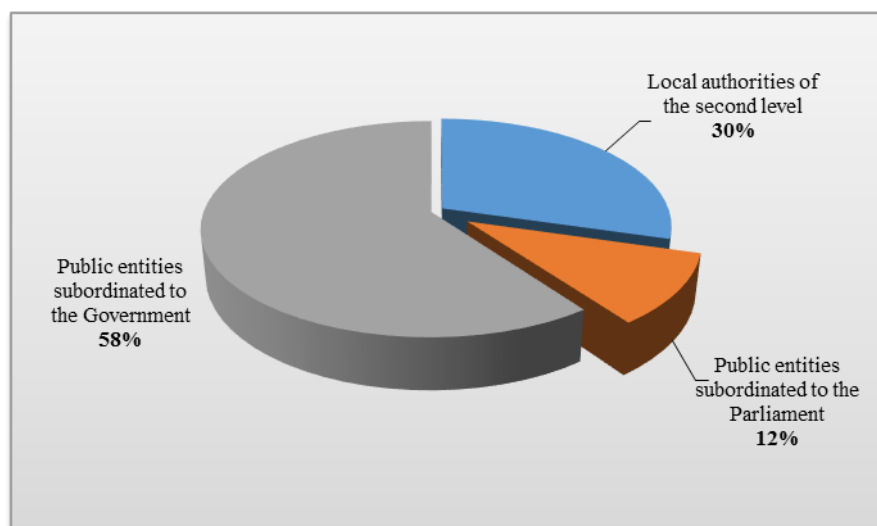


Figure 1. The network of internal audit subdivisions in the public sector, December 31, 2018

Source: Author's figure based on data provided by the Ministry of Finance

It is noted that the internal audit activity is mainly concentrated in small structural subdivisions that do not have sufficient resources to cover whole field of public entity's activity (*the audit universe*) and do not have tools for quality assurance. Thus, on December 31, 2018, 68 internal audit subdivisions or 65% of those established in the organizational structures of public authorities and institutions in the Republic of Moldova are created from one unit of staff / one internal auditor. This situation is getting worse by the limited supply of professionals on the labor market, as well as the unattractive remuneration, which in practice block the development of internal audit function, especially at the level of the local public administration.

The situation leads to a low level of occupation of internal auditor functions, which varies between 63% and 70% in the central public authorities and their subordinate public entities, and it is only 46% in local public authorities of the second level.

MATERIALS AND METHODS

The following scientific methods were used to carry out the present study: documentary method, the method of office research, induction and deduction, analytical and comparative method. The study is based on data and conclusions provided by the Ministry of Finance [1], the SIGMA (Support for Improvement in Governance and Management Programme) [2] and the International Company ECORYS [3].

During the research, the provisions of the Law on Public Internal Financial Control no. 229/2010 [4], National Internal Audit Standards [5], "Implementation Guides for the International Professional Practice Framework (IPPF)", version 1 January 2017, issued by the Institute of Internal Auditors [6], and the results of the external evaluation exercise performed by international experts [7] - [8] were considered.

The quality assessment was performed in accordance with the Guideline for assessing the conformance of internal audit units, drafted under the Twinning project „Support to development of an effective internal control and audit environment in public sector in Moldova”, which support Ministry of Finance to improve public finance management by enhancing internal control and audit environment in the public sector in the Republic of Moldova in line with European Union best practices. The core criteria, for the performed assessment, are presented in the Table 1.

Table 1. Criteria for external evaluation of internal audit activity

Core Criteria	Topic	Description
1	Organization, integration into the public entity and responsibilities (Internal Audit Charter)	The core criteria 1 describes the formal and material requirements for an Audit Charter. (requirements of the IIA Standards 2010 and 2040)
2	Organization, integration into the public entity and responsibilities (Ethic Code)	With the core criteria 2 the basic principles regarding neutrality and independence from other functions are assessed. (requirements of the IIA Standards 1000 and The Ethic Code)
3	Budget/ Resources	With the core criteria 3 is assessed whether the internal audit subdivision has adequate quantitative and qualitative staffing. (requirements of the IIA Standards IIA 1210 - 1230 and 2030)
4	Planning	With the core criteria 4 it is assessed whether the strategic and annual audit plan of the internal audit subdivision is based on a standardized and risk-oriented planning process (requirements of the IIA Standards 2010-2040).
5	Performing the Audit Engagement	The core criteria 5 describes if the internal audit engagement are documented in a standardized, proper and orderly manner. (requirements of the IIA Standards 2320-2340)
6	Follow-Up	The core criteria 6 describes the follow-up process and how the internal audit subdivision monitor and document the implementation of recommendations. (requirements of the IIA Standard 2500)

Source[7]

The internal audit subdivisions performed a self-assessment based on the Checklist presented in the Guidelines. The information provided was analyzed and interviews with the internal auditors took place. Also, the experts reviewed audit reports and the working papers in case of each internal audit subdivision during their fieldwork.

RESULTS AND DISCUSSIONS

The amendments to the Law on Public Internal Financial Control no. 229/2010, covering the requirements for establishing internal audit subdivisions from the perspective of the number of auditors, were approved by the Parliament and published on December 7, 2018. The conditions of establishing the internal audit in the public entities are determined by Article 19 of the Law. According to this, the internal audit subdivision shall consist of not less than three internal auditors if it is a Ministry, The National Social Insurance House or the National Health Insurance Company, and not less than two internal auditors if it is a local public administration authority of the second level.

It has to be mentioned that, the reform of the central public administration lead to a decrease in the size of the internal audit subdivisions by 33%. On May 01, 2019, 11 internal auditors are in place in eight Ministries (out of nine). Ministry of Justice has no auditor appointed yet.

The number of internal auditors in “new” Ministries was established without taking into account some general sizing criteria in order to ensure a systematic auditing of the entire aria of the public entity's competence. Out of nine Ministries only one has employed three internal auditors and in other eight Ministries internal audit subdivision consists of less than prescribed minimum number of internal auditors.

It is noted that the internal audit subdivisions which operate with one auditor face difficulties

in implementation of quality professional standards. These auditors cannot review and evaluate their work. Quality of audit engagements performed in small internal audit subdivisions is not internally assessed. This evaluation should be conducted by the head of the internal audit subdivision, which in these units is missing.

In the author's opinion, the issue of sizing internal audit subdivisions is one of the most important challenges to the proper functioning of such a structure. Lack of proper sizing has direct effects on meeting the goals set in the applicable legal framework. The existence of an inadequately sized internal audit subdivision will lead to an audit function that cannot meet the management requirements.

Taking into account the existing legal framework and the internal audit standards, the scope of the internal audit activity includes all internal organizational units and users of budget funds within Ministries' jurisdictions. Thus, the size of the internal audit subdivision shall be determined by the entity's scope, complexity of the business processes, available funds, number of employees, number of subordinated institutions, etc.

The situation regarding to the organization of the internal audit at the local public administration level is alarming. Out of the 35 local public administration authority of the second level, 4 authorities do not have an internal audit subdivision, namely Edinet, Falesti, Telenesti and Soldanesti. At the same time, by the May 01, 2019, only 16 internal audit subdivisions are functional, the occupancy of the internal auditor positions being 46%. It should be noted that there are not internal audit subdivisions established within the local public administration authority of the first level. Figure 2 present the situation of the staff resources for internal audit activity in public sector on December 31, 2018.

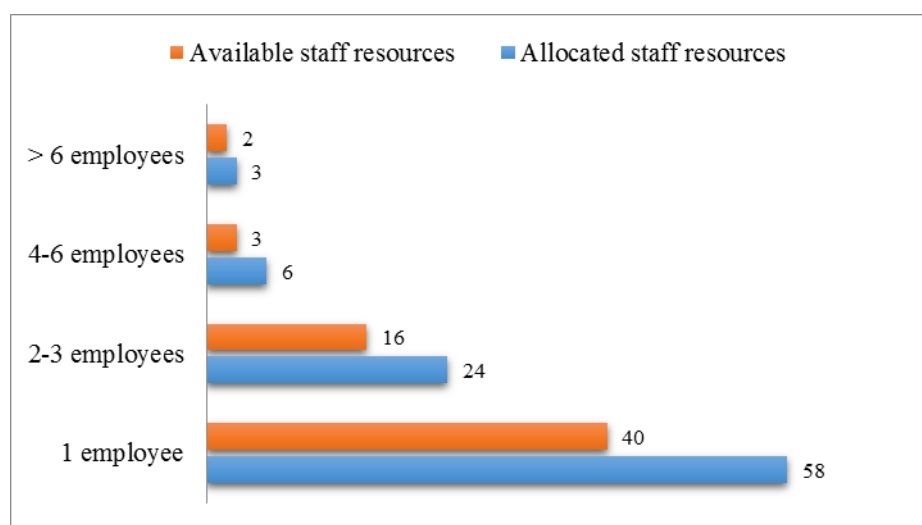


Figure 2. The staff resources for internal audit activity in public sector on December 31, 2018

Source: Author's figure based on data provided by the Ministry of Finance.

The status of internal audit subdivisions with one or two employees, as well as a high fluctuation of staff, certainly have had a negative effect on the development of internal audit in the public sector of the Republic of Moldova. In addition, there are no specific legal provisions to ensure adequate internal audit coverage among small public entities. As a solution, with the amendments to the Law on Public Internal Financial Control no. 229/2010, the forms of organization of the internal audit activity in the public sector have been diversified. Thus, starting with January 7, 2019, managers of public entities, based on a cost-efficient analysis, can decide on the alternative form of organization of internal audit activity, such as shared audit or contract based audit.

The issue of insufficient personnel resources, which is specific to public internal audit, has a negative impact on the compliance with quality assurance conditions recommended by the international professional standards. In this respect, the qualitative aspects of human resources of internal audit subdivisions, including the application of monitoring tools of the internal audit work, need to be taken into account.

Elements related to the performance of internal auditors in public sector was analyzed, based on the results of external evaluation of some internal audit structures, performed by experts under the Twinning project „Support to development of an effective internal control and audit environment in public sector in Moldova”.

The quality assessment, based on 6 standards, was performed for internal audit subdivisions within five public entities, including three central public administration authorities, one local administration authority and one subordinated institution. The staff resources of these internal audit subdivisions are different: 2 subdivisions are small, having only two employees, 2 subdivisions are considered medium size, having from 6 to 9 personal units allocated and 1 subdivision has allocated more than 10 employees.

The overview has included the verification of the fulfillment of prescribed requests for organization of the internal audit subdivisions, scope of audit, internal auditors' competence and skills, functional and organizational independence, Audit Charter and the Ethic Code, knowledge of the internal audit standards, strategic and annual plans of the activity, application of the audit methodologies.

Based on the assessment of each core criteria, the quality assessment team concluded that the activity of 4 internal audit subdivisions is generally conform with the internal audit standards. The policies and procedures of the internal audit subdivisions, as well as their application, at least comply with the core criteria. The system works, but some improvements are needed. The deficiencies were found have a moderate impact on their activity.

Also, the quality assessor concluded that the one small internal audit subdivision felt short of achieving some core criteria, but is aware of the improvement needs. The impact on the compliance with the professional internal audit standards is significant.

In order to improve the quality of the internal audit activity, a number of recommendations and improvement opportunities, to be followed by the management of the internal audit subdivisions, have been submitted. The main ones refer to:

- Strengthening the efforts to fill in the vacancies within internal audit subdivision and also to consider the need for special qualifications;
- Acquiring a financial budget to cover software needs (specialized software systems);
- Developing and continuously updating of the strategic plan of the internal audit activity, based on a risk analysis and the assessment of the necessary and existing staff resources for completing the tasks;
- Updating the Internal Audit Charter to insert provisions regarding the prevention and detection of fraud;
- Issuance of internal procedures for addressing of the ad-hoc engagements and conditions for carrying out specific tasks, especially those relating to financial inspection or investigations;
- Adequate documentation of actions performed by internal auditors during the audit engagement, by drawing up appropriate working documents and their attachment to the audit files.

In the external evaluation exercise, internal audit subdivisions had the opportunity to approve an action plan for the implementation of the individual recommendations presented in the final evaluation report. The results of the quality assessment of the five subdivisions, the recommendations and examples of best practices were presented and debated in a workshop.

As the result, the main problem outlined by the expert teams at all the evaluated subdivisions is the staff shortage. Without adequate resources, internal audit subdivisions are not in a position to operate in line with International Standards for the Professional Practice of Internal Auditing. Under these circumstances, internal audit subdivisions can mainly cover major risk areas, but will not be able to provide a systematic assessment of the entire audit universe.

It should be noted that the small internal audit structures have more difficulties in complying with the professional standards of quality. In public entities with only one internal auditor cannot be formed audit teams, as well as an adequate supervision cannot be in place for assuring the quality of the audit work.

CONCLUSIONS

Internal audit activity, like any other activity within an entity, needs proper resources to support its performance in order to achieve the objectives for which this activity has been created. The chronic shortage of resources, allocated to this activity, has negative consequences on the quality of services provided by specialized subdivisions.

In this circumstances, the internal audit function cannot meet the management needs or the requirements of the specific legal framework. As the result of the low performance of internal audit subdivisions, the managers' interest in this management tool decreases, with a negative effect on the reputation of the internal audit profession.

The qualitative aspects of human resources are the responsibility of the management of the public entity and the manager of the internal audit subdivision, who have the obligation to ensure that the internal audit subdivision has the sufficient and adequate resources to carry out its activity. Training, qualification and experience of staff become an important matter after the internal audit subdivision has been properly sized.

At the moment, it is necessary to give up on small internal audit subdivisions. The basic idea is to have no internal audit subdivisions with less than three employees. This will directly influence the quality of internal audit work in the public sector.

Also, it should be introduced larger internal audit subdivisions within the line Ministries, covering audit services of the entities within ministries' jurisdictions. The small entities, in terms of budget or number of employees, that cannot get the expected added value from the internal audit subdivision, are be entitled to outsource audit services. This can be done through shared or contracted internal audit services.

REFERENCES

1. *Consolidated Annual Report on Public Internal Financial Control*, Ministry of Finance of the Republic of Moldova, 2017 // <http://mf.gov.md/ro/managementul-finan%C8%9Belor-publice/control-financiar-public-intern>;
2. *Baseline Measurement Report: The Principles of Public Administration*, SIGMA, Moldova, 2016 // <http://www.sigmaweb.org/publications/Baseline-Measurement-Moldova-2015.pdf>;
3. *Conceptual note on the developing an effective control environment and internal audit in the public sector of the Republic of Moldova*, ECORYS PFM, April 7, 2017 // http://old.mf.gov.md/files/files/Contr%20Fin%20Audit%20Int/rapoarte/11_1396%20Moldova%20-%20Final%20Concept%20note%20Rom.pdf;
4. *Law on Public Internal Financial Control* no. 229 from September 23, 2010. In Official Gazette of the Republic of Moldova, August 8, 2019, no. 86-92 (art. 730);
5. *National Internal Audit Standards*, approved by the Order of the Minister of Finance no. 153 from September 12, 2018. In Official Gazette of the Republic of Moldova, October 26, 2018, no. 400-409 (art. 1577);
6. *Implementation Guides for International Professional Practices Framework (IPPF)*, version January 01, 2017, issued by the Institute of Internal Auditors, USA // <https://na.theiia.org/standards-guidance/mandatory-guidance/Pages/Standards.aspx>;
7. *Consolidated Annual Report on Public Internal Financial Control*, Ministry of Finance of the Republic of Moldova, 2018 // <http://mf.gov.md/ro/managementul-finan%C8%9Belor-publice/control-financiar-public-intern>;
8. Koning Robert, *Public Internal Financial Control – a European Commission initiative to build new structures of public internal control in applicant and third-part countries*, Slovenia, Ed. „DG Budget”, 2007.

IMPLICATIONS OF NET CASE FLOW ANALYSIS ON THE SUSTAINABILITY OF THE INSURANCE COMPANY

Marin Lilian,
PhD Student

Academy of Economic Studies of Moldova

Abstract: *The motivation of this study was to clarify the role of analyzing the correlation between net profit and net cash flow. The research has led to the conclusion that such an analysis is impressive for the efficient management of the insurance company. In order to clarify the above mentioned hypothesis, the National Financial Market Commission, the National Bureau of Statistics, the Financial Statements and the Reports of the management of some insurance companies from the Republic of Moldova were used. Analytical processing was performed using the monographic method, the comparison, the index method, and so on. The results obtained led to the conclusion of conclusions on the usefulness of the cash flow management analysis to ensure the efficiency, solvency and sustainability of the insurance company.*

Key words: insurance, profit, return on assets, cash flow

JEL Classification: G22

Introduction

The fundamental objective of all insurance companies is to maximize the market value of their shares. Specialized literature also mentions other aspects such as:

- Sustainable growth;
- minimizing risks;
- maintaining solvability;
- maximizing yield, etc.

Affluent corporations are generally translated into figures: Income from insurance premiums, which are actually the sales volume, the sales volume, the number of issued bonds, the increase in the supply or services, etc. Most often, however, the aim of maximizing the yield is invested. The existence of the plan does not guarantee at the same time the financial stability and the solvency of the insurance company. An example in this regard was the insurance market in the Republic of Moldova in 2016, when the National Market for Financial Market (CNPFF) ordered the setting up of special administration and the suspension of the insurance activity for an insurer insuring the property as a result of the review of the rapport the special administrator on the financial situation of the insurer, who a year ago held about 20 percent of the national insurer's market and had over 200 thousand clients, but the transaction for the transfer of the headquarters in the amount of 136 million lei by the company triggered the destabilization of the insurance market and the decrease of the market share to 1.7% in 2016. We can say that the financial management defaulted on such a situation, affecting both the company's owners and the clients of the company, the state, etc.

In our opinion, the management of the insurance company must be oriented towards sustainable growth, which implies a periodic monetization of the economic and financial situation. Such a monitoring is carried out with the methodological tool of the financial analysis specific to the insurance field. Specialized literature describes different methodological abortions of financial analysis of insurance company activity [3, 4, 9, 13, pp. 220-225]. Most often they address the problem of financial solvency, the sufficiency of assets that contain the reserves of the insurance company. A comprehensive analysis of the financial situation of the insurance company is recalled by the National Insurance Association of the United States (NAIC).

Among the least abundant is the analysis of the net cash flow, the responsible management of which the efficiency of the financial management of the insurance company depends. Some researchers argue that seeking to increase sales "... does not ensure the sustainable success of the company. In these cases, Cash Flight becomes an essential tool in managerial activity, and should be available both in the operational area and in the planning area. He basically shows the money movements in and out of a buddy in a certain period of time. Cash is the fuel that makes the business go. "Cash is king". [5]

"The manager can make more effective decisions if he keeps real-time information on cash flows and the laryngeal. The information provided by this financial statement helps managers to determine the entity's liquidity, to determine the dividend policy and to assess the effects of major strategic decisions on investment and funding. If the manager of an entity looks for a proper investment decision, its work is successful; otherwise malfunctions occur. The cash flow is the only part of the financial situation that responds to the solvency of the entity and financial flexibility."
[11]

Material and method

For the elaboration of this study were used databases of the National Commission of the Financial Market, of the National Bureau of Statistics, Financial Statements and Reports of the management of the Insurance Companies of the Republic of Moldova. The data were processed using the analytical and research methods: monograph, comparison, index method, graphic method and so on.

Results and discussions

Insurance in the Republic of Moldova is one of the fields of activity that has experienced a dynamic development in recent years. However, in the period from 2003 to 2007, stagnation in the development of this domain has been established at the present stage, especially in the last 5 years. Among the identified facts we could mention the decrease in demand for insurance services due to the worsening of the market conjuncture, the choice of the demand for insurance services from the business segment. It is feasible to influence the economic recession in the Republic of Moldova also in the period following the activity of the insurance market. In such situations, the insurance company management should focus attention on both performance and workability analysis to minimize risks and losses in order to reduce the influence of negative macroeconomic trends and maintain financial stability of the holding.

In order to meet the rigor imposed by the financial environment, modern financial management is provided with specific managerial methods, tools and levers oriented towards achieving the object of activity under normal profitability conditions. Normal returns are considered normal when the entity obtains sufficient return to continue operating under normal circumstances and in accordance with the degree of risk it exposes. One of the key performance indicators of the insurance company's effective activity is the return on assets, calculated on the basis of the relationship (1), and shows the contribution of a "leu" invested in assets to the improvement. Together with the ROI indicator, it is considered to be one of the most impressive indicators of the activity of an insurance company, because "... highlights the way in which sovereignty managers use the financial resources of real estate (real and financial) to keep profit [1].

$$ROA = \frac{P_{net}}{A} \times 100, \quad (1)$$

Where: ROA - return on assets (Return on Assets);

P_{net} - Net income

- The average annual asset value.

We can see that this is a representative indicator of the financial management efficiency of an insurance company. Assessments of the asset's rate of return enable the joint-stock company with other insurance companies. From the point of view of this cost-effectiveness indicator, stakeholders are informed about the capacity of ecological capital to ensure renewal and remuneration as a factor. Table 1 summarizes the calculation data and values of the "Return on Assets" indicator for insurance companies that have a significant weight on the insurance market in the Republic of Moldova.

Table 1. Profitability of most representative insurance groups in the Republic of Moldova in the period 2016-2017,%

The name the insurance company	Market share, year 2017	Annual average value of assets, MDL million		Profit net, millions lei		Return on assets, %	
		2017	2016	2017	2016	2017	2016
Acord Grup SA	5,95	113,44	103,88	7,98	6,42	7,03	6,18
Asterra Grup SA	9,86	142,91	120,56	-2,97	-2,67	-2,07	-2,21
Donaris Vienna Insurance Group SA	14,27	276,92	242,55	10,56	3,58	3,81	1,47
Galas SA	7,42	119,86	97,2	1,45	1,65	1,21	1,70
General Asigurari SA (*)	9,68	73,04	24,60	11,55	2,50	15,81	10,16
Grawe Carat Asigurari SA	14,27	746,93	627,0	35,71	51,09	4,78	8,15
Klassika Asigurari SA	9,60	169,44	145,74	12,86	16,58	7,59	11,38
Moldasig SA	14,32	618,63	663,98	21,81	8,10	3,52	1,22
Moldcargo SA	5,92	122,33	101,98	3,62	1,99	2,96	1,95
TOTAL, mediu	91,32	2383,5	2127,49	102,57	89,24	4,30	4,20

Source: authored calculations based on the financial statements of the company; source market data: <http://www.iasig.ro/pictures/xprimm/prime28feb.jpg>

Appropriate appreciation of the favorable or unfavorable value of profitability should be correlated with existing environments in the branch or sector of activity [2, p. 28]. The average of the ROI in the activity of "Financial and Insurance Activities" in 2016 constituted 3.9%, and in 2017 - 6.2%. In 2016, 5 people from the 9 analyzed exceeded the average level of ROS on the given activity. In 2017, three insurance companies exceeded 6.2% of the return on assets.

The rate of return on assets, in some cases, is appreciated in correlation with the rate of inflation. A higher rate of return on inflation is likely to ensure that the company's "ecological substance" can be maintained and even revitalized and increased its economic assets in a shorter period.

We note that in 2014, 2015 and 2017 the nominal growth of gross written payments was below inflation (Figure 1). Thus, in 2014, the inflation rate in the Republic of Moldova reached 105.1% and the gross premiums written increased by 0.39%; in 2015 the annual inflation rate reached 9.7% and the gross written premiums rose by 2.07%; the same situation also occurs in 2017: the inflation rate of 6.6% exceeds the nominal growth of the gross premiums written of 4.4 percent.

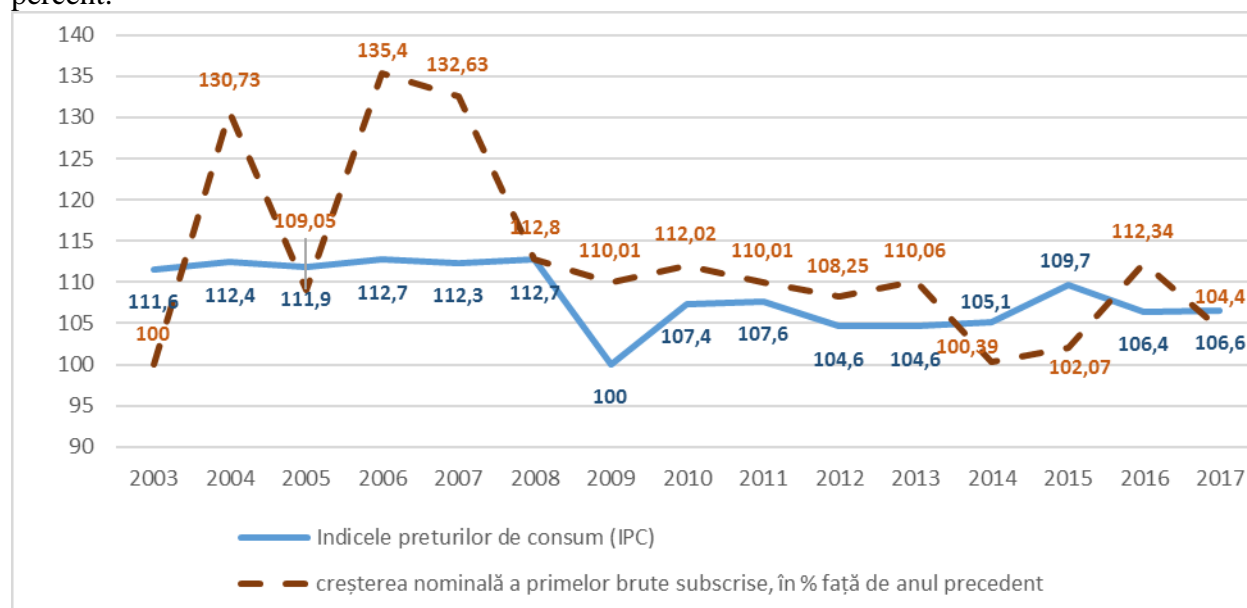


Fig. 1. Annual inflation and annual growth rate of gross premiums written in the Republic of Moldova, 2003 - 2017,%

Source: Autograph calculations and NBS data

The effectiveness of the assets is quite modest in the insurance majority. This indicates that the expenses on the underwriting activity are high, and the investment activity of the insurance company does not generate sufficient income to achieve a higher profit. The growth of investment and financial operations must be the highest in the total amount of the investment. The investment incentive allows the insurance company to pay in due time the damages, the extension of the activity, the insurance tariff reduction, etc. [14, p. 64]. Respectively, it is necessary to increase the efficiency of the investment and financial activity, to select as closely as possible the investments, to minimize the risks, to maximize the investment return.

In the research that addresses the financial security analysis of the safe-harbor, the analysis of the correlation between the net profit and the net cash flow is not aborted, because it is considered that the insufficiency of insurance policy depends largely on the value and structure of the insurance portfolio, is related to its pricing and investment directions. In 2017, about 46.20% are investments in state-owned assets, about 18.2 percent - investments in banking depreciation. Thus, about 2/3 of the plastics have a low yield. Such a structure of investment does not contribute to the emergence of the market economy value of the Republic of Moldova, since the financial resources of the insurance company constitute an impressive source of investment capital. The result of the financial activity is borne out by the exchange rate differences.

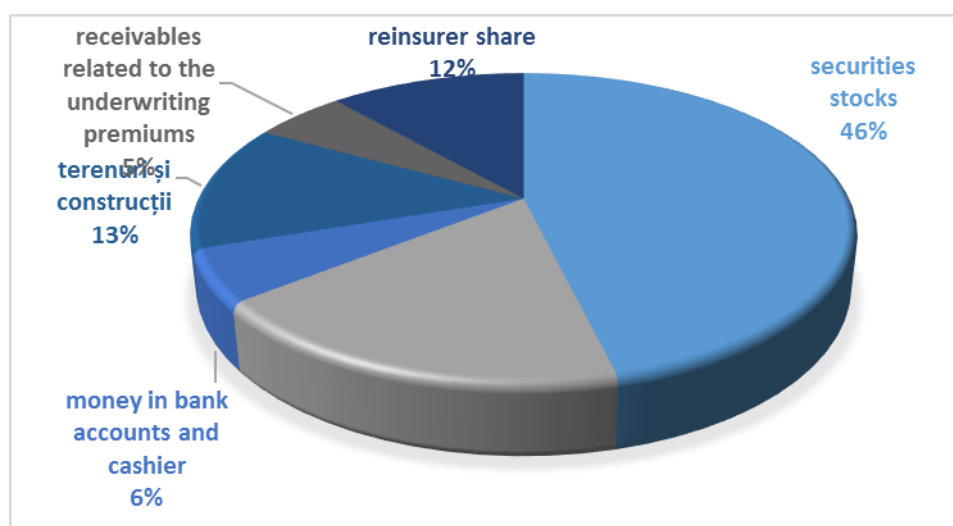


Fig.2. Structure of the investment fund of the insurance companies in the Republic of Moldova in 2017, %

Source: Annual report of NCFM.

Instead, we can see that the largest placements are in assets that are easily convertible into cash. Such an investment decision is specific to the field of insurance. Available cash holds a 6% weight in the investment portfolio. However, the business of an insurance company can be seen as a continuous flow of cash, and its analysis is important for managerial efficiency and insurance activity. Cash flow analysis is impressive for financial communication. "Financial communication on the basis of cash flow is justified by the unprecedented development of financial markets" [11].

In these circumstances, one of the main tasks of the financial management of the insurance company is to determine the cause of the deviation of the net amount of the net proceeds from the net cash flow value. Survival of the Source [14, p. 61] "The efficiency of activity is even higher, the small the deviation of the net cash flow from the size of the net yield of the period."

Based on the Cash Flow Statement and the Profit and Loss Statement for the year 2017, 6 insurance companies in the Republic of Moldova analyzed the evolution of the net profit in correlation with the evolution of the net cash flow. These data are presented in the form of a diagram (Figure 3).

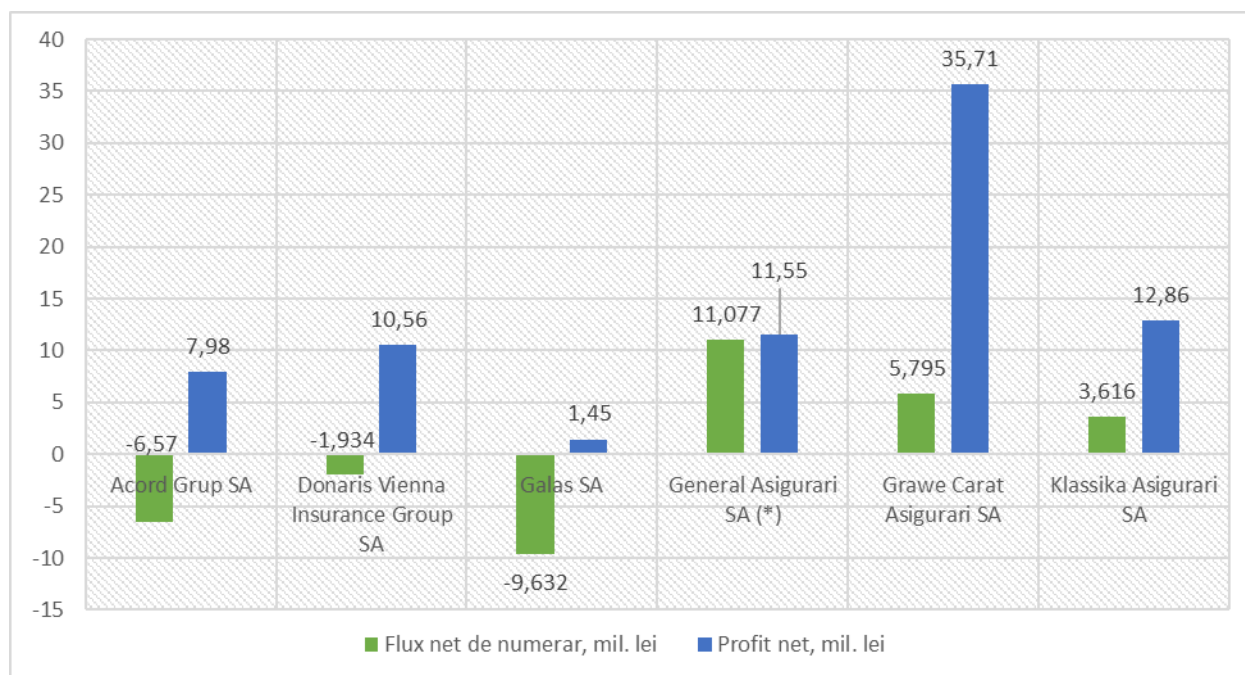


Figure 3. Correlation between net profit and net cash flow

Source: authored by the financial statements of the insurance company

The high deviation of the net profit from the net cash flow for the majority of the company, except for General Insurance SA, is explained by the fact that the net profit as a financial performance indicator is determined by the income and expenses related to the activity (investment, financing and financing) for the corresponding period of management. The revenues and expenses of the period are reflected in the accrual basis based on the principle of the specialization of the exercise, whose income and expenses are recorded as a means of generating or employing the phenomenon regardless of the cash receipts or payments. In addition, the prospect is not the only source of cash flow generation. For example, cash inflows cash inflows from loans, bank loans, asset transfer, are reported. Similarly, cash outflows do not imply a reduction in yield.

In order to reveal the reasons for the deviation of net revenue and net cash flow for the period under review, Moscaleva E.G. [14, p. 40] recalls the application of the analysis balancing method, known as the indirect method of cash flow analysis [10, pp. 314-316]. The use of the indirect cash flow analysis method of the insurance policy will allow the determinations of the deviations between net profit and net cash flow for the analyzed period to be determined. The deviation may be determined by the recording of the loss of capital with the increase of the net cash flow or vice versa, the presence of a significant increase and the lack of cash for the redemption of foreign direct debts. And this acquisition with the results of other assurance activities will allow the manager to identify cash floats, deficiencies, determine the directions of enhancing the efficiency of cash flow organization within the company.

CONCLUSION

Taking into account the requirements imposed by the competition environment, as well as by the non-banking financial market supervision bodies, any insurance company must have as basic reasons the profitability and the liquidity needed for a thorough activity and the honoring of the bonds to the clients. Respecting these fundamental considerations, the insurance company will achieve sufficient revenue to pay the owners and to compensate policyholders as necessary. Failure to achieve profitability and liquidity prospects until a financial disequilibrium, insolvency and non-indemnity of insured persons are secured in the event of the insured risks. From this point of view, the financial management of the insurance company should not be based solely on the liquidity indicators of the entity at present, but rather analyze the way in which cash requirements could evolve into the chances of various scenarios, including pessimistic scenarios.

Achieving these goals is impossible without analyzing the correlation between net profit and net cash flow. If there is a significant deviation between these two indicators, the financial analysis will be deepened to determine its causes. The application of the indirect cash flow analysis method will allow management to justify the strategy for managing accelerated growth in the balance sheet item and to determine the impact of some balance sheet items on the solvency model. This correlation of net revenue with net cash flow will allow financial managers of the insurance company to make better informed, balanced decisions aimed at consolidating the financial situation, enhancing solvency and financial stability.

BIBLIOGRAPHY:

1. Anghel M.G. Identifying financial instruments - an important step in the construction of the market. Romanian Statistical Review no. 9/2013, p. 41. Available on-line http://www.revistadestatistica.ro/wp-content/uploads/2014/02/RRS_09_2013_a3ro.pdf
2. Borya Sorin Nicolae. Analysis of the financial performance and risks of the enterprise. Module1. Page 28. file: /// C:/Users/Admin/Dwnwns/Analiza Performantei Financiare si Risc.pdf
3. Fundamentals of Insurance Company Financial Analysis. Elany. Complovanie Advisor. December, 2013. New York. <http://www.elany.org/f/1798>
4. Kwon, W. Jean and Leigh Wolfrom (2016), "Analytical tools for the insurance market and macro-prudential supervision", OECD Journal: Financial Market Trends. <https://www.oecd.org/pensions/Analytical-tools-insurance-market-macro-prudential-surveillance.pdf>
5. Financial reports. Cash Flow Information. <http://www.rapoartefinanciare.com/Cash%20Flow%20metoda%20indirecta.pdf>
6. Annual report 2017 on the activity of NCFM and functioning of the non-banking financial market. Ch., 2018. Available online: https://www.cnpf.md/storage/old_site_files/file/Publications/Raport_Anual_2017.pdf
7. Annual report 2016 on the CNFF activity and the functioning of the non-banking financial market. Ch., 2017. Available online: <http://www.cnpf.md/file/Publications/Buletine/2017/Report%20anual%202016%20FINAL.pdf>
8. Annual report 2015 on the CNFF's activity and the functioning of the non-banking financial market. Ch., 2017. Available online: http://www.cnpf.md/file/rapoarte/2016/RA_2015_final.pdf
9. Top 5 Financial Ratios: Insurers, 2010. <https://www.investsmart.com.au/investment-news/top-5-financial-ratios-insurers/57809>
10. Țiriu Nicovă N., Paladi V. et al. Analysis of financial reports. - Chisinau: ASEM, 2009.
11. Zgreaban, Cr. FINANCIAL COMMUNICATION BASED ON CASH FLOWERS. <http://www.oeconomica.uab.ro/upload/lucrari/820061/47.pdf>
12. <http://www.lasig.ro/pictures/xprimm/prime28feb.jpg>
13. Ginzburg A.I. Add economic analysis. - SB: Piter, 2005. - 320 pp. ISBN 5 - 469-00248-9 (pp. 220-225).
14. Москалева Е.Г. Methodological approach to conduct the analysis of the financial results of the fearful companies // Finance and credit, 2013. №40, page 64.

IMPLEMENTATION OF BASEL III STANDARDS TO REDUCE THE VULNERABILITY OF THE BANKING SYSTEM IN THE REPUBLIC OF MOLDOVA

Vadim LOPOTENCO,

PhD student

e-mail:lopotenco.vadim@gmail.com

Scientific coordinator: Victoria COCIUG,

PhD., assoc. prof.

e-mail:v_cociug@mail.ru

The Academy of Economic Studies of Moldova

Abstract. *The crisis in the global banking system that is taking place today, all the more insistently dictates the need to solve the problem in terms of minimizing risks and effective regulation of the financial and credit system. The article analyzes the content of international standards of banking Basel III. The prehistory of their appearance is being studied. The features of the application of these rules in the EU are considered. Possible changes are projected as a result of the implementation of Basel III in the financial system and economy. The process of introducing new standards in the Republic of Moldova is being studied.*

Keywords: *regulation of the banking sector, Basel III, risk-weighted assets, financial stability, vulnerability.*

JEL Classification: G01, G21, G28, G38,

1. Introduction

The global financial crisis of 2007–2009 touched almost all countries of the world and now the global banking system is at the stage of recovery. This crisis dealt a severe blow to the equity of commercial banks and led to a shortage of highly liquid assets. Many banks suffered significant losses, some of them went through the reorganization and restructuring of their debts, others were eliminated. As a result of the events that took place, the global crisis forced regulators and supervisors to tighten control over banking activities, tighten the requirements for calculating and complying with prudential standards, and make adjustments to legislative acts. The International Basel Committee on Banking Supervision, which in November 2010 in Seoul at the G20 summit of countries approved the third Basel agreement - Basel III, also took up this problem.

The scope of banking risk management at the present stage is regulated by “International Convergence of Capital Measurement and Capital Standards”, commonly known as the Basel Accords. The latter consist of a number of provisions: “Basel I”, “Basel II”, “Basel 2.5”, “Basel III”.

It should be noted that the Basel Agreements are of a recommendatory nature and underlie the relevant laws and regulations developed and implemented by the Central Banks of individual states.

The application of the Basel standards in Russia is currently incomplete. In particular, this concerns the norms and regulations of Basel II, as a result it can be noted that the completion of the implementation of Basel II will occur simultaneously with the implementation of Basel III standards, the final full transition is planned to be completed by 2019.

2. General characteristics of the Basel III International Financial Standards

Turning to the characteristics of the Basel III standards, it can be noted that the main objective of these provisions is to tighten the general rules on capital and liquidity, and serves the purpose of greater sustainability of the banking sector. Basel III is focused on increasing attention to risk assessment procedures - credit, market and operational, systemic supervision of the financial and banking system, as well as ensuring market discipline. The combination of these elements can be called risk-oriented supervision, which, as envisioned by the Basel Committee on Banking Supervision, will be able to ensure financial stability. This is a new postulate of banking supervision, designed to coordinate the entire financial system.

Structurally, the Basel III standards are divided into two main parts. The first describes the requirements for the structure of banking capital in relation to risk, the second part covers the techniques and methods of controlling the liquidity risk of banks.

The main elements of Basel III include:

- A new procedure for calculating regulatory capital;
- Assessment of counterparty risk for OTC transactions with derivatives (CVA);
- requirements for the presence of a capital preservation buffer;
- requirements for the presence of countercyclical buffer;
- The standard for assessing the adequacy of the underlying capital (CET I);
- The standard for the assessment of capital adequacy (TIER I);
- short-term liquidity ratio (LCR);
- indicator of net stable funding (NSFR);
- financial leverage (Leverage) - the ratio of capital coverage of assets without risk [2].

The document pays special attention to the requirements of tightening the form of Tier 1 fixed capital (TIER I), which is ordinary shares and retained earnings, its value should be increased from the current 4% (Basel II requirements) to 6% of assets, taking into account the weighted average measure risk. The value of basic capital level 1 (Common Equity Tier 1) should also be increased to 4.5%. The document provides for the mandatory presence of a capital conservation buffer (Conservation Buffer) in the amount of at least 2.5% of risk-weighted assets. It should be noted that while maintaining the norm of the total amount of required capital (8%), additional requirements are imposed on its structure. Thus, the role of level 1 fixed capital (TIER I) increases significantly with a decrease in the share of level 2 capital.

Basel III establishes increased standards for the size of reserve and stabilization capital, which each bank must have, and two special capital buffers are introduced - capital preservation buffer (2.5% of assets) and countercyclical buffer. A countercyclical buffer is introduced in case of overheating of the economy during periods of a credit boom and can be from 0 to 2.5% [2].

It is assumed that by 2019 the total capital and the capital preservation buffer should collectively be 10.5% (reservation rate). The table contains a forecast of changes in capital requirements for 5 years.

Table 1. Minimum requirements for the composition of capital and the period of their introduction (in% by January 1 of the relevant year)

Indicators	2015	2016	2017	2018	2019
Equity share	4,5	4,5	4,5	4,5	4,5
Backup buffer	0,625	1,25	1,875	2,5	2,5
Share capital + buffer	4,5	5,125	5,75	6,375	7
Capital adequacy ratio	8,0	8,0	8,0	8,0	8,0
Capital Adequacy + Buffer	8,0	8,625	9,25	9,875	10,5

Source: [2].

Note that Basel III adds two new standards - an indicator of short-term liquidity (LCR) and long-term liquidity (net stable funding) (NSFR). The short-term liquidity indicator serves the purpose of ensuring that the bank maintains an appropriate level of high-quality liquid assets that can be converted into cash to maintain liquidity for 30 calendar days under stress scenarios and force majeure conditions. The value of this indicator at the bank should be today at least 60%, and by 2019 - 100%. The net stable funding ratio (NSFR) is used as a guarantee that long-term assets cover the minimum stable liabilities of a bank for one year. The value of this indicator should be at least 100%. LCR is included in the list of mandatory standards from January 1, 2015, and the NSFR - from January 1, 2018.

Another indicator of bank resilience in stressful situations is the leverage ratio, calculated as the ratio of tier 1 capital to risky assets. The value of this indicator should be at least 3% [2].

3. Improving banking sector stability through Basel 3 implementation: pluses and minuses.

Basel III provoked a powerful wave of protest among representatives of the banking sector and the expert community. Professionals fear many negative effects of an economic and financial nature. Requirements for equity of credit institutions increased by about a third. Capital adequacy of banks is one of controversial scientific issues.

Some Western researchers consider the Basel standards of own funds not relevant economic realities. Basel III prescribes continuous compliance with regulations, in fact, intended for the crisis. This forces financial institutions to curtail business, i.e., to reduce the volume of lending to the real sector. It is worth noting that the most important function of the financial system is the redistribution of temporarily free financial resources between economic entities for their use for productive purposes.

The funds frozen on bank balances are deprived of the possibility of effective use. A similar process occurs in the insurance sector under the influence of the Solvency II regime, which also raises the requirements for equity. Not all market participants will be able to adapt.

We should expect an increase in the number of mergers and acquisitions, a growth in the concentration of capital in the banking sector, leading to a drop in competition and a decline in the quality of services. The increasing complexity of working conditions can also provoke banks to care in the shade. According to the IMF, Basel II stimulated off-balance sheet operations and shadow banking, which added fuel to the flames of the global financial crisis.

It is also possible that the profitability of banking operations will fall and, as a result, the decline in the attractiveness of credit institutions' shares for investors, the rising cost of lending, difficulties for long-term loans, the reduction in the number of business models of financial institutions, the complication of risky financing, the inhibition of financial innovations, obstacles to the flow of capital and, consequently, the decline in the efficiency of financial systems based on banks, with negative consequences for the national economy.

The aggravation of economic problems in the EU will inevitably affect the euro. The United States will benefit from this, since the dollar has long been competing with the single European currency.

Under normal business conditions, when banks are able to assess their risks, a much lower level of capital is required for the stable operation of banks. But on the other hand, if the risks are assessed incorrectly, then the increase in the airbag prescribed by Basel III will be clearly insufficient.

Suppose that if a retail bank did not even work with mortgage loans that collapsed the financial system in 2007–2009, then it could easily face a sharp increase in the percentage of loan default [7].

Thus, Basel III protects the banking system from small cyclical risks. But it should be noted that only cyclic. It is unlikely that he will be able to protect against systemic crises, such as a crisis or a debt crisis in the EEC 2010 (Greece).

The disadvantages of the introduction of new standards are. First, over the next 8 years, banks may need up to \$ 1 trillion in equity investments. Where they will take such financial resources in conditions of very slow growth of the world economy is unknown.

Secondly, an increase in capital means that the value of this capital will increase, that is, banks will have to double their profits. And to increase profits, banks will be forced to raise interest on loans. The growth of interest rates will be small, hardly more than 0.25% per annum, but even an increase in the interest rate on a loan for such items can badly affect an unhealthy economy [7].

Thirdly, the banking system is most likely waiting for a series of mergers and acquisitions, especially in the EU. A merger will reduce the number of banks, competition in the banking sector, and the stability of the system (because the smaller the players, the less stable the whole system).

4. Reforms in the banking system of the Republic of Moldova. The transition from Basel I to Basel III.

Under normal business conditions, in a situation where financial institutions are able to assess and predict their risks, a much lower level of capital is required for the stable operation of banks. But in a situation where the risks are rated incorrectly, the recommended "Basel III"

“airbag” will be clearly not enough to maintain stability and liquidity. Suppose that if a retail bank did not even work with mortgage loans that collapsed the financial system in 2007–2009, then it could easily face a sharp increase in the percentage of loan default [6].

Thus, it can be assumed that Basel III protects the banking system from small cyclical risks, but only cyclic ones. It is doubtful that he will be able to protect against systemic debt crises, for example, such as in Greece in 2010.

Today, Moldova is forced to make a leap from the principles of Basel I, operating now, to the principles of Basel III. Thus, the draft law provides for the banks to have internal capital, which, in terms of its qualitative and quantitative characteristics, must be adequate to the risks taken. In addition, “banks will need to apply strategies and processes to assess and maintain the adequacy of their domestic capital. These rules are part II of the core component of the Basel III standards and will undoubtedly be a novelty for the supervisor and banks of the Republic of Moldova

The Law on Banking in the Republic of Moldova has replaced 06.10.2017 The Law on Financial Institutions and marks a new stage in the reform of the banking sector, will strengthen the stability of the banking system, restore citizens' confidence in the banking sector, and it will be implemented in stages until 2020. The document will strengthen the regulatory framework and banking supervision by approaching European standards and the transition from Basel I standards to Basel III standards. After the entry into force of the new banking legislation and the secondary regulatory framework, which will allow for the introduction of the provisions of the law (more than 20 Regulations), the conditions stipulated for the banking sector by the Moldova-EU Association Agreement will be fulfilled.

As noted by the NBM, the new regulatory framework will be aimed, in particular, at developing corporate governance in banks, internal control mechanisms and risk management methods in banks. New approaches will be introduced for the calculation of regulated capital, risk-based capital adequacy (it will include in addition to credit and other risks - operational risk, market and other risks associated with banking activities), as well as liquidity indicators.

In addition, banks will be able to choose the approach for calculating capital adequacy adequate to the risks involved. Improving risk assessment and management is one of the most important goals of the new law on banking. The document will allow the implementation of effective control tools to prevent and minimize possible shortcomings in the activities of banks in the early stages, thereby ensuring the stability of the banking sector and protecting the interests of depositors. At the same time, the National Bank will receive a wider range of tools for the prevention and minimization of possible problems, more rapid intervention. Closer cooperation with banking supervisors from other countries is also envisaged. It is planned that the implementation of the Law on the activities of banks will significantly improve internal management in banks, introduce innovative risk management tools, change the requirements for banks' prudentiality, and expand cooperation with foreign regulatory agencies. In general, this will make the banking system of Moldova resilient to various shocks, increase its attractiveness for foreign investors, allow developing new financial products and services, and have more strong and reliable banks that play an important role for the country's economy.

Another innovation related to the transposition of the provisions of Basel III, is that when calculating assets weighted by risk, banks will be obliged to take into account several risks, including market or operational, and not just credit risk, as is happening today. That will increase the responsibility of shareholders and provide additional pressure on the capital of banks.

Although from the point of view of prudential regulation and minimization of risks, the introduction of Basel III principles is beneficial, nevertheless, this will entail new challenges for the country's banking institutions, including a possible further reduction in the appetite for lending to the economy.

As shown in the analysis of the Romanian Banking Association on the implementation of the principles of Basel III in Romania, new standards may lead to a decrease in the interest of credit institutions in financing, posing a problem, including in terms of the ability of the banking sector to achieve profit. The challenge is the adaptation of banking and financial groups to the requirements of solvency and liquidity imposed by the provisions of Basel III, which can lead to a limitation of assets and a change in the business model.

There are other important points or innovations of the new law mentioned by the National Bank, like this:

- from the point of view of administrative and organizational requirements, the bill repeats the existing provisions of the current legislation, but at the same time consolidates them taking into account the principles of internal management applied at the international level. Thus, the requirements regarding the quality of the structure of shareholders remain the same as in the current Law on Financial Institutions.

- to ensure the effective execution of the powers of the supervisory authority and strengthen corporate governance in banks, the draft law provides for some deviations from the Law on Joint-Stock Companies, related, in particular, to the powers of the general meeting of shareholders, the board of directors and the executive body, as well as the exclusion of audit commissions in banks Moldova from the list of bodies of control of the bank.

- compared to the current legislation, the project provides for a wide range of rights and obligations of the National Bank of Moldova with regard to the process of evaluation and supervision of credit institutions, and continues to promote the idea of a significant increase and diversification of possible sanctions and sanction measures. In particular, the NBM should have the right to impose sufficiently large administrative monetary sanctions that would be able to compensate for the expected benefits and have a deterrent effect, including for large banks and their managers.

Meanwhile, the Report on anti-corruption expertise, prepared by the National Center for Combating Corruption, reveals a number of risks associated with this draft law in its current version. Thus, in the draft, "ambiguous phrases and norms were found that could lead to erroneous implementation of the provisions or could be interpreted in favor of a more convenient application of the project." At the same time, the National Center for Combating Corruption objects to the envisaged expansion of powers and deviations from the current legislation, since "they are illegal and unacceptable in the current draft version" [1].

Issues related to:

- the possibility for banks to intervene in the banking activities of unauthorized third parties;
- empowering the NBM to unreasonably refuse to grant a license;
- vague conditions for opening branches in the territory of other states;
- arbitrary imposition on banks by the NBM of restrictions on instruments of remuneration, in the absence of acceptable arguments;
- using words that create uncertainty in describing the process of conducting a bank audit;
- the absence of definitions of the executive body and the executive document, although the author operates with similar concepts.

For example, art. 39 of the draft law, which describes the Remuneration Policy of Banks, states that "the National Bank of Moldova may impose restrictions on the type and characteristics of variable remuneration instruments or may prohibit the use of such instruments when it deems it necessary." [1].

On the other hand, tougher penalties for bank officials and people representing key interests in the event of violations is a necessary measure, given that in a situation of "stealing a billion" and in other schemes using bank loans, in most cases, people who have committed a crime, managed to get out of the water. The problem, however, as noted in the NAC review, is that some of the measures proposed in the current draft of the project go to the other extreme, which may lead to the fact that bona fide people will suffer from possible abuses.

It should be noted that banks took the "spirit of the time" correctly and began to actively introduce changes to improve internal procedures. Corporate governance bodies, a supervisory system, risk monitoring, general lending and collateral were strengthened. Thus, against the background of high capitalization rates (31% with a standard of at least 16%) and current liquidity (55% with a standard of at least 20%), banks were not only financially but also "morally" ready to introduce new rules for banking regulation. Basel-3 ".

We all understand that the Basel-3 agreement is quite voluminous, complex and is a challenge for the banking sector of any country. The difficulty for the domestic banking system is that before that, Basel-1 was operating in Moldova, not Basel-2, and the level of development of

our banks is not the same as in the European Union. Therefore, we made a decision in favor of a phased implementation. However, the new rules are not a complete innovation for Moldovan banks. The NBM conducted many seminars and consultations in order to explain the essence of the upcoming changes. Efforts in this area have also been made by banking associations.

The results of the NBM research on the financial effect of the transition to Basel-3 showed that the banking sector is ready for the new requirements for capital adequacy. According to the analysis of the quantitative impact of "QIS", which we conducted last fall, all the commercial banks of the country have enough capital to comply with the new rules. However, this analysis was carried out without taking into account the possible distribution of capital (dividends) and additional requirements for the creation of reserves at the end of comprehensive audits. Therefore, the NBM recommended that some banks refrain from distributing dividends based on the results of 2017. Shareholders are also advised to analyze capital adequacy in the light of the expected growth in the loan portfolio and reduction in the share of investments in government securities. Such a trend will inevitably lead to an increase in risk-weighted assets ("RWA"), and therefore to the need to attract additional share capital.

5. CONCLUSIONS AND RECOMMENDATIONS

Thus, the issue of fulfilling the requirements of Basel III takes on special significance in the realities of the modern Republic of Moldova economy, in which, against the background of international economic sanctions and the instability of the foreign policy situation, many banks face the impossibility of fulfilling the requirements of the capital adequacy ratio to finance potential defaults. Innovations are aimed at increasing the capital intended for financing outstanding arrears (in other words, first-level capital, which was raised in addition to its value, also due to the formation of a conservation buffer), against the background that the requirements for second-level capital, on the contrary, have decreased.

Thus, we can assume two options for the development of the Republic of Moldova banking system. In the optimistic version, we will be able to observe an increase in the share of banks' net profit, which forms the increase in equity. Such a scenario is possible when revising the very concept of banking activities - due to diversification of activity, liquidation of unprofitable divisions, products, and market segments.

In the pessimistic version, it is expected to compensate for the lack of funding for gaps between actual and regulatory capital values through the growth of takeovers or mergers of unstable and unmanaged banks with other large banks, which, of course, adversely affect customer loyalty to the financial sector and cause an outflow of borrowed capital.

As follows from the above, international requirements for the overall level of bank capital adequacy have almost doubled. Undoubtedly, the simultaneous introduction of such requirements would entail an irreparable blow to the activities of banks, since in fact 10% of their own capital would have to be spent on the formation of reserves, and would entail an additional issue from banks. Thus, in order to avoid the above risks, the Basel Committee on Banking Supervision decided to gradually implement the requirements.

6. REFERENCES

1. Legea Nr. 202 din 06.10.2017 privind activitatea băncilor (publicată la 15.12.2017 în Monitorul Oficial Nr. 434-439, art Nr : 727, intrat în vigoare din 01.01.2018)
2. Bank for International Settlements (December 2010 (rev June 2011)). "Communications Basel III: A global regulatory framework for more resilient banks and banking systems, online: <https://www.bis.org/publ/bcbs189.pdf>.
3. Cooper, George. (2008). "The Origin of Financial Crises, Central Banks, Credit Bubbles and the Efficient Market Fallacy", Vintage Books, New York 2008;
4. International Monetary Fund. Monetary and Capital Markets Department (2016). "Republic of Moldova: Financial Sector Assessment Program-Bank Crisis Resolution-Technical Note", International Monetary Fund, Washington, D.C.
5. Schinasi, Garry J.. (2005). "Preserving Financial Stability", International Monetary Fund, ISBN 1-58906-356-2 ISSN 1020-5098 Published September 2005;
6. The official site of National Bank of Moldova, <http://www.bnm.md>
7. Turner, P., Sobrun, J. (2015) "Bond markets and monetary policy dilemmas for the emerging markets", *Working Papers No 508*;

MODEL OF BANKING ACTIVITY AND MAXIMIZING PROFIT

PhD Student, Victor ABABII
ababii.victor@gmail.com
068375174

Academia de Studii Economice a Moldovei
str. Bănulescu-Bodoni 61,
MD-2005, Chișinău, R. Moldova

Abstract: *Banking activity in the Republic of Moldova under the impact of community values and regulations is a very important topic in establishing the relations between the National Bank of Moldova and the activity of commercial banks. The purpose of the research arises from the need to analyze the shaping of a banking activity model that perfectly combines with the established performance management by the bank's management. The ultimate aim is to maximize profit under regulatory conditions at both micro-prudential and macro-prudential level. The Theoretical part aims to examine theories on the concept of banking planning. The applied direction is to determine the instruments for measuring and reproducing the banking performance as well as the analysis of the evolution of the banking performance indicators: profitability, operational and managerial efficiency. The elements of a banking business model are a three-table system that is in perfect correlation, these are the balance sheet, the forecast of the financial result and the forecast of the equity movement. The system of indicators used are those of banking performance, namely those that involve the diagnosis of profitability: return on equity and economic profitability. Over time, the economic system of the Republic of Moldova experienced both major ups and downs and recessions. From the analysis of performance indicators, we note that banks have perfectly adapted the banking model to maximize profit. Thus, the banking performance is first aimed at determining the bank's solidity, its degree of exposure to the various risk categories and then the level of its effectiveness.*

Keywords: *economy, banking system, business model, profit, regulations.*

JEL Classification: G20, G21

1. INTRODUCTION

Analyzing the experience of other developed countries, we noticed that a well-established banking system based on an intensive risk-based supervision, an assessment of macroeconomic factors as well as an impact assessment, which it brings to the risks to which financial institutions are subject.

Banking activity in the Republic of Moldova under the impact of community values and regulations is a very important issue in establishing the relations between the National Bank of Moldova and the activity of commercial banks aimed at ensuring the smooth operation of the domestic financial system based on a strong and competitive banking sector to market relations and risk prevention. The Banking Supervision and Regulation Mechanism is established following a series of specific requirements laid down in normative acts and adapted to Community values and regulations, in particular adaptation to Best Practices and Recommendations from the Basel Committee on Banking Supervision and European Union Directives.

The banking sector of the Republic of Moldova has lately adopted a number of changes in the area of the domestic banking by highlighting well-established parameters of major importance:

- capital requirements, exigencies to owners and quota holdings;
- establishing and supervising compliance with prudential requirements to ensure banks' exposure to risks;
- ensuring a system that is favorable to banks' activity to solve problems with banks with increased vulnerabilities.

The purpose of the research arises from the need to analyze the outline of a banking activity model that perfectly combines with the performance management set up by the bank's management. The ultimate goal is to maximize profit under regulatory conditions at both micro-prudential (individual for banks) and macro-prudential (banking system as a whole). The subject presented is of utmost importance because the achievement of the Bank's objectives, namely the basic objective of maximizing profits, has a direct impact on the sustainable development of the Moldovan economy as well as ensuring the international competitiveness of the domestic banking system. Thus, financial stability is a key condition for the functioning of the national economy and can be

defined as a situation in the economy, characterized by the lack of imbalances that could lead to a negative correction of the financial markets, the emergence of a systemic financial crisis or the inability of financial institutions to maintain uniform performance of financial operations. Financial stability is maintained through appropriate regulation of current and potential risks, effective risk management and redistribution mechanisms, and confidence in the financial system. This topic is topical because of the equilibrium of a banking business model that will ensure a desired profit for banks, as well as compliance with a set of regulations imposed by governmental, intergovernmental and supranational regulators and supervisors to reach levels of capital ratios and the required liquidity ratios. Ensuring a regulatory system linked to an appropriate model of banking relies upon the following: ensuring that objectives such as maintaining stability and confidence in the banking sector (protection against systemic risk) are fulfilled; the protection of clients (especially depositors) against financial losses in bankruptcy of banks; protecting customers (consumers) against bank abuses; counteracting the moral hazard induced by the existence of the safety net of the banking sector; ensuring an efficient and competitive banking sector. Among the major factors that determine the changes in the banking business model can be mentioned: the profitability of commercial banks as well as the post-crisis regulation of the banking sector, which is inevitable in the phase of transition over periods of financial instability.

2. THE CONCEPTUAL FRAMEWORK

"Banking as a whole represents the link between depositors and borrowers, as well as the provision of key services to facilitate consumption and promote economic growth, risk surveillance and regulation of the banking sector is vital for the efficient and sustainable functioning of the economy" [1]. In essence, it can be said that the banking activity consists of banking operations, banking records and internal control. Besides these basic components, it can be appreciated that the activity is strongly influenced by the strategies and policies of the banks and by the policy and rules of the Central Bank. In addition, the analysis of the banking phenomenon greatly influences the banking techniques, banking products and the very configuration and definition of the banking business model. So "banking activity means organizing and conducting bank operations, bank records and banking control in line with banks' strategies and management, and ensuring the role of intermediaries between those who have capital and entrepreneurs" [2].

Performance can be defined as the measurable level of stability of a bank's activity, characterized by low levels of risk of any kind and a normal growth trend of profits from one analysis period to another. Banking is primarily aimed at achieving profit, which is a highlight banking performance.

3. RESEARCH METHODS

In order to achieve the goal and the objectives, the author aimed to develop a methodology of research, including various methods, so that the phenomenon of the analysis of the banking activity in the Republic of Moldova through the maximization of the profit is best exposed. Thus, the research will be oriented on two directions: theoretical and applicative. The Theoretical Department aims at examining theories on the concept of banking planning. The applied direction is to determine the instruments for measuring and reproducing the banking performance as well as the analysis of the evolution of the banking performance indicators: profitability, operational and managerial efficiency.

4. RESEARCH RESULTS AND DISCUSSIONS

The modeling of banking activity, a banking business plan must be tightly correlated with the purpose of management. If the manager proposes to double the profits, he / she will take a higher risk, and if he / she proposes a risk-minimizing development strategy, profits will be lower but more secure [3]. Any progress is accompanied by risk, so practices show that the risk is impossible to overlook, hence the need for risk management to show that the final results are not

severely affected. Risk management does not analyze what went wrong after the fact is accomplished - it is not an ex-post analysis. It is a process by which the risk becomes transparent. It implies looking for new risks, measuring them and managing them. We do not need to consider a unique answer to risk - risk management is a learning cycle that has several distinct phases: risk identification and risk analysis, which is an executive component, and the risk response, which is a vision component [4].

Any banking business model has behind it a well-planned planning that involves certain features influencing the bank's overall activity. These characteristics can be synthesized as follows:

- is an excellent decision-making and creative activity;
- involves the identification of environmental opportunities and their use;
- the plans drawn up are based on the discovery and development of the most effective means of realization;
- establishes or determines the coordination of the efforts of all members of the organization, ie involves a way for both managers and non-managers;
- anticipate the consequences of actions taken by managers in response to changes in the environment [5].

Underlying the bank's objectives is always a banking business model, which involves performing well-defined stages: establishing objectives; configuring the business model; banking planning; establishing plans with long, medium and short time horizons. In the same way that the bank's objectives differ according to its levels and the plans are at strategic, tactical and operational level. The business plan reflects all the means / factors (business model variables) and how the bank's management intends to achieve the goals in front of it. In other words, it describes the process by which the bank's management will ensure the achievement of its goals. The degree of detail and the accuracy of the description of the process, and consequently the reliability of the expected outcome, can vary depending on the bank [6].

As an example, the following concept of the banking model is proposed, which, with certain exceptions, applies to the contemporary banking system [7].

The banking business model describes the following areas:

- lending;
- acceptance of deposits;
- settlement services;
- speculative operations.

The elements of a banking business model are a three-table system in perfect correlation, these are the balance sheet, the forecast of the financial result and the forecast of the movement in equity. The whole banking activity is the implementation of the bank business model, set at the level of each bank, so the development path of the bank depends on the expected results as well as the risks that can occur within the framework of the set plans, not least the expected results are influenced and by the regulatory body through the rules and regulations imposed at the legislative and monetary policy levels.

The economic system of the Republic of Moldova since independence has experienced both major upheavals and sinking in recessions; the factors that contributed to these fluctuations were political instability, high corruption, dependence on foreign markets, international economic crises as well as thefts from the banking system. The following data shows the performance indicators of the domestic banking sector. The analysis period is 2013-2018, this period encompassing both the analysis of the effects of the 2008-2009 economic crisis as well as the crisis and post crisis after the bank robbery in 2014. . Even in the aforementioned situations, commercial banks have managed to adapt banking models to market shocks and maximize profit.

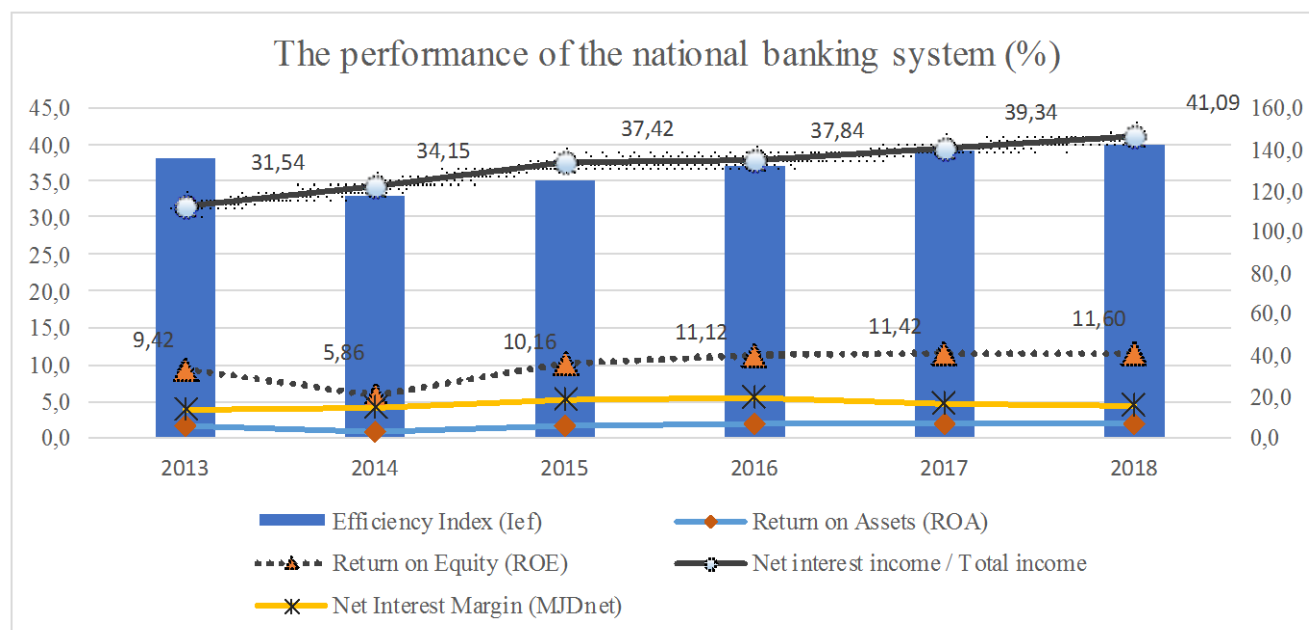


Figure 1.1. The performance of the national banking system in the period 2013-2018.

Source: Developed by the author based on data from the National Bank of Moldova

In the Moldovan banking system, the Financial Efficiency Ratio (ROE) rate was quite high throughout the analyzed period, a lower than the rest of the years was in 2014 at a rate of 5.86% under a comparable dynamic of net profit to equity, with a slight increase from 2015 to 2018 reaching 11.60%. ROE analysis based on determinant factors, using Du Pont decomposition, reveals a deterioration in bank capital remuneration as a result of the decline in asset capacity to generate profit in 2014, as advantage gains only partially offset the cut in the rate economic return (ROA).

ROI in the banking system mirrors the overall profitability of a banking company, also called asset profits or asset returns, and measures the effect of managerial ability to use the financial and real resources of the banking company to generate profit. Analyzing the figure above, we see the failing situation in 2013-2014 slightly increasing in the years to come. Thus, the 0.85% minimum was recorded in 2014 as a result of bank defalcation and the post-crisis situation after 2009. The set of regulations implemented by the supervisor and the rapid adaptation of banking activity led to an economic return (ROA) in 2018, 4.31%, which highlights the increased profit of the bank. It is worth mentioning that the interest income related to the total income has been increasing throughout the analyzed period reaching 41.09% in 2018. Analyzing the efficiency index (Ief), we note that interest income plus interest-less income related to non-interest expense shows a rate that exceeds 100 percent, with a slight increase from year to year, an indicator that tells us about the efficiency of managing own funds and attracted.

Speaking about getting profits in absolute values, we can see the following dynamics of the table below:

Table no.1. Dynamics of total profit or (-) loss on continuing operations after tax during the years 2012-2018 (mil.MDL)

Indicator	2012	2013	2014	2015	2016	2017	2018
Total profit or (-) loss on continuing operations after tax	434,6	1022,8	713,3	1144,2	1364,0	1528,1	1510,5

Source: Developed by the author based on data from the National Bank of Moldova

Analyzing the total profit from post-tax continuing operations, we conclude that even in the end-result of the entire banking system, the fraud in 2014 is noticeably showing a much lower result than in previous and future years. The data in the table and the rising dynamics of total profit talk about successful deployment and successful banking modeling. Withdrawal of the license of the three banks in 2015 involved in bank fraud led to an impetus for the domestic banking system and the revival of activity, and in 2017 and 2018, a profit of more than 1.5 billion lei was obtained.

5. CONCLUSIONS

As mentioned above, the goal of any trading company is to maximize profit, banks operate on the basis of the profitability criterion as well, permanently pursuing net profit under specific risk conditions: the economic evolution of the market, the regulations imposed by the central bank, the bank's financial structure, insolvency and liquidity. Profitability is an indicator of the competitive position of a bank in the banking markets and the quality of its management, ensuring the health of the banking system. Traditional banking practice - based on depositing and granting loans - is today only a part of the specific activity of banks, and is often the least profitable. The major sources of profitability of banks are revenue generating through commissions and trading on financial markets.

The performance analysis of the Moldovan banking system presents the configuration of a new banking business model, namely the client-oriented model and the adaptation to change through the quick assimilation of economic information that focuses on satisfying customer needs. The future of this banking business model will be a lasting one, with the digitization phase being the key to success in providing banking services to customers, digitization being the main tool for maintaining and developing this model, which in the future will cover most of the profits earned in the banking sector.

From the analysis of performance indicators, we note that banks have perfectly adapted the banking model to maximize profit. Thus, the banking performance is first aimed at determining the bank's solidity, its degree of exposure to the various risk categories and then the level of its effectiveness. A positive and maximum expected result from the bank starts from the financial diagnostic considerations on bank activity that are divided in two directions: the diagnosis of profitability (return on equity, economic profitability); and risk diagnosis (operating risk, financial risk, bankruptcy risk).

REFERENCES

1. BASNO, Cezar, DARDAC, Nicolae. Managementul bancar. București: Editura Economică, 2002. 272 p. ISBN 973-590-702-X.
2. Căpraru, Bogdan (2010), Activitatea bancară – sisteme, operațiuni și practice, Editura C.H. Beck, Iași, 368 p. ISBN 978-606-18-0319-4
3. I.Bătrâncea, I.Trenca, A.Bejenaru, S.N.Borlea – Analiza performanțelor și riscurilor bancare, Editura Risoprint, Cluj-Napoca, 2008, p.374
4. Dwyer, D., Stein, R.M. (2006), Inferring the default rate in a population by comparing two incomplete default databases, Journal of Banking and Finance, no. 30: 797–810.
5. MOGA, I. Strategii și politici bancare. Sibiu, 2009.
6. BELOBROV, A. Certificat european bancar: Manual de curs. Chișinău, 2015.
7. Grant J. Banks need to rediscover the ancient art of caution, Financial Times, December 14, 2012;
8. Banca Națională a Moldovei, baza de date interactivă, [online] Disponibil, <http://bnm.md/bdi/>.

THE OPPORTUNITY OF MONETARY POLICY INSTRUMENT APPLICATION IN ORDER TO CONTROL THE INFLATION PROCESS

PhD student, OLGA HINEV

Academy of Economic Studies of Moldova,

61 Mitropolit Gavriil Bănulescu-Bodoni St, Chișinău, Moldova, Republic of

e-mail: olga.kiosa@mail.ru

Abstract. *This research focused on studying the means and levers available by the central banks in order to achieve the inflation objective proposed by the monetary authority. The particular attention has been given to the monetary policy framework, which allows the monetary authority to act within the limits set by this monetary policy framework. It was formulated the generalized vision and approach from international experience. Based on the study, we concluded that the ability of the monetary authority to respond at the appropriate time and to anticipate potential shocks and risks to the pursued objective address, using the set of monetary policy instruments associated with the promoted regime contributes to ensuring the inflation target achievement.*

Key words: *central bank, monetary policy instruments, inflation, monetary policy.*

JEL CLASSIFICATION: E31, E32, E52, E58.

INTRODUCTION.

The importance of the investigated topic lies in the indispensable role of central banks to create optimal conditions in order to achieve price stability and control the inflation process. At the same time, the central banks tend to ensure the conjuncture conditions on the credit and deposit market, on the monetary and financial market, through the efficient and timely application of monetary policy instruments associated with currency supply control and the establishment of the level of rates on the banking market. The practical benefits of price stability have determined the international central banks to pursue the objective of ensuring and maintaining price stability and keeping under control the inflationary process. Starting from the primary objective pursued by a central bank, it is responsible for timely selection of monetary policy instruments in line with current and forward-looking macroeconomic developments from the perspective of ensuring the reasonable achievement of the objective. Recognizing that the monetary policy outcomes of controlling the inflationary process depend on the timeliness of applying monetary policy instruments suggests assessing leverage through which the central bank achieves the proposed objectives.

The purpose of the research is to finalize the aspects of opportunity of monetary policy instruments application in order to achieve the inflation target, referring to the theoretical approaches and international experience. In order to achieve the proposed goal, the following *objectives* were formulated:

1. Identifying the determinants underlying the choice of a monetary policy instrument against another or a mix of instruments;
2. The specification of monetary policy instruments and the substantiation of the associated issues;
3. Finalizing the transmission mechanism of the monetary policy decision-making process at the level of each instrument;
4. Identifying the opportunity to implement Taylor's rule and analysing the monetary policy instruments from the perspective of this rule;
5. Research of the literature on the monetary policy instruments' application according to the strategy and the applied regime in order to achieve the inflation target.

MATERIALS AND METHODS.

The bibliographic data analysis in the field of the researched problem. The theoretical and practical aspects of monetary policy instruments and actions, the application opportunity of instruments, as well as the monetary policy decisions transmission process against the backdrop of the associated monetary policy framework were approached in the working papers of economists from abroad: Bernanke, Taylor, Sargent and Wallace, Woodford, McCallum, Atkeson, Chari,

Kehoe. The studies and researches of the aforementioned authors represent a significant theoretical and practical value, contributing to the systematization of the concepts and findings formulated by the author.

The used research methods focus predominantly on theoretical proceedings, such as:

- The method of scientific abstraction. This method has been used to synthesize the ideas, principles and values associated with monetary policy instruments in the literature and to remove some irrelevant and provisional concepts, respectively.
- The comparative method. The application of this method has helped to capitalize on the international experience of the monetary policy framework, thus contributing to the formulation and dissemination of some reasoned conclusions regarding the opportunity of applying the monetary policy instruments according to the implemented monetary policy framework.
- The analysis method. The use of this method allowed the overall study, appealing to the theoretical and practical aspects, as well as it defined the strengths of opportunity of monetary policy instrument application according to the associated monetary policy framework.
- The deduction method. This method emphasizes the author's ability to formulate and identify hypotheses and concepts of a generalized nature, starting from the particular knowledge and making conclusions related to the current macroeconomic evolution environment with implications on the inflationary process.

From the perspective of research character, the research method is predominantly applicative, interdisciplinary, descriptive and causal.

RESULTS AND DISCUSSIONS.

The specialised literature highlights the importance of choosing an instrument or mix of monetary policy instruments capable to achieve the objective proposed by the monetary authority.

Taylor [7, p.2] argues: „The monetary policy problem is to find a good procedure to use to set the monetary policy instrument - usually the money supply or the short-term interest rate - to best achieve this goal”. At the same time, European Central Bank [11] declares: „The most important principle is operational efficiency. It can be defined as the capacity of the operational framework to enable monetary policy decisions to feed through as precisely and as fast as possible to short-term money market rates. These in turn, through the monetary policy transmission mechanism, affect the price level.”

In order to defining the monetary policy instruments, we intend to identify the aspects witch stay of their application and selection, valorising the monetary policy framework. Generalizing the literature in the field, we found that a central bank defines the spectrum of monetary policy instruments according to:

1. The implemented monetary policy strategy;
2. The operational and institutional framework associated with the strategy;
3. The degree of development of the financial-banking market;
4. The factors of conjuncture nature associated with the economic potential of the country.

The functionality of monetary policy instruments starts from a clear and explicit definition of the monetary policy objective, of the monetary policy framework through which the objectives proposed by the monetary authority are achieved.

Figure 1 highlights one of the most important means by which monetary authorities can influence the real economy of any country – the monetary policy transmission mechanism, and the assimilation of its proper functioning denotes the correctness of the right choice of instruments to correct any monetary policy errors with minimal costs and maximum effects.

The transmission models used in developed countries differ from those of emerging countries in the fact that the first are characterized by the existence of variables and links more interdependent with the activity of economic agents, whereas in the case of emerging countries, the transmission mechanism depends on a series of national and international determinants. A decisive role in definitivation of the monetary policy transmission mechanism belongs the conditions in which the monetary policy strategy is developed; here we can refer to the possible fluctuation of the

inflation rate, to the development level of the banking sector, as well as the estimation of the potential conjuncture.

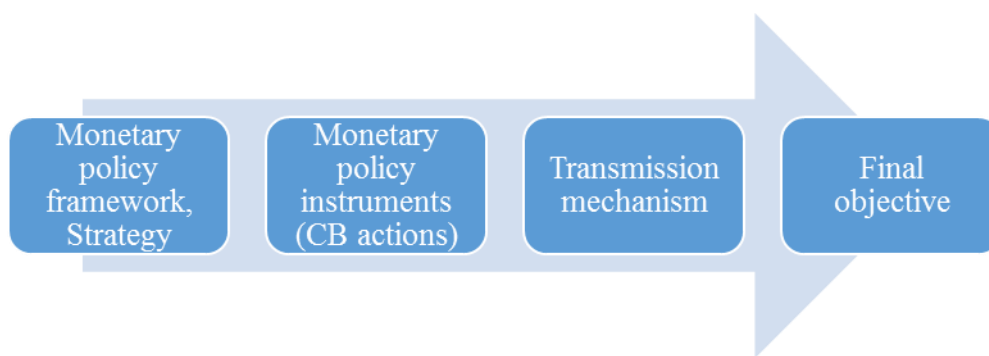


Figure 1: The role and place of monetary policy instruments in the process of assuming the final objectives

Source: elaborated by the author.

In this context, it is necessary to mention the instruments by which a central bank is able to pursue the inflation target (Figure 2). Either the monetary policy conduct acts with direct instruments that control prices, such as interest rate, or with indirect instruments that work by influencing the conditions on the monetary and financial market. In this respect, the use of indirect instruments requires a well-developed domestic financial market; in the absence of this conditionality, the application of indirect instruments will not benefit monetary policy in terms of controlling the inflation process.

Thus, in a classical way, the monetary policy instruments are:

The monetary policy rate or base rate or refinancing rate – is an important instrument of monetary policy, and in fact reflects the cost of money. Thus, as the monetary authority diminishes the monetary policy rate, the lending process is sustained, so the money supply increases and, respectively, the inflation increases through money supply. And on the other hand, with the rise in the base rate, the central bank reduces the lending process by diminishing the money supply and thus diminishing inflation.

Open-market operations – is the indirect monetary policy instrument by which a central bank sells or buys money market securities. Through these operations, the monetary authorities modify the reserves of the banks and influence the amount of currency in circulation. When the central bank sells securities, it withdraws some of the bank's cash and lowers the currency offer in circulation. And reverse, buying the state securities, the central bank injects additional liquidity, thus increasing the money supply.

Required reserves – the application of this indirect monetary policy instrument consists in the banks' obligation to hold reserves at the central bank. The amount of these reserves is defined according to the required reserve ratio stipulated by the monetary authority and the amount of money (deposits) attracted from economic agents and individuals. When the monetary authority increases the required reserves ratio, the commercial banks are required to make additional reserves, thereby diminishing the lending potential of the economy. Moreover, on the other hand, lowering the reserve ratio will help expand banks' ability to support the lending process.

Standing facilities – this indirect instrument aims to provide or absorb one-day liquidity and contributes to stabilizing short-term interbank money market interest rates within a symmetrical corridor around the monetary policy rate. Thus, by addressing this instrument in detail, the lending facility - entails providing liquidity and obtaining a one-day maturity credit by the banking financial institution and deposit facility, respectively - contributes to the absorption of liquidity and involves placing a deposit with a maturity of one day at the central bank by a banking financial institution at the overnight interest rate.

Interventions on the foreign exchange market – this instrument is often used by the central bank, which promotes monetary policy according to the exchange rate targeting regime, with a predetermined exchange rate target. At the same time, the intervention on the foreign exchange market would mean that the central bank knows the level of equilibrium of the exchange rate and

has the necessary means to orient it to this level. However, the monetary policy framework includes, besides the monetary policy regime and the exchange rate regime, which is often appropriate to the impossible trinity and, respectively, the interventions on the foreign exchange market is carried out according to the regime of the exchange rate pursued by the central bank

The indirect instruments are considered more market-friendly and less distortive than direct instruments. Their advantages derive from the fact that they are associated with systemic liquidity; they send monetary policy signals and allow the optimal allocation of financial resources based on risk and return. The prerequisites for the application of indirect instruments include the elimination of insolvent banks from the banking system and the establishment of adequate prudential regulation; the development of the primary market of government securities; the development of the secondary market for state securities and the establishment of the interbank money market.

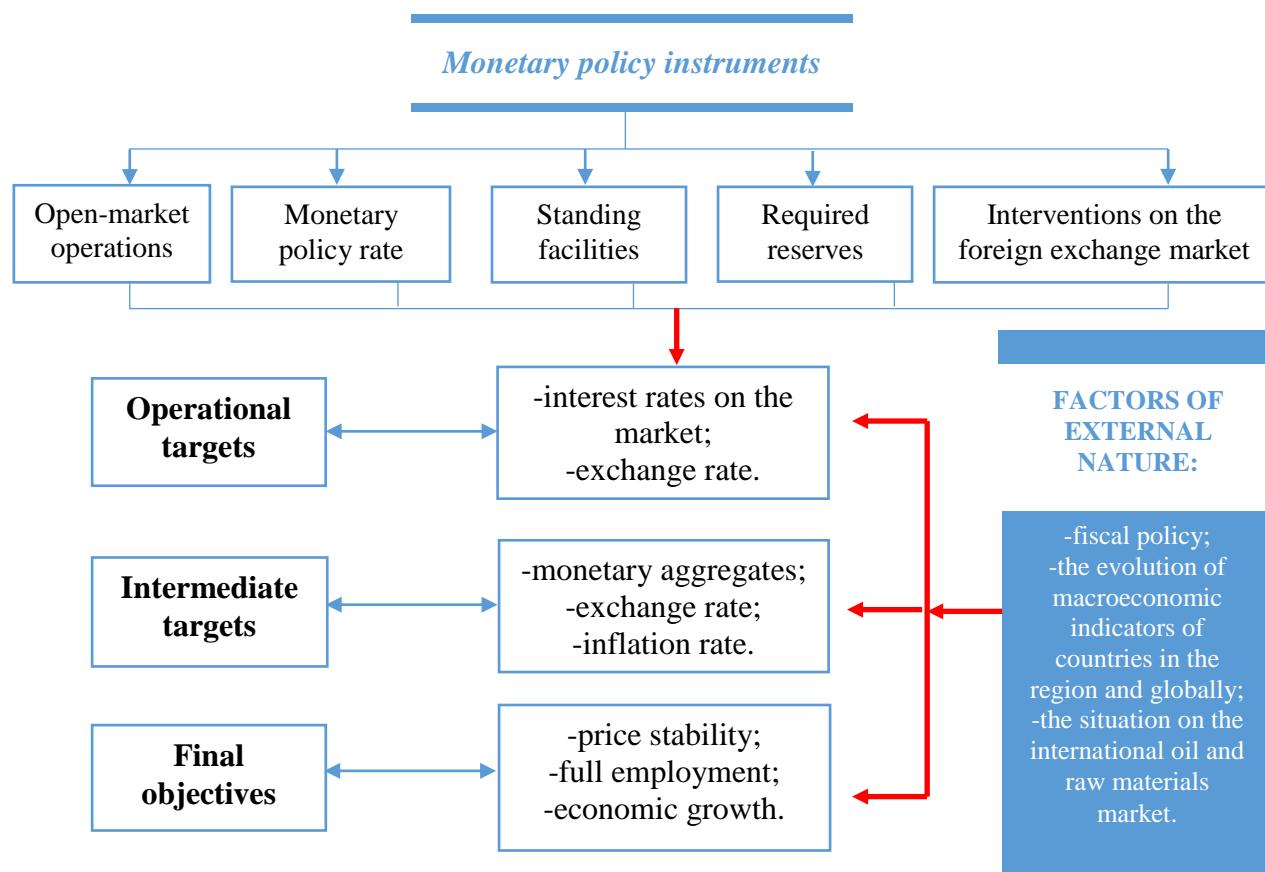


Figure 2: The monetary policy instruments and final objectives of central banks

Source: elaborated by the author based on the synthesis of the specialized literature.

In this respect, the ability of the monetary authority to respond to the appropriate time and to anticipate potential shocks and risks at the pursued inflation address, using the set of monetary policy instruments associated with the promoted regime contributes to the efficiency of monetary policy.

It should be noted that the inefficiency of monetary policy can not be attributed only to the instruments that are in the management of the monetary authority in achieving the proposed objectives. Here we can identify the role of external factors that affect the conduct of monetary policy with repercussions on the ultimate goal, such as fiscal policy, the evolution of macroeconomic indicators in the region and globally, the situation on the international oil and raw material market.

In this context, it is also noted that the monetary policy decisions are transmitted indirectly via the financial-banking system to the real economy, the development of which alongside its potential specificity is the determinants of the transmission effect of the monetary policy conduct. The effect of the transmission of monetary policy impulses on the real economy is felt after a certain period, this period differs from one economy to another according to its potential and

economic development, being estimated according to international experience in about two quarters.

Another aspect that needs to be considered in the process of choosing a particular monetary policy instrument or the mix of instruments is reflected by the ongoing assessment of the monetary policy stance. In this context, it is necessary to mention that the contemporary economists give an important role to the monetary policy reaction function, which in fact reflects the value of a monetary policy instrument that a central bank chooses or is recommended to choose in order to respond at a specific indicator of economic conditions.

Such a function is represented by the Taylor rule, and it assumes that the central bank determines the interest rate as a reaction to the inflation rate, taking as a benchmark the real interest rate, the inflation rate deviation from the inflation target and the deviation of the gross domestic product.

$$i_t = r + \pi_t + c_1(\pi_t - \pi^*) + c_2 y_t + \varepsilon_t \quad (1.1)$$

where: i_t – the short-term interest rate set by the central bank; r – the real short-term interest rate; π_t – inflation rate at time t ; π^* – inflation target; y_t – GDP deviation; c_1, c_2 – coefficients.

Thus, according to this rule, the monetary policy rate is a function determined by the deviation of inflation from the target inflation and GDP deviation. Taylor [6] pointed out that a rule of this type had desirable properties and, in particular, would stabilize inflation only if the inflation gap exceeds the unit. Thus, the inflation will remain under control only if the real interest rates rise as a result of inflation increase.

Currently, most central banks unanimously agreed to pursue the objective of achieving and maintaining price stability over the medium term, confirming the benefits of this goal.

The choice of the monetary policy regime and the framework for the promotion of the monetary policy associated with this regime depends on the monetary policy objective (s) stipulated in the statute or the law of the monetary authority, the institutional development and economic capacity of the country, as well as the opening of the financial markets and the choice of the exchange rate regime. The latter two are part of the impossible trinity principle of functioning of the monetary policy rules. From Figure 3, we note that as of situation of April 2018, 82 monetary authorities from all countries of the world (192 countries) chose the exchange rate targeting regimes, with a majority share of 42.7%. This includes exchange rate targeting regimes from fixed exchange rate strategies, monetary councils to floating exchange rate regimes, followed by other 24% of all countries. This category of monetary policy regimes includes countries that pursue an explicit statutory nominal anchor but actually monitors various indicators in monetary policy promotion. We note that 40 central banks or 20.8% are inflation targeting regime, followed by monetary aggregate targeting with 12.5%. The role and implementation of monetary policy instruments is carried out according to the implemented monetary policy regime, taking as a benchmark the impossible trinity criterion.

It should be noted that the central banks which implemented the monetary policy through exchange rate targeting regime will opt for intervention on foreign exchange market for ensuring the exchange rate anchor at the predefined level.

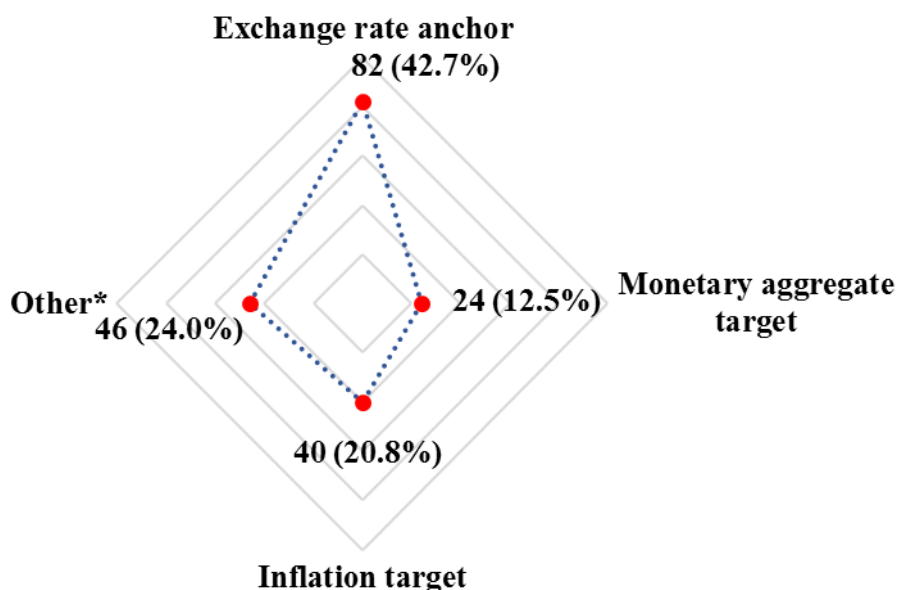


Figure 3: Monetary policy framework according to their distribution by country in 2017

Source: elaborated by author on the basis IMF's Annual Report on Exchange Arrangements and Exchange Restrictions 2017, p. 6-8, IMF, ISBN: 9781484300992.

*includes countries that pursue statutory explicit nominal anchor but actually monitors various indicators in monetary policy promotion.

The specialized literature highlights the superiority of an instrument against another monetary policy instrument, depending on the implemented monetary policy regime and the degree of development of the country. Thus, Swank [8] conducted an empirical study of the relationship between short-term interest rates and monetary policy regimes, concluding that central banks with direct inflation targeting and eclectic regimes, pursuing the inflation goal tend to have a strict control over the one-month rate. This in turn suggests that this rate plays a more important role in the monetary transmission process in countries that promote monetary policy in line with these strategies than in countries with a monetary aggregate targeting regime or exchange rate targeting regime. At the same time, Atkeson and others [1] also argue that the developed economies typically use interest rate models as a primary monetary policy instrument, while the low-income economies with poorly developed financial markets tend to use the exchange rate as a monetary policy instrument. These findings provide insights into monetary policy decisional options.

Table 1. Interpretations of the monetary policy instrument application opportunity

	Conclusions
Atkeson, A., Chari, V., Kehoe, P. (2007)	The argument that developed economies tend to use interest rates as a primary monetary policy instrument, and less developed economies opt for the exchange rate as the main instrument in the implementation of monetary policy.
Swank, J., Lidwin van Velden (1996)	The central banks with the direct inflation targeting and eclectic regimes, following the inflation target goal, tend to have a strict control over the one-month rate.

Source: elaborated by the author.

However, we concluded that the operational framework of monetary policy must be developed in line with the impossible trinity theory proposed by Mundell-Fleming. According to which the operational and instrumental framework of monetary policy is elaborated according to the compromises involved in monetary policy decisions according to the monetary policy regimes applied by the central banks. Therefore, we observe the impossibility of simultaneously meeting the three aspects of monetary policy, expressed by free capital movement, a fixed exchange rate and an independent monetary policy. In this context, a central bank that implements monetary policy under the inflation targeting and monetary aggregate targeting regime will opt for monetary policy

independence and perfect capital mobility against the fixed exchange rate. The monetary policy regimes for exchange rate subcategories, such as hard pegs, monetary councils, monetary unions, will choose the perfect capital mobility and fixed exchange rate, respectively, leaving out the independence of monetary policy. In this context, the operational framework of the central bank implements monetary policy according to the adopted regime and its associated framework.

CONCLUSIONS. The primary objective of monetary authority, ensuring and maintaining price stability is achievable through the implications of an efficient and timely approach of instruments and techniques at the disposal of central banks in the context of a well-defined, transparent and predictable monetary policy framework.

The effective functionality of monetary policy instruments starts from clear and explicit definitivation of the monetary policy objective, the well-defined nominal anchor, of the monetary policy framework through which the objectives proposed by the monetary authority are achieved. At the same time, the opportunity of application a monetary policy instrument in the detriment of another depends on the circumstances associated with the development of the financial and banking sector, the economic and productive potential of the country.

The monetary policy conduct acts with direct instruments that control prices, such as interest rate, or with indirect instruments that work by influencing conditions on the monetary and financial market. In this context, the use of indirect instruments requires a well-developed domestic financial market; in the absence of this conditionality, the application of indirect instruments will not benefit monetary policy in terms of controlling the inflationary process.

The monetary policy decision transmission mechanism plays an important role in the functioning of monetary policy instruments, as well as the definitivation of the lag associated with this mechanism, contributes to the efficiency of the central bank's actions and instruments.

The ability of the monetary authority to respond at the appropriate time and to anticipate potential shocks and risks to pursued inflation address, using the set of monetary policy instruments associated with the promoted regime contributes to the efficiency of monetary policy. It should be noted that the inefficiency of monetary policy can not be attributed only to the instruments that are in the management of the monetary authority in achieving the proposed objectives. Here we can identify the role of external factors affecting the conduct of monetary policy with repercussions on the ultimate goal, such as fiscal policy, the international economic situation, international oil prices and raw materials, especially for countries importing these products.

REFERENCES

1. Atkeson, A., Chari, V., Kehoe, P. *On the Optimal Choice of a Monetary Policy Instrument*. National Bureau of Economic Research Working Paper, No. 13398, 2007, 34p.
2. Bearce, D. *Monetary Divergence: Domestic Policy Autonomy in the Post-Bretton Woods Era*, University of Michigan Press, 1967, p. 17.
3. Bernanke, B., Mishkin, F.S. *Central Bank Behavior and the Strategy of Monetary Policy: Observations from 6 Industrialized Countries*. National Bureau of Economic Research Working Paper, No. 4082, 1992, 77p.
4. Bernanke, B. (2004). *Inflation Targeting. Panel Discussion*. Federal Reserve Bank of St. Louis Review, No. 86(4), pp.165-168.
5. Bernanke, B. (2007). *Inflation expectations and inflation forecasting*. Speech at the Monetary Economics Workshop of the National Bureau of Economic Research Summer Institute, Cambridge, Massachusetts, 10 July 2007, Available: [<https://www.federalreserve.gov/newsevents/speech/bernanke20070710a.htm>].
6. Taylor, B.J. *Discretion versus Policy Rules in Practice*. Carnegie-Rochester Conference Series on Public Policy, No. 39, 1993, pp. 194-214.
7. Taylor, B.J. *Design and Implementation of Monetary Policy Frameworks in ASEAN Countries*. High-level peer-to-peer forum organized by IMF's Institute of Capacity Development and Asia-Pacific Department, July 2018, 26p.
8. Swank, J., Lidwin van Velden. *Instruments, procedures and strategies of monetary policy: an assessment of possible relationships for 21 OECD countries*. Meeting of BIS Central Bank Economists, 1996, 12p.
9. Woodford, M. (2001). *The Taylor Rule and Optimal Monetary Policy*. American Economic Review, Vol. 91, No. 2, pp. 232-237.
10. IMF's Annual Report on Exchange Arrangements and Exchange Restrictions 2017, IMF, ISBN: 9781484300992, 86p.
11. <https://www.ecb.europa.eu>

EFFECTIVENESS OF MONETARY POLICY

conf. univ., dr. Angela BELOBROV, belobrov.a@ase.md
ASEM, str. Banulescu-Bodoni 61, MD-2005, Chișinău, R. Moldova
drd. Veronica CHICU, veronica.chicu@ase.md
ASEM, str. Banulescu-Bodoni 61, MD-2005, Chișinău, R. Moldova,

Abstract. *Economists and politicians advocate in recent years that stabilization of output and inflation should be left to monetary policy and the long-run primary goal for central banks should be the price stability. While achieving this goal, monetary authorities must have a clear understanding of the timing and effect of their policies on the economy, thus a clear understanding of the transmission mechanism of the monetary policy. The purpose of this paper is to analyze the evolution of the efficient monetary policy concept and its transmission mechanism using synthesis method. The main conclusions of the paper refer to results of recent researches and analyses that prove the important role of a sound understanding of monetary policy transmission mechanisms in order to maintain price stability. Effectiveness of monetary policy can be traced through changes in money market conditions that initially affect financial markets as reflected in asset prices and general liquidity and credit conditions, changes that in turn affect spending and prices.*

Keywords: monetary policy, transmission mechanism

JEL Classification: E52, E58

Introduction

The purpose of this paper is to analyze the evolution of the efficient monetary policy concept and its transmission mechanism. Monetary policy has emerged as one of the most critical government responsibilities; monetary policy is seen as providing a flexible and powerful instrument for achieving medium-term stabilization objectives, in that it can be adjusted quickly in response to macroeconomic developments [1, p.2]. Its effectiveness thus has been a long-standing issue in the literature of monetary economics and central banking.

A successful conduct of monetary policy implies, first of all, an accurate assessment of its effects on the economic performance of a country, while using the appropriate policy instrument. In countries with a more sophisticated financial system, there is a general consensus on the use of indirect instruments - particularly a short-term interest rate - to effect monetary policy [7, p.5]. While the monetary authorities of developing countries focus on prices (interest rate, exchange rate, and other asset prices) rather than quantities (money, credit, base money, bonds, foreign assets, etc.). In contrast to the latest, the most distinguishing characteristic of monetary transmission mechanism in low-income countries is the focus on quantities rather than prices. This difference is often attributed to weak institutional frameworks, oligopolistic banking structure, shallow financial markets, and extensive central bank intervention in foreign exchange markets in low income countries [3, p.5].

The evolution of monetary policy efficiency concept

Over time, there have been many approaches and definitions of the concept of monetary policy and, more importantly of what its effectiveness means and how it should be quantified and assessed.

A definition used for a long time in theoretical models and forming the foundation of the “monetarist revolution” in 1960s and 70s, was that monetary policy focuses on a measure of “high power money” – liabilities of the central bank. A counter definition that was likely the dominant perspective of policymakers was that monetary policy referred to central bank actions to influence and/or target short-term interest rates or nominal exchange rates [8, p.2-3].

Later on, was advanced a new theory, according to which, in a rational-expectation model, a unique equilibrium price level does not exist if the money authority pegs the interest rate period by period, regardless of how its value varies from period to period [9, p.2]. The results of this paper where reconsidered, and it was shown that the indeterminacy vanishes if the interest rate rule is chosen so as to have a desired effect on the expected quantity of money demanded [4, p.1].

In recent years, in particular since Taylor's proposed characterization of FOMC behavior in the early Greenspan years, interest rate rules that include a "nominal anchor" in the form of a desired or target inflation rate, have become the basic specification of "monetary policy" in theoretical analyses. The legacy of the Great Depression in the United States and other industrialized economies was that monetary policy was "ineffective." This perspective is most prominent in Keynes' General Theory and in the writings of the "Keynesian economists" in the 1940s through the 1960s [8, p.3].

At some point, the monetary and fiscal policies were viewed as equally important in affecting inflation and output fluctuations. The 60s brought also the rise of the "monetarism" which sustained inflation was a monetary phenomenon and central banks should ensure the price stability by controlling the stock of money in the economy and not targeting short-term nominal interest rates. Monetarists saw monetary policy as having significant effects on short-run fluctuations in real output while not affecting the long-run output growth [8, p.4-5].

The next model, initially supporting the theory that monetary policy has no effect on output stabilization, following additional research, showed that it was the interaction of the rational expectation hypothesis and an assumption of perfectly flexible wages and/or prices that generated the "policy ineffectiveness proposition" [8, p.5-6].

This brought to the "New Keynesian" perspective that is widely used today in academic and professional circles. The contemporary literature and policy discussions direct the attention towards an inflation objective in a central bank policy rule as the nominal anchor in a fiat economy. The theoretical debate is about how to best implement monetary policy rules, rather than about effectiveness of the policy. The setting of the interest rate value is the policy action; and the policy itself is represented by the parameters of the rule, including the inflation objective and the respective weights that are assigned to deviation of observed inflation from that objective and deviations of real output from potential output [8, p.7-8].

The channels of monetary policy

The monetary transmission mechanism consists of the various channels through which monetary policy actions affect the economy and the price level in particular. A good understanding of the transmission mechanism is an important prerequisite for implementing a sound policy, as it allows a judgment to be formed as to the extent and the timing of monetary policy decisions which are appropriate in order to maintain price stability [6, p.44].

Typically, two broad stages are considered in the transmission mechanism. In the first stage, changes in money market conditions affect financial markets, as reflected in asset prices and general liquidity and credit conditions. In the second stage, those changes in financial market conditions affect spending and prices [6, p.44].

Traditional interest rate channel can be summarized in the basic Keynesian IS-LM framework which explains the effects of a monetary expansion as leading to fall in real interest rates, lowering the cost of capital, and causing the rise in investment spending, thereby leading to an increase in aggregate demand and rise in output. An important fact is that while the monetary policy authority has direct control only over the short-term nominal interest rate, the real spending decisions are only affected by changes in the real interest rate [5, p. 2-3]. The crucial factor linking the monetary base with the real interest rate and ultimately determining the effectiveness of the interest rate channel is the slow adjustment of the price level. Price stickiness causes movements in the monetary policy rate to have a significant effect on short-term real interest rates. In addition, the rational expectations hypothesis of the term structure suggests that long-run real interest rates are determined by expectations about future short-term real interest rates. The monetary policy authority is therefore able to use short-term policy rates to influence long-run real interest rates through price stickiness and the term structure, which then affect the real economy [3, p.14].

Exchange rate channel also involves interest rate effects because when domestic real interest rates fall, domestic currency deposits become less attractive relative to deposits denominated in foreign currencies, leading to a depreciation of the domestic currency. This further leads to a rise in net exports, thus in aggregate output [5, p.5].

Equity price channels. According to Mishkin, there are two channels involving equity price that are important to the monetary transmission mechanism: the Tobin's q theory of investment and wealth effects on consumption [5, p.6]. First, the theory of Tobin's q suggests that when equities are cheap relative to the replacement cost of capital, firms do not want to issue new equities to purchase investment goods, leading to a decline in investment. Second, equity prices may have substantial wealth effects on consumption because of the permanent income hypothesis. A rise in stock prices increases the value of financial wealth, thus increasing the lifetime resources of households as well as the demand for consumption and output. A similar mechanism is applied to prices of other assets such as housing which is a substantial component of wealth. Therefore, MTM also operates through land and housing price channels [3, p.15].

Asymmetric information in financial markets provides the basis for the *credit channel* of monetary transmission. Economists usually distinguish between two types of credit channels stemming from imperfections in financial markets: *the bank-lending channel* and *the balance-sheet channel* [3, p.15].

The bank-lending channel is based on the assumption that an expansionary monetary policy, which increases bank reserves and deposits, increases the quantity of bank loans available. This increase in loans will subsequently cause investment spending to rise. The monetary policy will have a greater effect on smaller firms as they are more dependent on bank loans, and have less or almost no possibility to access credit markets through stock and bond markets, bypassing the banks [5, p.9].

The balance sheet channel is based on the theoretical prediction that the external finance premium facing a borrower should depend on borrower's financial position. The greater is the borrower's net worth – the lower the external finance premium should be [2, p.11-12].

An expansionary monetary policy that causes a rise in equity prices raises the net worth of firm thus leading to higher investment spending and aggregate demand because of the decrease in adverse selection and moral hazard problems. Expansionary monetary policy that lowers nominal interest rates also causes an improvement in firms' balance sheets because it raises cash flow, reducing adverse selection and moral hazard problems, subsequently leading to higher investment spending and aggregate demand [5, p.10-12].

However, as it is quite difficult to carry out an empirical test that would convincingly separate the bank lending channel from the balance-sheet channel, there's a bigger confidence in existence of a credit channel in general rather than in the ability to distinguish sharply between the two mechanisms of the credit channel [2, p.22].

Since modern monetary policy analysis is based on forward-looking and rational economic agents, the *expectation channel* is in effect fundamental to the working of all channels of monetary transmission mechanism. Expectations of future changes in the policy rate can immediately affect medium and long-term interest rates. Monetary policy can also guide economic agents' expectations of future inflation and thus influence price developments. Inflation expectation can influence not only the level of real interest rate thus determining the impact of any specific nominal interest rate, but also the price and money wage-setting behavior, feeding actual inflation in subsequent periods. At the same time, changes in the monetary policy stance can influence expectations on future course of real economic activities by affecting inflationary expectations and the ex ante real rate and guiding the future course of economic activities [3, p.15-16].

As it is important to be able to assess quantitatively the effects of monetary policy, several important factors are to be considered when attempting this exercise. The channels of monetary transmission are not mutually exclusive, in that the overall response of the economy to changes in monetary policy incorporates the combined effects of all the channels, it thus becomes very difficult to assess the strength and contribution of the individual channels to the overall impact of monetary policy on the inflation rate. At the same time, central banks normally relax policy in the wake of weaknesses in the economy and tighten policy when there are strengths in the economy. This can represent a serious impediment to any attempt to identify and isolate the effects of the different

channels through which the effects of monetary policy are transmitted to the economic system [1, p.5].

CONCLUSIONS

The multitude of researches and analyzes carried out on the effectiveness of monetary policy demonstrate that although there are considerable lags in the process of transmitting the monetary impulses to the economy, the changes in monetary policy eventually lead to price changes (through transmission channels). However, this link is still considered to be surrounded with uncertainty because the transmission channels have a combined effect and it is quite difficult to separate the influence of a certain monetary policy action on the aggregate result especially in the case of simultaneous shocks to the economy.

With recent developments and changes in modern monetary policy analysis, the role of inflation expectations in determining the timing and size of monetary policy effects became very important.

BIBLIOGRAPHY

1. Arestis P., Sawyer M., Can Monetary Policy Affect The Real Economy?, Working Paper No. 355, Annandale-on-Hudson, N.Y.: The Levy Economics Institute, 2002, pp.13
2. Bernanke B.S., Gertler M., Inside the black box: the credit channel of monetary policy transmission, Working paper 5146, National bureau of economic research, 1995, pp.29
3. Davoodi H.R., Dixit S., Pinter G., Monetary Transmission Mechanism in the East African Community: An Empirical Investigation, IMF Working Paper WP/13/39, 2013, pp.59
4. McCallum, B.T., Price Level Indeterminacy with an Interest Rate Policy Rule and Rational Expectations, Journal of Monetary Economics 8, 1981, pp. 11
5. Mishkin F., The channels of monetary transmission: Lessons for monetary policy, Working paper 5464, National bureau of economic research, 1996, pp.29
6. Monetary policy transmission in the euro area, European Central Bank Monthly Bulletin, July 2000, pp.148
7. Primus K., The Effectiveness of Monetary Policy in Small Open Economies: An Empirical Investigation, IMF Working Paper WP/16/189, 2016, pp.40
8. Rasche R.H., Williams M.M., The Effectiveness of Monetary Policy, Working Paper 2005-048B, Federal Reserve Bank of St. Louis, Research Division, 2005, pp.77
9. Sargent T.J., Wallace N., Rational Expectations, the Optimal Monetary Instrument, and the Optimal Money Supply Rule, Journal of Political Economy, Vol.83, no.2, 1975, pp. 14

THE PARTICULARITIES OF THE FINANCIAL AUDIT OF ECONOMIC ENTITIES WITH PUBLIC PROPERTY FROM THE REPUBLIC OF MOLDOVA

ANA VÎRCOLICI

E-mail: ana.prodan_personal@yahoo.com

PhD student, AESM, Republic of Moldova, Chisinau,
61 Mitropolit Gavriil Banulescu-Bodoni st., tel.: 022 22-41-28, www.ase.md

Abstract. *Within this article, the author carried out a diagnostic analysis of the national legal framework related to the external financial audit requirements (financial statements audit) for the economic entities with public property (SOEs), as well as of the internal audit concept within the publicly owned economic entities from the Republic of Moldova. As a result of the diagnostic analysis, it were made conclusions about the functionality degree of the audit process within the SOEs, it have been identified the challenges with regard to the researched subject and formulated possible ways to solve them in accordance with applicable good practices. The research methodology was mainly based on the study of the legislation of the Republic of Moldova in the audit and public property management domain.*

Key words: *financial audit, financial statements, internal audit, public interest entities, public ownership, regulatory framework, SOEs.*

JEL CLASSIFICATION: G380, M420

INTRODUCTION. In terms of its general acceptance, the audit is approached as a tool for fairness control and financial performance analysis, starting from what accounts and accounting syntheses reflects. According to the literature, the audit concept generally supposes a professional examination of information, in order to give a responsible and independent assessment by reference to a quality criterion (standard, norm). The objective of the audit is also to ensure the quality and accuracy of the information along with improving their use, in order to get maximum performance [1].

The term „*audit*” appeared for the first time in Latin and then in French and means *listening the accounts*. So, the audit was from the beginning designed as financial, carried out based on financial statements, where the accounting accounts are located, but then it expanded everywhere where his presence was needed, including through combination with analysis, control, comparative studies, etc. Respectively, the financial audit is the coordinating and reference form, according to which all the forms of audit are aligned [3].

In the current sense, the use of the „*audit*” term is related to the development of commercial companies in the 19th century, when a delimitation of managers' (executive directors) competences and responsibilities from that of the owners (shareholders / associates) took place. During this period, the leadership of the commercial companies business and patrimony is increasingly taken over by managers. Following these developments, the owners felt the need to know how managers and other persons with leading positions deal with their businesses [1].

Therefore, the wide range of coverage, the complexity of the issues addressed, as well as the practical needs of information recipients, has determined an audit specialization by limiting the missions to certain areas. The types of audit have been differentiated according to certain criteria, namely depending on:

- a) subordination relationship between the auditor and the management of the audited entity (internal audit / external audit);
- b) regulation (mandatory audit / required audit);
- c) aspects taken as a reference (regularity audit / performance audit);
- d) targets (financial / operational / strategic / performance audit);
- e) nature of the audited entities (audit of public institutions / audit of economic agents) etc.

According to the World Bank report „Support to State Owned Enterprises. Preliminary Diagnostics and Reform Assessment”, SOEs financial performance and respectively, the key performance indicators must be based on sound audited financial information. Considering the role of SOEs in the sustainable economic development of the Republic of Moldova (SOEs

assets (state enterprises and joint-stock companies with fully or majority state capital) constituted in 2015 more than 32% of GDP and approximately 10% of the corporate sector's assets), effective administration of these entities should be ensured. An efficient management tool in this regard is represented by the financial statement audit, its importance being also highlighted by the external development partners (International Monetary Fund, World Bank, European Commission etc.).

Thus, *the purpose of the research* is to carry out a diagnostic analysis of the national legal framework related to the external financial audit requirements (financial statements audit) for SOEs, as well as of the internal audit concept within the SOEs from the Republic of Moldova, in order to assess the functionality degree of the audit process within the SOEs, to identify the challenges with regard to the researched subject and to formulate possible ways to solve them in accordance with applicable good practices.

MATERIALS AND METHODS. To achieve the purpose of the research, the following methods and tools were used: the documentary method, based on accessing and studying the bibliographic sources; the analytical method through which the essence of the investigated processes has been reached; synthesis method, induction and deduction, logical analysis, critical analysis of materials etc. At the base of the research were the fundamental studies of specialists in the field, legislative and normative acts of the Republic of Moldova, the reports of public authorities, materials of international organizations (International Monetary Fund, World Bank etc.) and other information resources available on Internet.

RESULTS AND DISCUSSIONS.

Analysis of the legal framework particularities related to the external financial audit of the Republic of Moldova SOEs. According to national legislation provisions, the financial statements audit may be mandatory or required. The mandatory audit of annual financial statements, including consolidated ones, is carried out by the public interest entities and other categories of entities established by law. The obligation to audit the financial statements of state enterprises and joint stock companies with fully or majority state capital were introduced starting with 2014, with the corresponding amendment and completion of the Law no. 146/1994 on state enterprise (subsequently abrogated by the Law no. 246/2017 on state enterprise and municipal enterprise) and of the Law no. 1134/1997 on joint stock companies. Until that time, the audit of the financial statements was carried out at the decision of the SOEs board of directors.

Thus, according to the Law no. 146/1994 on state enterprise, the mandatory audit of the annual financial statements was carried out by the enterprises that exceeded, for the last two consecutive management periods, the limits of two of the following criteria:

- a) social capital – 500,0 thousand lei;
- b) total income – 10000,0 thousand lei;
- c) average number of staff in the management period – 100 persons.

With the adoption and entry into force of the Law no. 246/2017 on state enterprise and municipal enterprise, the mandatory audit of the annual financial statements of state enterprises is carried out if they are part of the category of medium-sized entities, large entities or public interest entities, in accordance with the accounting legislation.

The middle entity is the entity that, *not being a micro entity or small entity*, at the reporting date *does not exceed* the limits of two of the following criteria [10]:

- a) total assets – 318000,0 thousand lei;
- b) income from sales – 636000,0 thousand lei;
- c) average number of staff in the management period – 250.

Alike, *the large entity* is the entity that at the reporting date exceeds the limits of two of the following criteria:

- a) total assets – 318000,0 thousand lei;
- b) income from sales – 636000,0 thousand lei;
- c) average number of staff in the management period – 250.

At the same time, the public interest entity is the entity whose securities are admitted to trading on a regulated market; a bank; insurer (reinsurer) / insurance company; body for collective investment in securities, with legal personality; *a large entity that is a state enterprise or a joint-stock company in which the state's share exceeds 50% of the share capital* [10].

Generalizing the above analyzed information on the criteria for mandatory audit, it is attested that starting with 2018, state enterprises are required to carry out the audit if, at the reporting date, they exceed the limits of two of the following criteria:

- a) total assets – 63600,0 thousand lei;
- b) income from sales – 127200,0 thousand lei;
- c) average number of staff in the management period – 50.

Table 1. Comparative analysis of the criteria for the mandatory audit of state enterprises financial statements

Criteria for the mandatory financial statements audit up to 2018	Criteria for the mandatory financial statements audit starting with 2018
<i>Income from sales, thousand lei</i>	
10000,0	127200,0
<i>Average number of staff, pers.</i>	
100	50
<i>Social capital</i> – 500,0 thousand lei	<i>Total assets</i> – 63600,0 thousand lei

Source: *elaborated by the author*

So, according to the criteria for qualification of state enterprises as being subject to mandatory audit of financial statements until the adoption of Law no. 246/2017 on state enterprise and municipal enterprise and after its entry into force, it is noted that the threshold of these criteria has increased significantly compared to the limits of the criteria established by the old Law of state enterprise, which has conditioned the decrease in the number of state enterprises subject to mandatory external financial audit. Respectively, the number of state enterprises subject to the mandatory audit of the financial statements decreased in 2018 compared to 2017, about 2.7 times.

Analyzing the state enterprises subject to mandatory audit, it is noted that about 50% of the audited entities according to the criteria established by Law no. 146/1994 on the state enterprise, were represented by state companies from theatrical and concerts domain and state enterprises from the forestry sector. Under the new criteria, the mandatory audit shall be performed mainly by state enterprises with a volume of assets exceeding 63600,0 thousand lei and an average staff number of over 50 units (e.g: S.E. „Radiocomunicații”, S.E. „Administrația de Stat a Drumurilor”, S.E. „Aeroportul Internațional Mărculești”, S.E. „Combinatul de vinuri de calitate „Mileștii Mici”, S.E. „Combinatul poligrafic” etc.).

Also, according to Law no. 246/2017 on state enterprise and municipal enterprise, it was introduced the obligation to audit the financial statements of municipal enterprises starting with 2018 year, pursuant to the same criteria as for state enterprises. The mandatory audit of the financial statements for 2018 was to be carried out for about 18 municipal enterprises (mostly from the city Chișinău, Bălți, as well as from Comrat city, Orhei, Cimișlia, Rezina, Fălești, Glodeni, Criuleni).

Similarly, the mandatory audit of the annual financial statements is carried out by the joint stock company in which the state share exceeds 50% of the share capital. There were about 32 joint stock companies with full or majority state capital that performed the mandatory audit of the financial statements for the year 2018 (from which: JSC „Moldtelecom”, JSC „Combinatul de Vinuri „Cricova”, JSC „Combinatul de panificație „Franzeluța”, JSC „Barza Albă”, JSC „Termoelectrica” etc.). The decrease in the number of joint stock companies subject to mandatory audit is due to the process of public property circulation (privatization, reorganization, liquidation, etc.).

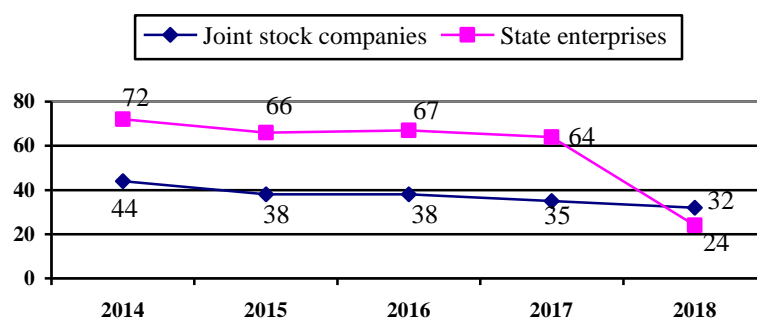


Figure 1. Number of state enterprises and joint stock companies with full or majority state capital, subject to the mandatory audit of the financial statements for the years 2014-2018, unit.

Source: elaborated by the author

Concluding on the issues discussed above, it is noted that together with the change of the criteria for carrying out the mandatory external financial audit by the state enterprises, the number of enterprises subject to mandatory audit has considerably diminished, which could reduce the accuracy and quality of accounting and financial reporting by these entities. Therefore, the decision-making process related to public property management, based on the financial information made available by the entities, can also be affected.

However, based on the new law of state enterprise and municipal enterprise, the founder of the state/ municipal enterprise must appoint the *censors commission* (similar to the joint stock companies practice), which controls the economic and financial activity of the enterprise on a semi-annual basis. This could provide / support a certain level of quality for financial reporting by enterprises and thus diminish the impact of the reduction in the number of enterprises subject to mandatory external financial audit.

At the same time, it is mentioned that the audit of SOEs financial statements, can be performed both by audit entities in accordance with Law no. 271/2017 regarding the audit of the financial statements (selected by competition), and by Court of Accounts of the Republic of Moldova. The annual financial statements of state / municipal enterprises that have been audited by the Court of Accounts are not subject to the mandatory audit performed by the audit entity in the year audited by the supreme audit institution.

Therefore, in order to ensure the objectivity and transparency of the procedure for selecting the audit entity for auditing the SOEs financial statements, as well as to establish a unique mechanism in this sense, the way of selecting the audit entity and the terms of reference were approved by the Government. Thus, the way of submitting the bidding letter, tender structure, evaluation and selection of audit entities, the purpose and content of the terms of reference, [...] are established by the Regulation on the way of selection of audit entities and the terms of reference for auditing the individual financial statements of state / municipal enterprises and joint stock companies in which the state share exceeds 50% of the share capital (further - Regulation), approved by the Government Decision no. 875/2015.

The assessment and selection of audit entities is carried out by the SOEs management board, transparently, through a public offer to which at least 3 audit entities are required to participate, considering the information set out in the bidding letter, and taking into account cumulatively:

- a) the period of the audit;
- b) the deadline for submitting the letter to the persons responsible for governance and leadership;
- c) the deadline for the auditor's report presentation;
- d) the minimum number of auditors who will perform the mandatory audit of individual financial statements;
- e) the lack of affiliation relations with the entity and / or the responsible persons of the entity, the founder of the entity, except the state [11].

According to the Regulation, the terms of reference established by the SOEs include audit requirements, *auditing experience of companies from the same sector* (similar activity, comparable financial/ production capacity), preparing and presenting the letter to persons responsible for governance and management, preparing and presenting the auditor's report.

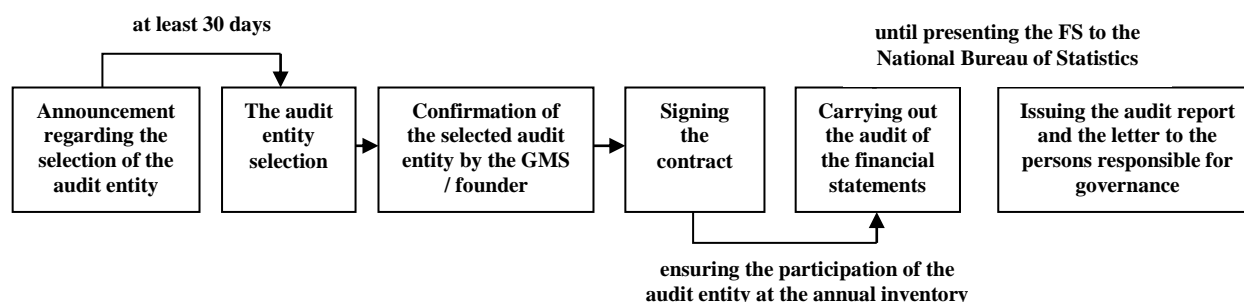


Figure 2. The process of selecting the audit entity in order to audit the SOEs financial statements

Source: elaborated by the author

It is important to note that, in the process of selecting the audit entities for auditing SOEs financial statements, particular emphasis should be placed on setting appropriate quality criteria for audit entities. The World Bank in its reports states that the quality of audits in Moldova is often weak, and therefore the quality of financial information prepared by SOEs is not reliable for economic decisions. As mentioned in the World Bank Report on compliance with accounting and auditing standards and codes (A&A ROSC), oversight and quality assurance of the audit profession are in the initial development phase. Effort is needed to modernize and improve audit oversight, which in turn may positively influence audit quality and thus the quality and reliability of SOEs financial information [5].

Until the adoption of Law no. 246/2017 on the state enterprise and municipal enterprise, the legal framework regulating the activity of state enterprises established certain quality criteria, which auditing entities had to match in order to audit the financial statements of these entities, namely:

a) according to the situation on 31 December of the previous management period, a minimum of 2 certified auditors should be listed in the appendix to the license for conducting the audit activity, one of whom has to have experience in the audit field for at least 5 years;

b) the audit entity as well as auditors within the audit entity should not have penalties imposed by the external control of the audit work quality, for the previous management period, fact confirmed by the Supervisory Board of Audit.

These criteria are also found in Law no. 1134/1997 on joint stock companies, are in force and are applied to the selection of the audit entity for auditing the annual financial statements of joint-stock companies with full or majority state ownership.

The new Law of state enterprise and municipal enterprise does not provide for certain quality criteria for audit entities, which should be taken into account by the governing bodies of state enterprises and municipal enterprises when selecting the audit entity, compared to the legislation regulating the activity of joint stock companies, being observed a differentiated treatment in this respect, which may cause ambiguous interpretations of the legislation.

Therefore, under the current legal provisions, the management board of the state / municipal enterprise is the governing body which has the task of establishing effective criteria for selecting the audit entity for auditing financial statements, with particular emphasis on quality criteria, at the expense of the lower price as the decisive factor in the choice of the audit entity.

However, in the author's opinion, it is considered necessary to complete the Law no. 246/2017 on state enterprise and municipal enterprise with minimum quality criteria for the audit entities which performs the financial statements audit of the state / municipal enterprises in order to ensure fair treatment of the legislator in relation to joint stock companies as well as in relation to state / municipal enterprises.

The practice of establishing quality criteria for the audit entities that perform the financial statements audit is also used for banks, insurance companies, non-bank lending organizations etc., as well as in Romania's experience in various sectors of the economy. In the situation of the banks, the National Bank of Moldova approves the audit company for the external audit of the bank, which cumulatively meets the following criteria:

- 1) the approval of the National Bank of Moldova has not been withdrawn in the context of compliance with the legal framework of the banks' activity and / or the external audit of the bank in the last 3 years;
- 2) has at least 3 years of experience in auditing the financial statements of public interest entities;
- 3) the audit entity team designated for the audit mission meets the following conditions:
 - a) at least 1/3 of the audit entity's team has experience in auditing financial statements according to international financial reporting standards (hereinafter - IFRS);
 - b) at least one auditor has a certificate of qualification of the auditor of the financial institutions, issued by the National Bank of Moldova;
 - c) at least one auditor has a certificate of qualification of the accountant issued by an independent international company;
 - d) at least one auditor in the audit entity team has an audit certificate in CISA information systems, issued by an independent international company dealing with the development, adoption and use of globally accepted knowledge and practices for ISACA industry leading IT systems;
 - e) at least one member of the audit entity team has at least 3 years' experience in auditing the financial statements of public interest entities, including one year in auditing the financial statements of banks [13].

Respectively, in order to improve the quality of financial reporting, as well as the preparation of financial statements by SOEs, who later will contribute to improve the decision-making process of public property management, one of the effective measures in this respect is to establish quality criteria for audit entities in order to audit SOEs financial statements, which would ensure the selection of professional audit entities, given that SOEs manage state patrimony as well as public financial funds.

The internal audit particularities within the economic entities with public ownership from the Republic of Moldova. The internal audit of large companies and other economic entities is as well developed as the audit of financial statements, and combines the particularities of financial audit with those of internal management control, taking also a number of attributes that serve to the management and general interests of profit and development [2]. To eliminate confusion between financial (external) audit and internal audit, it is noted that the (external) financial audit generally applies only to the accounting function based on the financial statements prepared by the entity's management, often the financial auditor checking the control system through specific tests, in order to increase the confidence in the audited financial statements.

Internal audit is an independent and objective activity that gives to an organization assurance as to the control degree over operations, guides it to improve its operations and contributes to adding value [7]. Internal auditing helps this organization achieve its objectives by assessing its risk management, control and governance processes through a systemic and methodical approach, and make proposals to enhance its effectiveness.

In practice there is a close link between financial and internal auditors, financial auditors being often interested in all the functions of the entity in order to contribute to generating influences on the entity's results and on the indicators included in the financial statements. There is a clear view that the two types of audit - financial (external) and internal - are complementary in order to reflect a true image of the entity's activity [2].

Table 2. Comparative analysis of the internal audit and external audit characteristics, based on certain criteria

Criteria	Internal audit	External audit
1) Statute of the audit function	Integrated into entity structure, or can be an external specialized company.	External specialized company, offering services and is legally independent.
2) The body that appoints the audit	Executive management of the economic entity.	General meeting of shareholders / founder or board.
3) Audit targets	<ul style="list-style-type: none"> - To supervise the entity's management and verify that the financial statements are legally drawn up; - To evaluate and formulate appropriate recommendations for improving the governance process. 	Certification of the accuracy of accounts and financial statements. External audit also assesses the internal control system, but only for financial-accounting items.
4) Beneficiaries of the audit	Shareholders, board of directors, employees, directors.	Those who wish certification of accounts: banks, shareholders, authorities, clients, suppliers.
5) Scope of the audit	The scope is broader because it includes all the functions of the economic entity (financial accounting, human resources, logistics, IT, environment, and patrimonial management).	The scope is narrower, the verification focusing on those issues that determine the financial position and performance of the economic entity.
6) Periodicity of the audit	Activity performed permanently in the commercial companies according to the statute.	Missions are intermittently organized and at necessary times for account certification, respectively after the end of the year.
7) Independence of the auditor	Relative independence or independence of a free profession - if the internal audit is performed by an external company.	It is independent of its client, as it is a specific independence for the holder of a free, legal regulated and statutory profession.
8) Methodology used	Clearly defined, specific methodology that aims at assessing risks and adding value.	Accurate, standardized methodology based on inventory, analysis, comparisons, reports, expert use, external confirmations.

Source: elaborated by the author based on source [2] and [3].

National framework regulating the SOEs activity does not require them to establish the internal audit function. The Law no. 229/2010 on the public internal financial control, whose purpose is to strengthen managerial accountability for optimal resource management according to the objectives of the public entity, based on the principles of good governance, by implementing the internal managerial control system and the internal audit activity in the public sector, applies only to central and local public administration authorities, to public institutions as well as autonomous (self-management) authorities / institutions that manage national public budget funds. In 2018, in the context of amending the Law no. 229/2010, it was proposed to include state enterprises and joint stock companies with 100% state share in the social capital,

in the scope of the law, but the initiative was not supported, given the extensive process of reorganization of state enterprises.

However, the Law on accounting and financial reporting no. 287/2017, establishes the obligation of the SOEs manager to organize the entity's internal control system. At the same time, the accounting and financial reporting Law entered into force on 1 January 2019, qualifies certain categories of state enterprises and joint-stock companies with majority state quota in the social capital, as public interest entities. Public interest entities keep double-entry accounts and prepare financial statements under IFRSs.

At the same time, according to the regulations for the financial statements audit in force since 1 January 2019, the public interest entity is required to set up an *audit committee*. The audit committee is subordinated to the general meeting of the shareholders or to the founder. Audit committee members have competencies in the field of public interest entity, and at least one member has competence in the field of accounting and / or auditing [9].

The audit committee carries out its activity on the basis of the provisions of the financial statements audit Law and the regulation approved by the general meeting of shareholders or by the founder and:

- a) informs the board of audited public interest entity about the results of the audit and its contributions to the integrity of financial reporting;
- b) monitors the financial reporting process;
- c) *monitors the effectiveness of the internal control system, internal audit, as appropriate, and risk management within the audited public interest entity;*
- d) monitors the audit of individual financial statements and consolidated financial statements;
- e) verifies and monitors the independence of auditors / audit entities that performs the audit of financial statements and / or provides non-audit services to the public interest entity;
- f) recommends the audit entity's to be confirmed for the audit and monitors its selection process;
- g) presents the annual activity report to the general meeting of the shareholders / founder, which includes the declaration of compliance with the requirement of independence, as well as the fulfillment of the attributions stipulated under a)-f) [9].

The obligation to set up audit committees is a novelty for the Republic of Moldova, which has to be implemented from 2019 onwards and is in line with international practices and related European directives. According to the financial indicators registered as at 31 December 2018, the category of public interest entities that will prepare the financial statements according to IFRSs and will set up audit committees, includes 12 state enterprises/ joint stock companies with full or majority state capital, of which: S.E. „Poșta Moldovei”, S.E. „Calea Ferată din Moldova”, JSC „Rețele electrice de distribuție Nord”, JSC „Moldtelecom”, JSC „Metalferos”.

It is also noted that the Corporate Governance Code approved by the National Commission for the Financial Market, is mandatory for public interest entities, and is to be applied also by state enterprises/ joint-stock companies with full or majority state ownership, which are part of the category of public interest entities. The Corporate Governance Code establishes that in order to ensure a successful company's activity, it will be necessary to regularly plan checks (verifications) and establish internal and external (audit) control procedures. At the same time, it is attested that the Corporate Governance Code addresses the internal audit function through the censor commission whose duties, according to the Code, must be the oversight of the internal control system, as well as the verification of compliance with regulations, guidelines and instructions.

Given that IFRSs are more stringent than National Accounting Standards, audit committees are intended to contribute to improving the financial reporting process, internal control system, internal audit, as appropriate, and risk management, and the above mentioned Corporate Governance Code represents a set of governance standards for the management and shareholders of the company in the effective management of a company and combines best national and international practices in this sense, the financial reporting system of the economic entities with

state capital qualified as public interest entities, the administration and the transparency within these entities is generally expected to be improved.

CONCLUSIONS.

Both internal and external auditing is an important monitoring mechanism within the corporate governance structure of publicly owned entities, especially in ensuring the accuracy and integrity of financial reporting and detection and prevention of violations / errors.

Financial information presents the risk of being less credible than it should. In order to manage this risk legally and effectively, the financial audit analyzes the financial statements from the perspective of economic prevalence over the legal, namely the extent to which the information is in line with the economic reality and not just with the existing legal framework [3]. Accordingly, the importance of financial audit is to increase the credibility of information from the financial statements, but also in a critical assessment of them.

Likewise, the importance of internal audit lies in achieving the objectives of any company through a systematic and methodical approach that evaluates and improves the effectiveness of risk management, control and governance processes. The internal audit is one of the most useful tools that a company management team can have in order to have better control over the company and to have early warning indicators on future financial and non-financial issues, so they can continue their operations properly [2].

As a result of the diagnostic analysis carried out on the national legal framework, it is noted that the change in the criteria of the mandatory audit of the financial statements, generated the decrease of the number of state enterprises subject to mandatory external audit, which also requires and emphasizes the need to strengthen the internal control system in these entities. The national legal framework for internal audit does not establish the obligation of state enterprises and joint stock companies with full or majority state capital to establish the internal audit function within the entity. However, state-owned entities are required to ensure the organization of the internal control system under the provisions of the accounting legislation. But, the lack of secondary legislation that details the process of organizing the internal control system diminishes from the perception of entity leaders about the need for this process at the enterprise. In most cases, this function belongs to the subdivision within the entity responsible for keeping the accounts.

In conclusion, it is mentioned that the quality assurance of the financial statements audit of the economic entities with public ownership by setting criteria for the selection of the audit entities, the rules imposed regarding the internal audit, possibly for a certain category of publicly owned entities, such as those of public interest, but also the development of the secondary regulatory framework regarding the internal control system in enterprises are definitely effective measures of financial discipline, which will directly contribute to increasing the efficiency of the use of public patrimony, public financial resources and ultimately to the improvement of the financial and non-financial performances of the economic entities with public ownership.

REFERENCES

1. Boulescu M., Ghiță M., Mares V. *Fundamentele auditului*. București: Ed. Economică, 2001;
2. Boța-Avram C. *Auditul intern al societăților comerciale*. Cluj-Napoca: Ed. Risoprint, 2009;
3. Dănescu T. *Audit financiar, convergențe între teorie și practică*. București: Ed. IRECSO, 2007;
4. Drăgan C.M. *Introducere în știința auditului*. Buzău: Ed. Alpha MDN, 2009;
5. „Suport pentru întreprinderile în proprietatea statului (ÎPS). Diagnosticul preliminar și evaluarea reformelor: etapa 1”, Banca Mondială, 2017, <http://documents.worldbank.org/curated/en/772311499413113949/pdf/117276-WP-ROMANIAN-P158220-PUBLIC-Moldova-Diagnostics.pdf>;
6. Legea nr. 1134/1997 privind societățile pe acțiuni. În: Monitorul Oficial, 2007, nr.142-143, art. 593;
7. Legea 229/2010 privind controlul financiar public intern. În: Monitorul Oficial, 2010, nr. 231-234, art. 730;
8. Legea nr. 246/2017 cu privire la întreprinderea de stat și întreprinderea municipală. În: Monitorul Oficial, 2017, nr. 441-450, art. 750;
9. Legea nr. 271/2017 privind auditul situațiilor financiare. În: Monitorul Oficial, 2018, nr. 7-17, art. 48;

10. **Legea contabilității și raportării financiare nr. 287/2017. În: Monitorul Oficial, 2018, nr. 1-6, art. 22;**
11. **Hotărârea Guvernului nr. 875/2015 pentru aprobarea Regulamentului cu privire la modul de selectare a societăților de audit și termenii de referință pentru auditarea situațiilor financiare anuale ale întreprinderilor de stat și societăților pe acțiuni în care cota statului depășește 50% din capitalul social. În: Monitorul Oficial, 2015, nr. 347-360, art. 979;**
12. **Hotărârea Comisiei Naționale a Pieței Financiare nr. 67/10/2015 cu privire la aprobarea Codului de guvernanță corporativă. În: Monitorul Oficial, 2016, nr. 49-54, art. 363;**
13. **Hotărârea Comitetului executiv al Băncii Naționale a Moldovei nr. 118/2018 cu privire la probarea Regulamentului cu privire la auditul extern al băncilor. În: Monitorul Oficial, 2018, nr. 183-194, art. 908;**
14. **Paginile web ale autorităților publice și alte surse din internet.**

THE PECULIARITIES AND STAGES OF THE INNOVATION PROCESS IN THE BANKING SYSTEM

PhD student Cristina Panfil,
National Institute for Economic Research,
Chișinău, Ion Creangă 45,
cristina.panfil@yahoo.com

Abstract: *Promoting the innovation process on the banking market is imperative due to the crucial role of the banking system in the economy, and the impact of innovation on socio-economic development. Innovation is essential and mandatory for the increase of banks' competitiveness and development of improved banking products and services. The goal of the study was to create a "guide" for overseeing innovation in order to keep it from impending. The research methods used were analysis synthesis and observation. As a result, the study gives an insight into the process of innovation and defines the stages a bank should follow in the innovative process.*

Keywords: *innovation, banking system, competitiveness, innovative models.*

JEL classification: *G21, O31, O43.*

1. INTRODUCTION

According to Article 4 of Regulation no. 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions, the bank or "Credit institution is an entity whose business is to attract deposits or other repayable funds from the public and to grant credits to personal accounts". Given the diversity of operations and the risky nature of commercial banks' activity, banks are subject to strict supervision. In this context, central banks play the key role in securing the stability of prices, preventing internal and external instability, and dealing with specific monetary policy decisions.

In terms of its functions of financial intermediation, capital multiplier and handling of monetary policy instruments, banking system, has multiple implications on the socio-economic system of any country. Thus, through the lending sources offered for consumption, on the one hand, and the strategies for attracting savings, on the other hand, the banking system has implications for households that require ever-changing banking products and services. The banking system also has implications for government spending through government credits, on one hand, and the management of the budget fund through treasury accounts, on the other hand. Banking system is also important in the context of external borrowing for state's macroeconomic policies support, to finance development programs and cover the budget deficit, to ensure transparency and to certify the legality of transfers from abroad, including remittances.

Another aspect of banking activity relates to financing of foreign trade. By the foreign exchange operations made through international transfers, the banking system forms long-term economic relationships in foreign markets and contributes to the development of sustainable economic performance.

The interdependence between income and the propensity to save, between savings in the form of bank deposits and the supply of credits, between sources of bank financing and investment, between investment and production, between export value and exchange rate, inflation rate and consumption, creates an entire circuit, where the banking sector plays an indispensable role. Currently, playing a special role in providing investments required for the development of entities, banks need to have new loan products to lend to innovative investment projects, products that could provide security for the bank and prosperity to investors.

Therefore, promoting the innovation process on the banking market is imperative due to the crucial role of the banking system in the economy, on the one hand, and the impact of innovation on socio-economic development, on the other. Innovation is essential and mandatory for the increase of banks competitiveness and development of the banking products / services. This is especially felt during the crisis, when development is more necessary than ever. *The need to promote innovation process on the banking market results from the complexity and social-economic dynamics, that consequently, requires a more dynamic character of the development and functioning of the banking system, of the transformations and innovations to cope with change.*

Banks, as financial institutions that mobilize the monetary resources of the economy and their orientation towards efficient economic activities, must constantly adapt to the dynamism of the current and future business environment, innovation becoming the motto and the distinctive indicator within it.

The promotion of innovation is also driven by the need to develop the management towards new products and services, which is in turn driven by the peculiarities of the banking market, the features of global banking competition, changes in customer demand, rapid development of information technologies, banking business standards, good practice in the field, and others. Nowadays, the biggest concern for a company is to monitor the whole lifecycle of innovation, to have sufficient list of techniques to formally measure innovation and keep it from impeding.

2. RESEARCH METHODS AND THE RESULTS OF OBSERVATIONS

Although there are many papers on topics related to innovation, there are few customizations on specific areas. Each organization or company, according to the specific of its field, and depending on the level of innovation culture, perceives differently the innovation process. Turning to the service sector, Bart van Ark and his co-authors define services innovation as *"a new or considerably improved service concept, a new customer interaction channel, a new service delivery system or technology concept, which individually or in combination, leads to one or more new (renewed) service functions that are new to the firm and change the service or good offered on the market and require new technological, human or organizational capabilities of the service company."*[1]. In 2014, at a conference, innovation is defined broadly as *"an activity or set of activities that results in: a new or significantly improved product or service, a production process or an operational process, a way to attract consumers, enhancing their experience, and organizational practice, the architecture of work, the competence of human capital or use resources, by which value is added"*[2]. At the same time, over the last decades, researchers have found that service innovation goes beyond the limits of individual organizations and involves interactions and collaborative activities between systems of actors. As a result, service innovation processes in constellations with multiple actors require attention and should get support from mutual effort of the banks' suppliers, internal partnerships in the banking system, the ecosystem in general.

Starting from the aforementioned considerations, for a bank operating according to strict rules, innovation has its own fulfillment, on one hand, by the national, international, domestic requirements and performance objectives, and on the other hand, the market peculiarities and the influence of the multitude of external factors, especially the information technologies.

The definition of services innovation cited above, points to a process of creating new or significantly improved products and services obtained after the use of capital and staff skills in an innovative way, or creating and delivering value, attracting and retaining customers. Therefore, it can be inferred that the innovation process in the banking sector encompasses all the activities involved in creating and delivering significantly improved products/ services or new customers involved in the process of purchasing/ consuming the created values. In order to provide significantly improved products/ services, banks are engaging in innovating technologies, processes, methods and models which help the entity to transform work, capital, raw material, information into products / services with a higher value for customers. Customer engagement itself can be subject to transformation and innovation.

Pim den Herlog, Mark W. de Jong; Wietze van der Aa. have proposed an innovative model in six-dimensional services, as shown in Figure 1.2. By analogy, this model can also be applied in the banking field. Thus, the model includes the following dimensions:

1. Income model - this dimension involves building new revenue models based on competitive advantage. The structure of revenue and costs resulting from the provision of new banking services allows an objective assessment of the competitiveness and innovation performance as well as the search for reserves to increase banks' profitability following the innovation process.

2. The value chain - the entire value chain (tenders, marketing, offer of services, etc.) of a bank can serve as a source of innovation.

3. Interaction with the consumer - the customer interface can be a source of innovation, with customers becoming more and more involved in the production of the service. This dimension refers to how the service provider interacts with customers. As an example are electronic banking (ATM cash withdrawal), database delivery via Internet, etc. The French researchers P.Eigler and E.Langeard (1987) created the neologism "servuction", obtained by combining the terms "SERVICE" and "production". The term "servuction" should be considered as the production process of a service in which customers are directly involved [3].

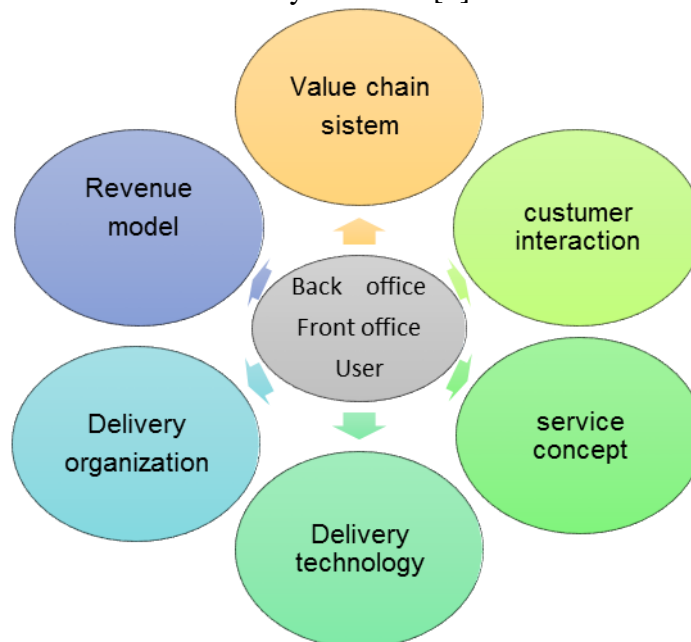


Figure 1. Six dimensions of service innovation in the opinion of the author Pim den Herlog and co-authors (adaptation according to the source [4])

4. Concept of "service"- refers to an idea or product/ service concept that is new for the market. The concepts of "banking product" / "service" defines the totality of the values offered to the client by the entities in the field that have, over the last period of time, become interchangeable. [5] Innovation of banking services implies the establishment of some parameters for services or changes to the previous ones. Parameters of banking services generally refer to the level of commitment, cost, efficiency, security conditions (coding and security of the information cycle), tax issues and availability. Usually, innovation is based on banking or tax regulations.

5. Service delivery technology - new service systems require new delivery technologies, with an important role in information technology. Although information technology is not the only technology relevant to banking services innovation, it is still an important technological source in many innovative services. The technological dimension of innovation may refer, for example, to a new computer or new customized software packages that allow the formation of customer databases, their characteristics, and so on. As a result of the ever increasing complexity, it is increasingly necessary to introduce new technologies and modern computing techniques into banks. However, there are situations where service innovations are possible and without technological innovation or can incorporate limited technological content.

6. Organization of Deliveries - refers to changes in organizational structure, new skills of the teams, or new work skills that can help increase banking performance.

According to the Methodological Guide of Innovation [6], the process of passing from invention to innovation comprises three stages, which differ from the introduction of products, services or innovative methods on the market:

- The first stage - the transformation of an idea or a research result into a technological prototype.
- The second stage - the transition from prototype to production, including the analytical project, the development and testing of innovation.

- The third stage - large-scale production and ensuring a high level of market penetration.

The above-mentioned document defines the steps to be followed at each stage on three axes:

- The technological axis - refers to the technical development of innovation, starting from an idea that could be based on research results or needs identified on the market and leading to a technological prototype;
- The market axis - refers to the interaction with the market during the development of innovation, starting from a first-stage preliminary analysis, moving towards full market analysis, sales and distribution from the second stage, to more complex marketing and distribution, and market response during the last stage.
- The business axis - refers to the necessary business steps, including intellectual property rights, marketing and business model selection, business development and access to finance during the second stage, and business development during the third stage.

Other authors consider that the process of innovation includes the following steps [7]:

1. exploring innovative ideas;
2. selecting innovative perspectives;
3. assessing the viability of selected ideas;
4. elaboration of the detailed business plan regarding the innovative project;
5. project evaluation by experts;
6. experimental achievement of the innovative product;
7. initiating corrective actions of the innovative product;
8. promoting the innovative product;
9. serial production of the innovative product.

At each of these stages are carried out certain activities and are solved issues related to the innovation process. Activities alternate and interrelate, ensuring a certain consistency and integration, simultaneously designing and developing a successful product or service, and determining the framework in which innovation takes place.

The innovative process within the banking products/services market can be achieved in stages as shown below:

- I. preliminary stage - identification of innovation opportunities / risks;
- II. stage of analytical design of the product / banking service;
- III. stage of experimental production and testing of the experimental lot;
- IV. the serial production stage and the widespread promotion of the product / banking service.

The tasks to be performed at each stage are shown below.

Stage I. Identification of innovation opportunities or risks. At the preliminary stage, the following tasks are carried out:

Business Axis - analyzes the situation and positioning of banks in the financial and banking sector in order to identify the possibilities for innovation of the banking business model. Nowadays, banks can choose between several models: a universal bank with limited financial and non-financial activities, a "full service bank" that carries out global banking; bank specializing in money transfers, mortgages, consumer loans, large corporate clients, mediums, small, private clients, agricultural companies, etc. Exploring the sources of innovation related to these issues identifies the development objectives based on the innovation of the banking business model, investment in innovative projects and, respectively, new banking products. Understanding the direction banks are taking in the context of the evolution of the national and global economy, the conceptualization of the banking business model determines the changes needed for innovative banking products / services. It is therefore obvious that banks need to revise their business models as a result of changes in the financial and banking market. The time, when banks could have clients, offering service packages lacking transparency, has come to an end [8]. Although this statement is not valid in all areas and states, a revolution in financial technology is becoming increasingly felt. The

solution for this global problem is the development of *common behavioral models, integrated by innovative banking business, working with technology businesses and alternative financing models.*

Technological axis - any bank has technology. By addressing technology in a broad sense, as all the processes (servicing, engineering, marketing, organizational, management), through which the entity transforms labor, capital, raw material, information into superior values for the client, changes in these processes are understood as innovations. The analysis of information and financial-banking technologies highlights the possibilities for developing banking products / services in the coming period. Currently, banking industry is threatened by non-banking business models such as financial technologies (FinTech), including investment innovations, cryptocurrencies, online payments, mobile services, crowd funding, automated counseling, and so on. Also the popularity of blockchain technology increases. The informational and financial revolutions, the digitization of economies call for radical changes in countries' banking systems. If in the past the banks competed with each other, with microfinance companies, leasing, now the competitive pressure on the financial services market comes from "new entrants" in the field - FinTech start-ups and people with sufficient capital, able to invest in more attractive areas of banking activity to replace with their own business models, attracting millions of local and global clients. In these circumstances, banking industry "... is constantly growing and evolving through the need to prepare against cyber security threats, banks frequently encountering new threats and potential fraud risks." [9]. That is why it is very important to explore the entire ethnic and technological arsenal of direct and indirect competitors for an innovative positioning of the bank in the relevant market and in the entire system of financial relations. Specialists in the field believe that "In the new Open Banking world, as customer expectations get defined by standards driven by FinTechs, neobanks and more agile digital firms, traditional banking rules and value propositions no longer apply. Banks recognize that the status quo is no longer sustainable. To grow and protect their position, banks and capital market firms need to evolve and reimagine their business and their client engagement [10].

Market Axis - refers to the identification of sources of innovation in the elements, characteristics, mechanism of the banking market, the bank's relations with customers and its partners, the behavior of buying products / banking services, etc. Banking market is specific, the market subjects being commercial banks and other financial and non-financial entities. The peculiarity of the banking product market results from the specificity of the object of the transactions, the particularities of the demand manifestation for the products of the banks, the specifics of the relations with the clients, the characteristics of the offer, the high concentration of the banking services production, the oligopolistic competition and the superior direct and indirect competition. Banking innovation is the result of business environment changes, customer requirements that are increasingly well-known, skills, demands transparency and quality, responsibility and involvement. The supply of banking products / services differs from one bank to another through a series of features specific to each component. These include: the volume and period of the loans granted; interest and commission fees or commissions; their degree of differentiation; the required guarantees; the efficiency of the service, the facilities provided by banks, etc. All of these may serve as a source of innovation and differentiation, as well as to build a new relationship with customers.

The **demand for banking services** expresses the need to make payments, to credit, to open deposit accounts, and others, a certain moment on the market. As a rule, demand arises as a result of product / service sale / purchase transactions (previous experiences) or when customers want new purchase experiences. Customers' demand is characterized by the following features:

- is extremely diverse in structure, frequency of manifestation, volume and range of action, etc.;
- can be permanently displayed (payment of the goods by bank card), periodically or occasionally, depending on the type of service;
- has a high degree of elasticity and responds to the evolution of specific factors such as income, interest, insurance premiums, commission, etc. ;
- demand for banking services differs from one market segment to another.

The analysis of innovation opportunities / risks in the banking services market should highlight and take into account the following issues related to the innovation process:

- low inability to absorb banking innovations by market segments;
- Clients' reticence towards innovations, their unfavorable perception;
- Low level of knowledge in the field of information technologies to customers, insufficient technical endowment;
- Inconsistencies between the prices of banking services (commissions and interest) and the economic situation of the clients;
- Possibility to keep the value of shares at a level not lower than previously achieved;
- The impossibility of forecasting investments in new services and risks related to innovation
- etc.

Important sources of innovation can also be identified by analyzing competition. The analysis of the competitive forces in the banking product market, based on the model of the five competitive market forces (Porter model), identifies the opportunities / threats from: competitors in the sector, suppliers, customers, substitute products, new entrants [11]. By addressing this analysis from the perspective of the innovation process, we can identify trends in the innovation process and the dangers that may arise. In addition, an important role is played by state / government policy, which can be considered as the sixth market force, with a double hypostasis - regulating the banking market and the subject of the banking market. Ensuring legal and regulatory support for the proper functioning of the banking sector, improving and adjusting normative acts to the requirements of national and international standards represent important innovation activities.

Exploring sources of innovation is a first step in developing and implementing innovations in different areas of banking. Starting from R & D to staffing, all of the enterprise's functions are covered by innovation. The scale of the innovation process and the way it is deployed differs according to the nature of the activity, the existence of innovation opportunities, the innovative capacity of each bank and its objectives. Practice shows that banks have multiple objectives of innovation: increasing market share, conquering new markets, improving the quality of banking products / services, expanding product ranges, replacing obsolete products and services, reducing environmental impact, etc. But the main goal of the companies, through the innovation process, is to reach higher indicators than the average ones on the market. The implementation of innovations leads to products with improved quality characteristics, superior quality services, new, more efficient and environmentally friendly technological processes, innovative managerial models and methods, etc. All this ensures higher competitiveness in relation to competitors and contributes to obtaining higher indicators.

Stage II. Stage of analytical design of the banking product / banking service. At this stage the following tasks are carried out:

Business Axis:

- The innovative project develops according to a business model, organizational and informational models of the bank. The mission, objectives, organizational structure of the bank are established to ensure an efficient operation of the innovation activity. It is important to ensure interdepartmental coordination between the departments involved in the development of new products so that they can then be successfully implemented.

- Elaborate the detailed business plan for the innovative project, including the necessary investments.

- Project evaluation performed by experts is a predictive assessment of the investment project in terms of the costs of innovation and the results that can be obtained from innovation - change in the value of shares, change in profitability, liquidity, competitive position, etc.

Technological axis:

- development of the new product and prototype elaboration;
- assess the impact of innovation at sector / economy level - analyze the effects of innovation on the banking product market as a whole and on the economy as a whole;
- assessing the effects of entity-level innovation.

Market Axis:

- Prototype analysis from a client / market perspective;
- assessing the effects of innovation at the client / market level.

Stage III. Stage of experimental production and testing of the experimental lot

Business Axis:

- organizational innovation of the bank according to the product / service innovation and its positioning within the sector;
- elaborating the development and promotion plan for the new product / service.

Technological axis:

- ensuring the technical and technological performance of innovations;
- risk management of innovations.

Market axis: “Laboratory” and market testing of the new product / banking service and its improvement, correlating it with regulatory requirements and market segments.

Stage IV. Serial production stage and promotion on a large scale

Business Axis: Continuous innovation of the organizational model and the informational model of the banking products / services on which the banking production is based.

Technological axis: Continuous technological innovation, implementation of incremental and revolutionary innovations that deliver greater higher to customers and the society.

Market Axis: Organizing and coordinating the delivery of new products/ services, forming customer portfolios for new banking products / services.

CONCLUSIONS

In conclusion, it can be mentioned that the innovation process on the banking market is multidimensional and requires an integrated and interdependent approach during the course of all stages for a responsible successful implementation, value added customer experience and the society.

REFERENCES

1. BART VAN ARK, BART. Services Innovation, Performance and Policy: A Review, June, 2003, Research Series No.6, The Hague (with Dialogic)
2. JANET HAO, BART VAN ARK, ATAMAN OZYILDIRIM. Signposts of Innovation: a Review of Innovation Metrics, pag. 4 // https://www.conference-board.org/pdf_free/workingpapers/EPWP1701.pdf, [accesat online 14.11.2018]
3. EIGLER, P., LANGEARD E.: La servuction: le marketing des services, McGraw Hill, 1987
4. PIM DEN HERLOG, MARK W. DE JONG; WIETZE VAN DER AA. Capabilities for Managing Service Innovation: Towards a Conceptual Framework, in Journal of Service Management 21(4):490-514 · August 2010, disponibil: // https://www.researchgate.net/publication/215915604_Capabilities_for_Managing_Service_Innovation_Towards_a_Conceptual_Framework, [accesat 10.11.2018]
5. CETINĂ, IULIANA, EMANUEL ODOBESCU, *Strategii de marketing bancar*, Editura Economică, București, 2007, p. 63
6. GHIDUL METODOLOGIC AL INOVĂRII. Disponibil: http://www.i3e.eu/innovation/mgi_RO.pdf, p. 8, (elaborat în cadrul proiectului I3E și finanțat prin inițiativa Europei de Sud-Est cu scopul de a promova inovația și antreprenoriatul în zonă, având parteneri din 8 țări ESE), [accesat 20.08.2018]
7. VASILIEVA L.N., MURAVIOVA E.A. Metodi upravlenia inovatсионnoi deiatelinoștiiu M..KNO Rus, 2005
8. BÎZDEREA CLAUDIA GABRIELA. Analiza alternativelor de finanțare prin serviciile tehnologice financiare fintech – fenomenul de crowdfunding// RFS, Vol. II • Nr. 3 • Noiembrie 2017, p. 111. Disponibil: https://revista.isfin.ro/wp-content/uploads/2017/11/6_Bizdere-Claudia-Gabriela_RO.pdf,
9. Idem.
10. <https://www.capgemini.com/industry/banking-and-capital-markets/> [accesat 20.08.2018]
11. PORTER, MICHAEL. Avantajul concurențial. Manual de supraviețuire și creștere a firmelor în condițiile economiei de piață. București: Editura Teora, 2001.

FINANCIAL INSTRUMENTS BASED ON PRECIOUS METALS AND THEIR REGULATION IN THE REPUBLIC OF MOLDOVA

Litocenco Ana, drd

Academia de Studii Economice a Moldovei

str. Banulescu-Bodoni 61, MD-2005, Chișinău, R. Moldova

analitocenco@yahoo.com, 069 57 21 29

Abstract: *The precious metals and their importance in the investment market is indisputable. Their safety has been proven for ages and in the times of the biggest financial crises. At the global level, the precious metals market (trade and investment) seems to grow. Therefore, in this article is related an analysis of the precious metals market in the Republic of Moldova and its regulation in order to see its development.*

Key words: *financial instruments, precious metals, regulation, gold, silver.*

JEL Classification: *E22, E58, G18.*

INTRODUCTION

Precious metals are naturally occurring rare metallic elements having significant economic value. They have high luster, usually ductile which tend to be less reactive than most elements. Precious metals are primarily regarded as investments and industrial commodities. Platinum group metals and gold are some of the most prominent precious metals present in the industry. While the coinage metals, silver and gold are consumed in industrial applications, they are better known for their use in jewellery and art.

Precious metals such as gold are widely used for investment purposes and jewellery owing to their aesthetics. It is usually sold in stock exchange markets associated with falling share prices attributed to its escalating high prices. Recent war events and rebellions in the Middle-Eastern countries such as Syria, Egypt, Libya has led to significant increase in investments in bullion (gold bars). This has resulted in overselling of gold which in turn has increased the gold prices worldwide. Global supply of gold is a combination of scrap recovery, central-bank supply and mined gold, out of which more than half of the supply comes from mined gold. Asia Pacific serves as the major producer as well as consumer of gold with significant consumption in South East Asian countries such as China and India. Moreover, high growth in these emerging economies coupled rising disposable incomes of the individuals is the major driver for the precious metals market.

Platinum group metals such as palladium is majorly consumed in the automotive industry as catalytic converters, manufacturing of electronics and jewellery, as well as chemical and dental applications. Palladium is sourced from two major sources: mine production and recycling. The global market for palladium is likely to experience significant growth with declining demand for metals and increasing demand for recycling metals, leading to palladium demand outstripping the supply. In addition, changing prospects of investments in palladium have also contributed to the growth of the market.

Increasing prices for coinage precious metals such as gold are anticipated to be one of the major factors driving the market as more and more consumers are purchasing gold as a mean of long terms investments. In addition, growing demand for palladium in catalytic converters in the automotive industry in vehicles exhausts are also expected to contribute towards the growth of the market. Demand for precious metals from other sectors such as jewellery and industrial are also anticipated to drive the growth of the market. However, technical issues and diminishing ore grades of these metals are expected to hamper the growth of the market. Future market growth is expected to be from Asia Pacific with the growing industrial activities in emerging economies such as India and China. These factors are expected to provide new opportunities for the growth of the precious metals market [8].

Taking into account the global trends related to the precious metals market, it is considered necessary to analyze this market and its regulation in the Republic of Moldova.

The analysis of bibliography resources related to the subject

The research theme was approached and studied taking into account the global trends and the national framework related to the precious metals market (laws, Government's Decisions and other normative acts).

Description of the research methods

The research methods that were applied are as follows:

- the economic analysis method implies the decomposition, the breakdown of the investigated process into elements and the research of each element as part of a whole.
- the synthesis method presumes the unification of the fragmentary elements, the partial knowledge obtained in the analysis in a whole.
- the comparison method implies studying the processes and economic phenomena through a reference criterion, establishing similarities and differences.

The obtained results

In the Republic of Moldova, the regime of precious metals (PM) and state policy in the field of PM activities are regulated by Law no. 282/2004 on the regime of precious metals and precious stones. According to this law, the regulation, supervision and control of the PM activities on the territory of the Republic of Moldova are aimed at:

- promotion of state policy in the field of PM activities;
- defence of the country's economic interests;
- efficient use of PM;
- compliance with the national legislation governing the production, processing, faceting, use and circulation of PM;
- the use of environmentally friendly technologies for production and processing of PM;
- protecting the rights of the beneficiaries of products (articles) in PM, the rights of producers of these products (articles), including against unfair competition.

State regulation, supervision and control of PM activities and the operation of pawnshops is exercised by:

- licensing of PM activities, licensing of pawnshops;
- establishing the state monopoly on the testing and marking of jewellery and other articles made in the Republic of Moldova manufactured in the Republic of Moldova and of those imported for commercialization, as well as on the examination of fingerprint markings on the articles in PM;
- establishment of special rules of registration and management in the process of procurement, processing, use and circulation (including marketing) of PM, articles from them;
- performing a special customs control of PM and their articles;
- establishing the mode of transportation of PM and their items across the state border of the Republic of Moldova with the monitoring of volumes and prices;
- state supervision and control of the observance of normative acts in the field of PM activities;
- surveillance of state marking [2].

The state regulation, supervision and control of the PM activities are exercised by the Government and the central public administration authorities, empowered with the control and supervision right, according to figure 1.

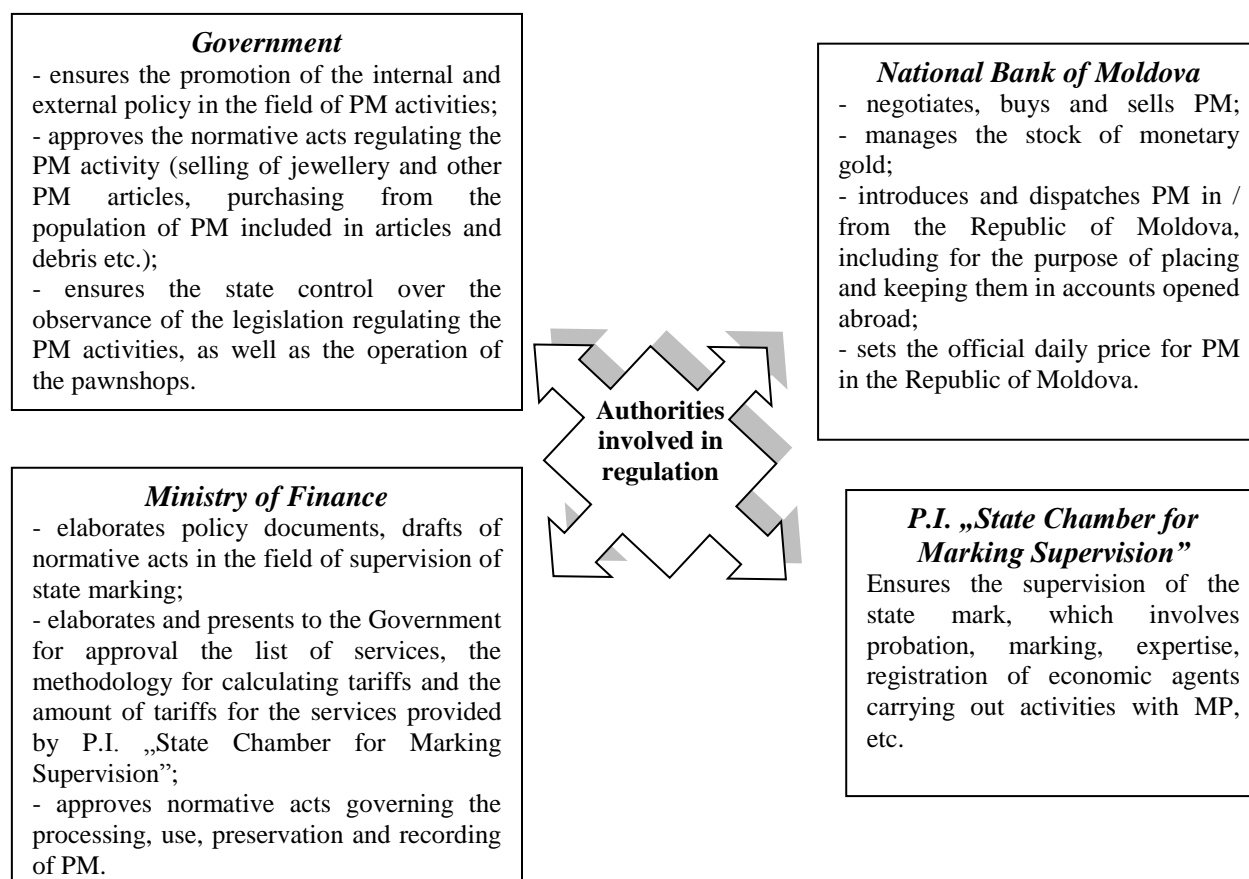


Figure 1. Authorities and regulation powers of the PM market in the Republic of Moldova

Source: Elaborated by the author based on provisions of the Law nr.282/2004

According to the provisions of the national framework, **precious metals** are considered to be:

- ❖ gold;
- ❖ silver;
- ❖ platinum;
- ❖ palladium.

Qualification of metals mentioned above as precious metals is carried out irrespective of the state and the form in which they are present, including native, affinity, as well as in raw materials, alloys, semi-finished products, industrial products, chemical compounds, scrap and industrial waste consumption [7].

At the same time, it is noted that the precious metals have *title*, which is the value of the alloy, indicating the number of units of weight of the precious metal base at one thousand units of weight of the alloy (see Table 1).

Table 1. The title of the precious metals
nr. of units of weight

Nr.	Type of the precious metal	Title					
1.	platinum	900	950				
2.	gold	375	500	585	750	900	958
3.	silver	800	830	875	925	960	
4.	palladium	500	850				

Source: Elaborated by the author based on www.cssm.md

The financial instruments based on precious metals are ingots; investment coins, commemorative and jubilee coins, and monetary gold, which have different particularities (see Table 2).

Table 2. **Particularities of the financial instruments based on precious metals**

Type of the financial instrument	Particularities
<i>ingots</i>	represents gold, silver, platinum and palladium, cast in special forms corresponding to the national standards and technical regulations on these metals, valid on the territory of the Republic of Moldova, or international standards, accompanied by certificates of quality of the precious metals, issued by the responsible authority.
<i>investment coins, commemorative and jubilee coins</i>	are made of precious metals in form, weight and established title, which correspond to the national standards and technical regulations in force on the territory of the Republic of Moldova or international standards, accompanied by certificates of authenticity.
<i>monetary gold</i>	the part of the financial gold used as an asset, held by the National Bank of Moldova as an international reserve of the state.

Source: Elaborated by the author based on the national framework [2]

At the same time, it is worth noting that the National Bank of Moldova determines, on every working day, the prices of gold and silver, representing the prices expressed in Moldovan lei of one gram of fine gold (at 950 title) and one gram of fine silver (at 960 title). The determination of these prices is made for the purpose of reflecting in the bookkeeping of the National Bank of Moldova the equivalent in Moldovan lei of monetary gold, as well as for the purpose of setting the price of commemorative coins of gold and silver [1].

According to the national framework, the National Bank of Moldova represents the authority empowered to issue *commemorative coins*, representing a work of art. The particularities of commemorative coins are as follows:

- are made of gold or silver most often;
- are issued in limited print;
- are dedicated to personalities, historical events, nature, science or the arts;
- are numismatic and can be used as a means of payment;
- are put into circulation through licensed banks.

The commemorative coins have a special aesthetics and a special execution. They are presented in capsules and special boxes, accompanied by certificates of authenticity containing the characteristics of the coin and the signature of the Governor of the National Bank. The first commemorative coin was issued by the National Bank of Moldova in 1996, 5 years after the proclamation of the Independence of the Republic of Moldova. At the same time, the first series of coins was dedicated to Moldavian monasteries, launched in 2000, and consists of 20 silver coins illustrating the holy places in the country. Other coin issuance series are „Celebrities”, „Holidays”, „Culture”, „Traditions of Moldova”, „Monuments of Moldova”, „Red Book of the Republic of Moldova” and reveal important figures of national culture, places of historical importance or traditions in Romanian space, pieces dedicated to the flora and fauna of Moldova [6].

As far as the *monetary gold* is concerned, it is noted that the National Bank of Moldova maintains in its balance sheet the international reserves of the state which are represented by:

- gold;
- foreign currency in the form of banknotes and coins or bank accounts held abroad in foreign currency;
- other assets recognized at the international level [1].

The main criteria for selecting reserve assets are the safety of the underlying amounts and the liquidity. In this context, the National Bank of Moldova maintains international reserves at a level which, in its view, is appropriate for the achievement of the monetary and foreign exchange policy of the state. Also, in case of diminishing the international reserves or if the National Bank

considers that they are about to diminish to a level which would jeopardize the execution of the foreign exchange policy or the timely fulfilment of the international transactions, the National Bank shall submit to the Parliament and to the Government a report on the situation of the international reserves and the causes that have led or can lead to their diminishing. The report also usually contains recommendations to remedy the situation [6].

The analysis of the statistical data available on the official website of the National Bank of Moldova leads to the conclusion that the amount of monetary gold available in the international reserves of the National Bank of Moldova is relatively constant (see Figure 2).

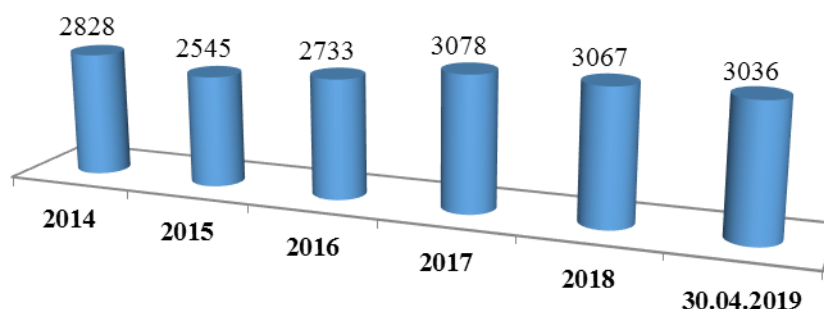


Figure 2. The dynamics of the monetary gold value contained in the international reserves of the National Bank of Moldova, thousands of USD

Source: Elaborated by the author based on www.bnm.md

At the same time, it is stated that, at the end of April, the weight of the monetary gold in the total reserves of the National Bank of Moldova constituted about 0.1% [6]. By comparison, according to the World Bank's Report on international reserve holdings in the world, the top-performing countries with the most significant gold reserves in the same period are: USA (74.9%), Germany (70.6%), Italy (66.9%), France (61.1%) and Russia (19.1%) [8].

If we were to analyze the marketing and trading of ingots in the Republic of Moldova, it is worth noting that this type of financial instrument is less used.

Instead, the population of the Republic of Moldova invests in the purchase of various articles of the PM, such as: jewellery (rings, bracelets, necklaces, brooches, earrings, chains, key rings, etc.), personal items (cigarette cases, cigarettes, lighters, glasses, watches, etc.), household items and / or for ritual and decorative purposes.

The sale of jewellery and other articles of PM on the territory of the Republic of Moldova is performed by legal and physical persons who practice entrepreneurial activity and obtained the respective license²³ in the manner established by the legislation [5].

In order to protect the rights of the owners of PM articles, the rights of the producers of these articles against unfair competition, as well as for the purpose of defending the state's interests, there is made the state marking surveillance, which is ensured by the P.I. „State Chamber for Marking Supervision”. In this context, as well as under the provisions of the statute of the institution, it provides the following services:

- the sampling and marking of all articles of PM manufactured on the territory of the Republic of Moldova and / or introduced in the country for marketing;
- examination of fingerprint marks;
- PM expertise and diagnosis of precious stones, their evaluation;
- conducting PM analyzes;
- preparation of test reagents;
- other activities provided by the legislation [7].

²³ The licensing authority of the activity with PM is the Public Services Agency.

The marketing of the PM articles is carried out in compliance with certain requirements stipulated by the normative acts of the Government, the Ministry of Finance and P.I. „State Chamber for Marking Supervision”, namely: ensuring the presence of stamped labels, indicating the name, manufacturer, article, title, weight and price for 1 gram, type of garments, their feature, weight and retail price of the article etc [2].

At the same time, the P.I. „State Chamber for Marking Supervision” ensures the registration and the record of the natural and legal persons practicing entrepreneurial activity in the field of PM, and, according to the statistical data of the institution, at the end of 2018 there were registered 414 entities operating in the PM field, which 149 entities represent pawnshops, and the other entities - trading, manufacturing, repairing entities [7].

In addition, given the fact that the number of entities operating in the field of PM, especially the operation of pawnshops, is considerable, by Law no.308/2017 on the prevention and combating of money laundering and terrorism financing, the natural and legal persons that practice PM activities have been qualified as reporting entities that have to comply with certain requirements related to measures to prevent and combat money laundering and terrorism financing (precautionary measures, reporting, etc.) and P.I. „State Chamber for Marking Supervision” has been designated as a supervisory body of the respective entities [4]. Moreover, according to the provisions of Law no. 282/2004 on the regime of precious metals and precious stones, P.I. „State Chamber for Marking Supervision” has the function of exercising the state control over the observance of the compliance related to the supervision of the state marking by the economic agents operating in the PM field [2].

Although, the P.I. „State Chamber for Marking Supervision” is empowered by 2 legislative acts with functions of control, but in practice it can not initiate the procedure for carrying out the inspections due to the lack of its nomination as a control body, according to the provisions of the Law no.131/2012 on state control over entrepreneurial activity [3]. This legislative divergence creates impediments to the oversight function of the state mark, leaving this segment of the national economy unattended.

CONCLUSIONS / RECOMMENDATIONS

Based on the carried out research, it is observed that the PM market in the Republic of Moldova is a poorly developed one, which is limited to the marketing of PM articles only for personal purposes. At the same time, the deficiencies of the national legislation do not allow the supervision of the economic agents carrying out activities with PM and the issues regarding their development and the trends in their activity remain uncertain. As the PM market tends to grow in scale and promises to be a safe source of investment financing, national authorities must take the necessary measures to ensure the functionality of the legislation in force and to examine the possibilities for promotion and development of PM transactions from the investment perspective.

BIBLIOGRAPHY

1. Law no.548/1995 on National Bank of Moldova;
2. Law no.282/2004 on the regime of precious metals and precious stones;
3. Law no.131/2012 on state control over entrepreneurial activity;
4. Law no.308/2017 on the prevention and combating of money laundering and terrorism financing;
5. www.asp.gov.md;
6. www.bnm.md;
7. www.cssm.md;
8. www.gold.org.

THE ANALYSIS OF HEALTH EXPENDITURES IN THE REPUBLIC OF MOLDOVA, IN 2012-2018

ZUBCOVA ELENA, PhD

e-mail autor: ezubcova@yahoo.com

Academy of Economic Studies of Moldova

The Republic of Moldova, mun.Chișinău, Bănulescu-Bodoni street, 61

anticamera@ase.md

PETROIA ANDREI, Dr., Associate Professor

e-mail autor: petroia5@hotmail.com

The Republic of Moldova, mun.Chișinău, Bănulescu-Bodoni street, 61

anticamera@ase.md

Abstract: *The population health constitute a basic element in the harmonious development of the state. It is not just one of the basic human rights, but it is also a necessary condition for the progress of modern society. Thus, the identification of financial instruments which characterizes the expenditures of healthcare system in the Republic of Moldova represents a fundamental role. The used methodology have been based on the following methods: method of diagnosis analysis, the comparison method, methods of data analysis using statistical techniques: metode de analiza a datelor utilizind tehnici statistice: graphics, tables, etc.*

As a result of the health expenditures analysis in the Republic of Moldova in 2012-2018 the existence of the problem of insufficient financial resources in the researched field was established and stated. The healthcare system must adapt to permanent changes in funding needs. The healthcare system, in order to function at an appropriate level, must have enough financial resources to invest in buildings and equipment, payment of staff salary, purchase of medicines and other consumables. The most of countries with advanced economy allocate important resources to financing health sector as the premise for the healthiest generations and sustainable long-term development. Moldova allocates 515 dollars per/capita, which is less than 9,5 times than EU average.

Key words: *health, expenditures, public, private, evolution, financial resources, budget.*

JEL CLASSIFICATION: I11, I18

INTRODUCTION

The importance and the meaning of health expenditures clearly pay special attention, because for each person the health is fundamental to enjoy and appreciate the elements of life as a whole.

The following objectives were set for achieving the stated goal:

- analyzing of funding sources of the health system;
- analyzing of total health expenditures and their structure in the Republic of Moldova;
- determination financial necessary of the health system based on correlation of total health expenditures and factors of influence;
- arguing the need to apply modern financial instruments to attract financial resources to the healthcare sector;
- making proposals on improvement of healthcare system in the Republic of Moldova.

MATERIALS AND METHODS

The specific aspects of health expenditures in the Republic of Moldova have been researched on the basis of the works of local and foreign authors, as well as of the international institutions, which contributed to build the concept of health expenditures financing.

The methodology reflects those expenditures that the health service provider incurred during the reporting period.

The analysis of the main indicators in dynamics is possible according the used methodology, which corresponds to the modern trends in the development of economic science.

RESULTS AND DISCUSSIONS

The total health expenditures for the Republic of Moldova amounted for 13,5 billions lei according to 2017 data, (2015-9,35 billions lei), represents an approximative increasing of 30%. [6]

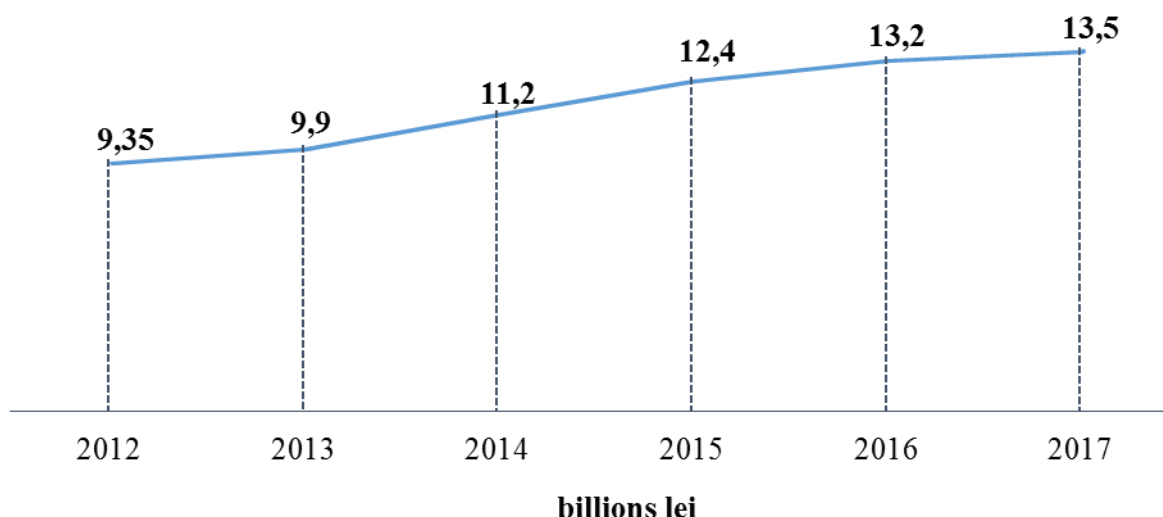


Figure 1. The Dynamics of Total Health Expenditures, billions lei

Source: Elaborated by authors according to National Agency for Public Health results, in 2012-2017 data, for the Republic of Moldova.

The total health expenditures share in GDP increases in the most developed countries. Although they represent a major public concern, few aspects are known about the factors that influence the rapid growth of these expenditures. 1]

The health expenditures analysis for 2012-2018 period in the Republic of Moldova was performed based on the correlation of the total health expenditures with the GDP.

In terms of GDP, the health expenditures in the Republic of Moldova are 2,2 times lower than the EU average.

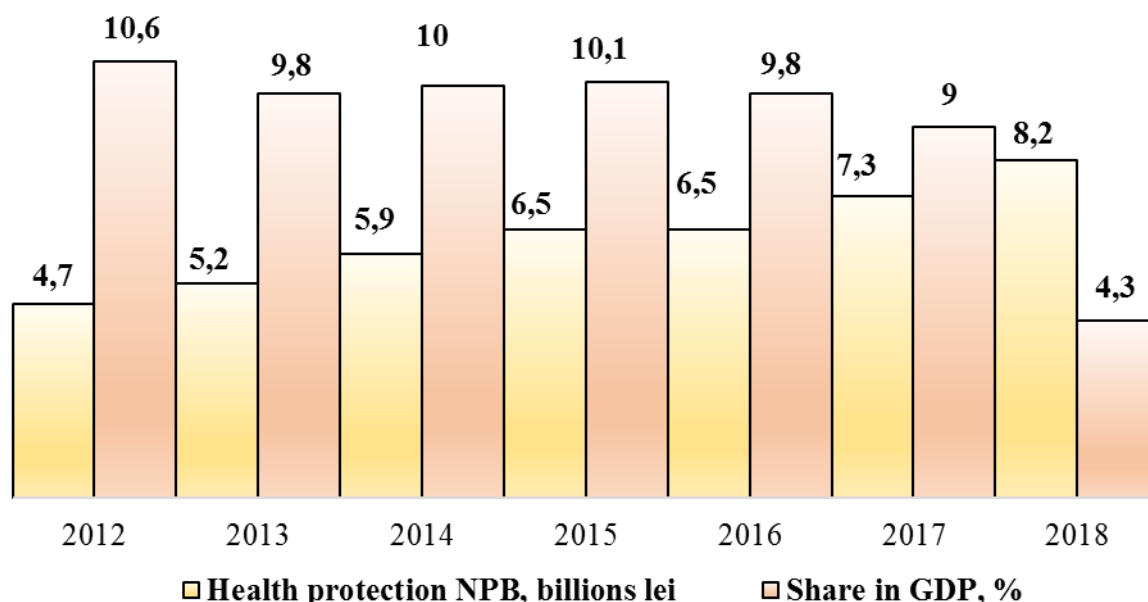


Figure 2. The Health expenditures of the National Public Budget, billions lei

Source: <https://veaceslavionita.wordpress.com/2018/11/26/moldova-aloca-cei-mai-putini-bani-pentru-sanatate-din-europa-e-nevoie-de-masuri-urgente-pentru-redresarea-situatiei/>

In comparison with the data offered by the international organizations the Republic of Moldova remains behind several CIS countries in terms of the share of health expenditures in GDP.

Thus, the health expenditures accounted for 4,3% of GDP in 2018, is the minimum of the last 7 years.

The average in EU is 9,6% in 2018, and the least allocates Romania 5,2% in GDP. From non-EU countries only Turkey allocated in 2017 less than the Republic of Moldova. [3, 5]

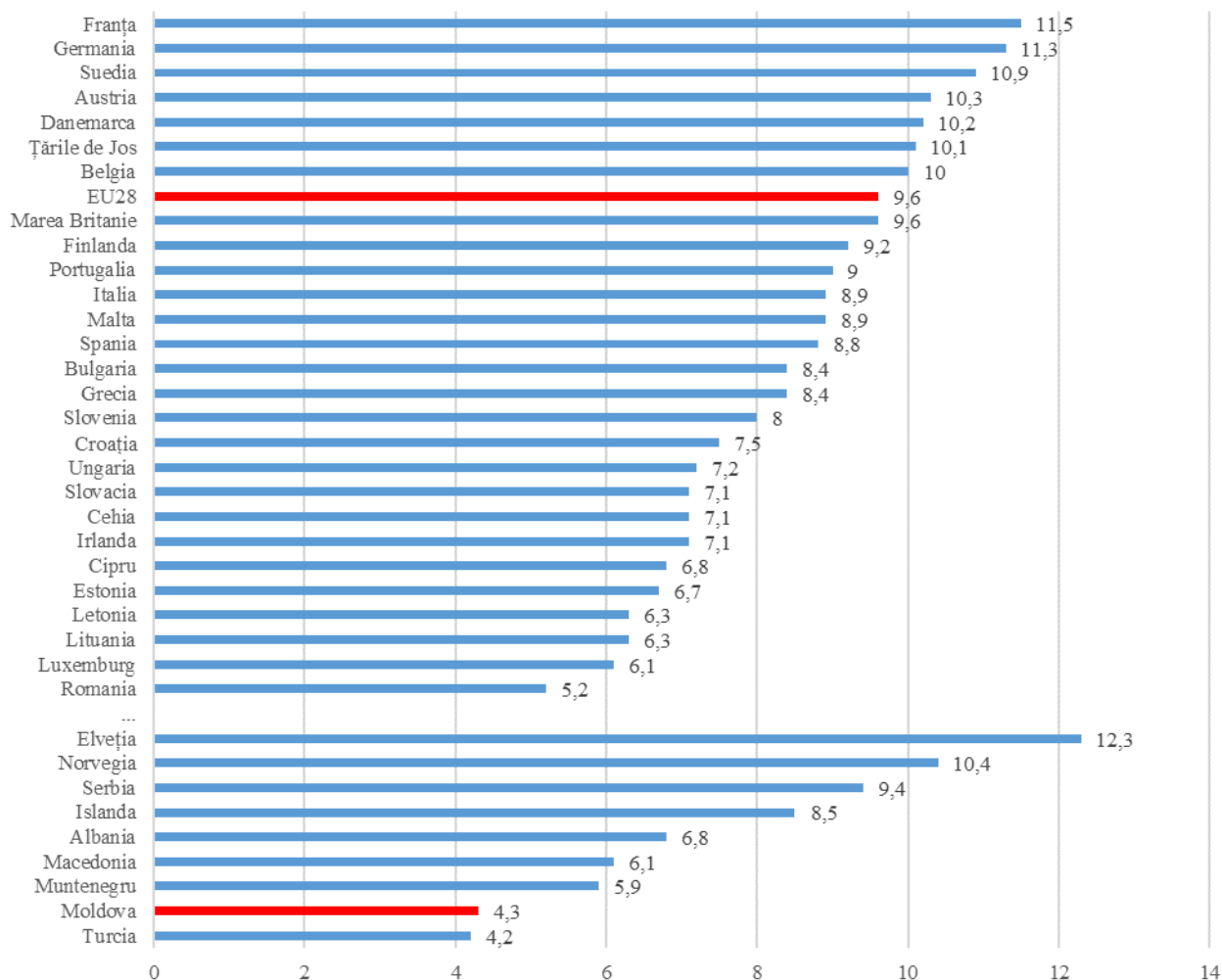


Figure 3. The Health Expenditures, share in GDP, %

Source: Health at a Glance: Europe 2018

In absolute values, the per capita expenditures in the Republic of Moldova is on average of 3809,1 lei (2016-3705,3 lei). According to this data, we find that the per capita expenditures in the Republic of Moldova are 9,5 times lower than the EU average.[3, 2 ,4]

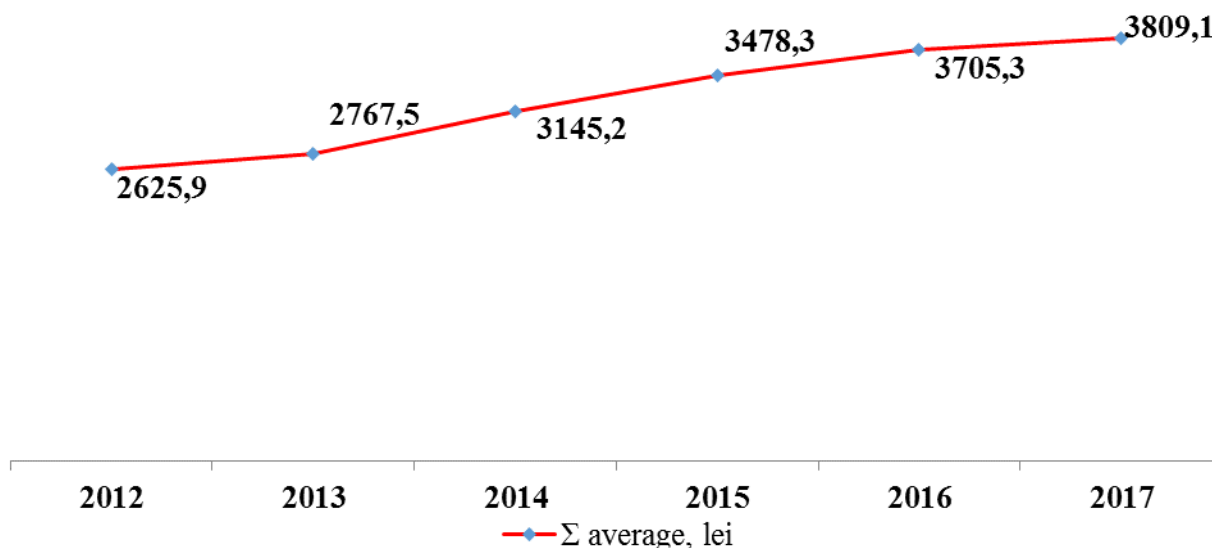


Figure 4. The Evolution of the total health expenditures per capita

Source: Elaborated by authors according to National Agency for Public Health results, in 2012-2017 data, for the Republic of Moldova.

The total health expenditures has been formed from four funding sources. The public sources has constituted 51,39% in 2017 from the total health expenditures. The public sector accounted 43,67%, external sources accounted 4,91% from the total health expenditures and the transfers from the transnistrian region 0,02%.

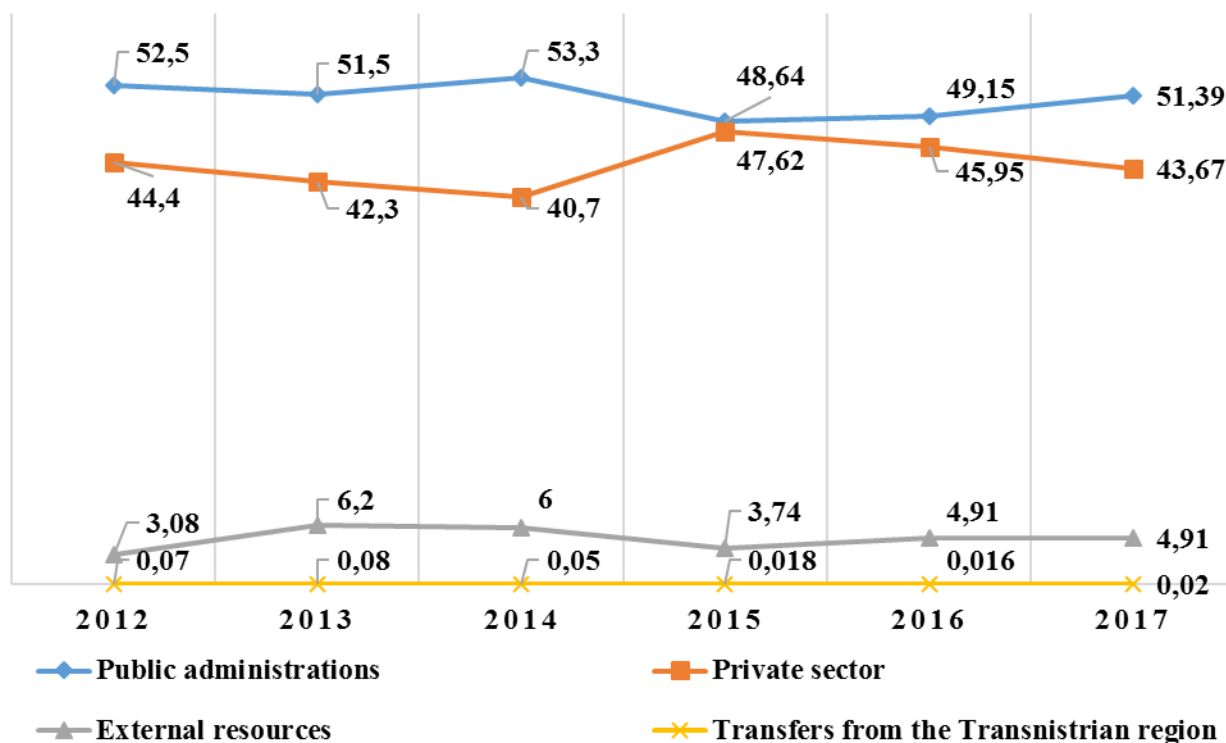


Figure 5. The Evolution of the Health Total Expenditures according to financial agents categories, %

Source: Elaborated by authors according to National Agency for Public Health, in 2012-2017 data, for the Republic of Moldova.

The divergences in National Health Program data

All the offered data are in compliance with the health policies and represent the result of consolidating the health service providers data. They may be different from the ones presented by Ministry of Health for several reasons:

1. The service providers were not able to disagree the held information by medical institutions, that is why the data that was possible to obtain was used.
2. In some cases, the service providers reflect the expenditures financed from the program account not in the program position but in the type of services provided, (recovery and rehabilitation medical services with internment), and at program position expenditures are zero, and vice versa.
3. The Ministry of Health presented funding for Health National Programs in the consolidated form but not on the beneficiaries of funds or purchased medicines. Thus, at the moment is very difficult to follow the flow of funds for the programs from the Ministry of Health till the beneficiary healthcare institution which provides medical services, and which could influence results by doubling the data (ex. The distribution of drugs to treat tuberculosis by the Institute of Phthisiophonomology, the vaccine distribution by National Agency for Public Health, etc.).
4. It is not excluded the fact that medical institutions have presented erroneous data. But, for data validation and informations primary source and financing information is needed. In context, for the future will be given special attention in obtaining detailed information from the Ministry of Health in order to perform cross-checks with the medical institutions' data.

In conclusion is important to mention the fact that, sums which does not correspond to those presented by the Ministry of Health were not omitted but only reflected in other positions, thus per total, the health system financing remains at the same level.

The current deviations from the methodology of the National Agency for Public Health

The quality of the compiled data in the Republic of Moldova is satisfactory. However, it is going to develop new data sources, to improve the quality and to remedy the gaps. Throught the weak points, which follow to be taken into consideration when analyzing the date for the Republic of Moldova, we mention:

1. The data do not include all the data of NGOs. Obtaining this information will increase the share of private health spending.
2. Donor data only includes flows managed by the Ministry of Health and allocated directly to healthcare providers. There is no information about donor investments distributed directly to NGOs and private healthcare providers.
3. Initial data on private health service providers do not have the detailed disaggregation required for health functions and health service providers. Therefore, estimates are used to determine the most important categories.
4. The distribution of informal payments must be considered with some reservations as regards disaggregation of health services and health service providers. Complete data is not available on the required categories, which is why estimates are used.
5. Primary data for private insurance are not categorized by healthcare providers and providers, respectively, using estimates.
6. The distribution at all levels / subcategories in the expenditure category "Medical supplies provided to outpatients" did not yield an adequate result. As a result, it was decided to aggregate all the subcategories, exclusively "Prescription Drugs" and "Drugs released without a prescription", and to create a common subcategory - "Other Sustainable and Non-Sustainable Medical Goods".
7. There is no data on the expenditures for the health services provided to the Moldovan citizens abroad.

CONCLUSIONS

1. The financing options mentioned by sources from the state budget, social insurance and voluntary insurance - are the most widespread ways of financing the health care system.
2. The evolution of total health care expenditures in the Republic of Moldova has highlighted an increase in funding from 9.35 billion lei in 2012 to 13.5 billion lei in 2017. By making an estimate of public funding and pivoting in the Republic of Moldova, have revealed that the financing of the health care system in the Republic of Moldova is characterized by public funding and is mainly carried out on the basis of the mandatory health insurance system, accounting for 51.4% of the total health care expenditures, and the private financing represents 43.67% of the total expenditures for health care.
3. Compared to GDP, health care expenditures in the Republic of Moldova are 2.2 times lower than the EU average. In absolute terms, per capita spending in the Republic of Moldova is 9.5 times lower than the EU average.
4. In the Republic of Moldova the resources for financing the health sector are insufficient, being determined by the existing budgetary constraints and the policies in this sector, although the healthcare system in the country benefits from support provided by the international institutions in the elaboration of policies and provision of services.

RECOMMENDATIONS

In order to reduce from this enormous gap are necessary several urgent measures:

1. The introduction of vice tax

The expenditures of the Compulsory Medical Assistance Insurance Fund (CMAIF) for smokers and alcohol addicts are higher than for the rest of the citizens. It is not fair that people who lead a healthy way of life to pay for those who deliberately decide to destroy their health. In order to solve this problem, it is necessary to introduce a vice tax on the sale of tobacco products and alcoholic

beverages. The fee must be fixed per unit of product and be approved annually by Parliament. In order to simplify its administration, the tax will be unified with the excise tax on the above-mentioned products, but will be fully transferred to the CMAIF. By virtue of the vice tax, an additional 0.5-1 billion lei a year can be accumulated in the CMAIF, which will increase health expenditures by up to 0.5% of GDP.

2. The development of Facultative Medical Insurance

A significant source of health insurance revenue in EU countries is voluntary insurance of citizens, in addition to compulsory insurance. Employee companies offer social packages, which also include additional health insurance packages. In order to encourage such insurance, it is necessary to offer optional insurance the same tax regime as for compulsory insurance. For this, voluntary health insurance premiums must not be included in the income of citizens and should not be subject to income tax. The aim is that at least 10% of employees should apply to voluntary health insurance. This measure could give the health care system additional 500 million lei annually, or 0.2-0.3% of GDP.

These two urgent measures would allow the Republic of Moldova to be brought to the minimum in the EU. Additionally, at least two other measures have to be implemented.

3. The increase of state budget allocations for national programs and investment projects in the health sector.

Currently additional to CMAIF, the government allocates around 1,3 billions lei for various national programs and investment programs in health sector, which represents 0,6% from GDP. It is necessary in 5 years to bring this indicator to at least 1,25 from GDP, what is means an annual increase by 0,1% from GDP or 200 millions lei in the prices of the year 2019.

4. The increase in insured persons

Due to the fact that more than half of the employed population does not have an official job, the CMAIF lacks at least 600,000 insured persons. The government's task is to include as many uninsured people as possible in the health insurance system through active policies. In this regard, the Government has created the necessary legal framework: the Zolliers' Law, the authorized individuals. These active measures must aim at inculcating the social insurance system in the next 3-5 years by at least 100 thousand people, which would provide additional up to 300 million lei annually.

All these measures will permit the increase health benefits at least 5% from GDP, to 4,2% the actual level.

BIBLIOGRAPHICAL REFERENCES

Electronic sources

1. Galina Ulian, Tatiana Moroi. Prognostarea cheltuielilor pentru ocrotirea sanatatii in Republica Moldova prin utilizarea modelarii econometrice
<http://ojs.studiamsu.eu/index.php/exact-economic/article/download/530/477>
2. Tatiana Moroi. Finantarea sistemului de ocrotire a sanatatii in Republica Moldova
http://www.cnaa.md/files/theses/2016/50546/tatiana_moroi_abstract.pdf
3. Veaceslav Ionita. Moldova alocă cei mai puțini bani pentru sănătate din Europa. E nevoie de măsuri urgente pentru redresarea situației.
<https://veaceslavionita.wordpress.com/2018/11/26/moldova-aloca-cei-mai-putini-bani-pentru-sanatate-din-europa-e-nevoie-de-masuri-urgente-pentru-redresarea-situatiei/>
4. http://statbank.statistica.md/pxweb/pxweb/ro/40%20Statistica%20economica/40%20Statistica%20economica%20COM_COM020_serii%20anuale/COM020200.px/?rxid=b2ff27d7-0b96-43c9-934b-42e1a2a9a774
5. <https://apps.who.int/nha/database/Select/Indicators/en>
6. <https://cloud.mail.ru/public/JfUi/44ahFn6e6/1a.%20RAPOARTE%20STATISTICE%202019/>

SECȚIUNEA IV: *Contabilitate, audit, analiză economică*

PROBLEMATIC ASPECTS OF THE SUBSEQUENT MEASUREMENT OF INVENTORIES

ARTUR VÎRTOSU, *Drd.*
ASEM, Republic of Moldova
e-mail: artur.virtosu.av@gmail.com

Abstract. *Subsequent inventories measurement is performed at the reporting date and consist of assessment of the inventories' value to be presented in the financial statements. Several issues arise in this assessment, the main ones are proposed for investigation:*

- *determination of net realizable value (hereinafter - NRV);*
- *documentation of operation for subsequent measurement;*
- *accounting for impairment adjustments of inventories;*
- *assessment of the tax consequences related to inventory valuation.*

The article provides recommendations on solving the issues related to subsequent measurement of inventories in line with the requirements of the Accounting Directive of European Union 2013/34/EU, IFRS and advanced international accounting practices.

Keywords: *inventories, accounting value, impairment, subsequent valuation, net realizable value;*

JEL classification: M-41

I. Introduction

The procedure of measurement is one of the fundamental subjects of inventories accounting for any entity. Depending on the time of performing, the following forms of inventories measurement can be highlighted:

- **initial measurement**, which is carried out at the date of initial recognition of inventories and consists in determining their value, to be recorded in the accounting;
- **current valuation**, done at the moment of inventory disposal, and consists in determining the book value to be settled in accounting;
- **subsequent measurement**, to be performed at the reporting date, and consists in determining the book value of inventories to be presented in the financial statements.

The purpose of this study is to investigate and thoroughly examine national and international approaches to subsequent measurement of inventories and to formulate recommendations for improving them in line with IFRS [12], Accounting Directive 2013/34/UE [4] and advanced international practices. In particular, the following issues are addressed: determination of NRV, documentation of subsequent measurement operations, accounting for impairment adjustments and reflection on the tax consequences related to subsequent measurement of inventories.

II. Analysis of reference sources

The measurement of inventories by domestic entities is stated in the following regulations:

- Law on accounting and financial reporting [5] (hereinafter - Law 287), in force since January 1, 2019, which establishes general rules regarding the accounting of the accounting elements and presentation of financials statements;
- *National Accounting Standards* (hereinafter - NAS) "Presentation of financial statements" and "Inventories" [13], applicable to all entities keeping double-entry accounting, except those of public interest and other entities that apply international accounting regulations;
- *International Accounting Standards* (hereinafter – IFRS) IAS 1 "Presentation of financial statements" and IAS 2 "Inventories" [12], applicable to public interest entities and other entities applying international accounting regulations.

The provisions of the NAS "Inventories" [13] which entered into force since 1 January 2014, with recently published amendments [8] and applicable from 1 January 2020, generally transpose the basic terminology, rules and approaches set out by international regulations, in special Accounting Directive 2013/34/UE [4] and IAS 2 „Inventories” [12].

Some issues related to the subsequent measurement of inventories are addressed in general aspects in the investigations of local and foreign researchers such as:

- Recomandări practice privind aplicarea SNC „Stocuri” (Practical recommendations on the application of NAS "Inventories") [6];
- Probleme aferente evaluării inițiale și ulterioare a stocurilor (Issues related to initial and subsequent inventory measurement) [7];
- Последующая оценка, списание и продажа запасов по цене ниже их балансовой стоимости в соответствии с новыми НСБУ (Subsequent measurement, write off and sell of inventories on a price below their book value in accordance with NAS) [15];
- Opțiuni contabile privind aplicarea valorii realizabile nete în procesul evaluării stocurilor (Accounting options for applying net realizable value to inventory measurement) [14];
- Lower Of Cost Or Market Inventory Valuation: IFRS Versus US GAAP [3];
- Учет запасов по МСФО и РСБУ (Accounting for inventories under IFRS and Russian Accounting Standards) [17].

III. Methodology of research

In the research process, the results of local and foreign scientists' investigations on subsequent measurement of inventories, as well as advanced international practices have been taken into account.

The research is based on a deductive approach, from general to particular, starting from the current state of knowledge of the practical and theoretical aspects of inventories measurement.

IV. Data Presentation and Analysis

In accordance with the provisions of p. 44 of the NAS "Inventories" [13], subsequent inventories measurement is performed at the reporting date, taking into account the current valuation method applied by the entity during the reporting period. The fundamental principle of the subsequent measurement is - **inventories are valued at the lowest of the initial cost and net realizable value**. This rule is also set by IFRS / IAS 2 "Inventories" [12].

The NRV represents the estimated sales price of inventories diminished with estimated completion costs and estimated cost necessary to make the sale. The definition of NRV in IAS 2 "Inventories" [12] is similar, except for the statement that "the estimated selling price during the normal course of business". We believe that this statement is relevant and should be included in national accounting regulations.

Other methods of subsequent measurement of inventories are also found in international practice. Thus, according to ASC 330 "Inventories"[1] in the US GAAP, inventories must be valued at the lower of the initial cost and market value. The use of the term "market value" is conditioned by the conservative approach used US accounting regulations so that, losses are recognized immediately in the reporting period when they occur. The definition of "market value" is the replacement cost that should not be higher than the NRV.

The American researchers Dahli Gray and Clemense Ehoff [3] consider that the "market value" method acts as a "safety valve" by immediately recognizing losses and postponing the earnings until they are earned. Unlike IFRS, US regulations (US GAAP) allow the entity to apply different current valuation methods for different inventories items.

In our opinion, the provisions of IFRS are closer to the economic realities in our country, where there is no active market for many types of goods, thus the transposition in NAS the subsequent measurement according to the NRV is justified.

The application of the subsequent measurement is conditioned by the need to ensure the reliability of the indicators in the financial statements, as well as the follow up of the general accounting principles. In order to perform the measurement of inventories, it is necessary to recall

the accounting principles to be considered so that the value of inventories provides a true and fair view of the entity's financial position and performance:

- **the measurement at the initial cost**, which means that the accounting elements presented in the financial statements are measured at acquisition cost or production cost, except in the cases provided by the accounting standards;
- **prudence**, which implies non-admittance of overvaluation of assets and income and / or undervaluation of debts and expenses;
- **the permanence of methods**, which consists in applying accounting policies consistently from one period to the next one.

In order to comply with the prudence principle, inventories should not be presented in the balance sheet at a value greater than the lowest amount of the initial cost and the estimated NRV from their sale or use.

For the purpose of subsequent measurement of inventories, the amount of their balance is first determined according to the current valuation method applied by the entity. Thus, when the specific identification method is used, the value of the inventories balance at the end of the reporting period matches with the value determined at their initial measurement. In the case for the current valuation the FIFO method is applied, the inventories balance at the end of the reporting period is estimated at the initial cost of the last lots of purchased materials or produced inventories. In contrast, if the entity applies the LIFO method, the end-of-period inventories balance is measured at the initial cost of input of the first batches of purchased or manufactured inventories. For entities applying the weighted average cost method, the end-of-period balance is estimated based on the weighted average cost calculated for the entire reporting period or after each receipt of inventories.

The NRV of inventories at reporting date is determined by each entity independently considering the management information needs, business conditions, physical size and physical status of inventories, price fluctuations, including those related to subsequent events and other factors. At the same time, according to p. 45 of the NAS "Inventories" [13], inventories should be valued at NRV only if this is lower than their book value, i.e. in the cases of:

1) **deterioration or partial degradation of inventories** (for example - expiry of the shelf period, fire damage, floods and other exceptional events);

2) **partial or total obsolescence of inventories**, especially those relating to goods where scientific and technical progress advances very quickly (computers, mobile phones, electronic equipment, etc.);

3) **decrease of the sale price of inventories**, which may be due to changes in market conditions, including the appearance of new, cheaper or similar inventories;

4) **increasing the potential costs of finalizing and selling inventories** that may occur when the markets change and / or the conditions for the sale of inventories, leading to an increase in selling expenses, etc.

Currently, many entities underestimate the importance of determining NRV at reporting date. However, if the book value of inventories is significantly higher than the NRV, this leads to an underestimation of expenditure and an overestimation of the financial result, which subsequently can result in distribution of dividends in an over-measured amount.

In the national accounting regulations [13, NAS "Inventories", p. 46], NRV of inventories can be determined by one of the below methods:

1) **method of inventory categories (elements)** that considers the determination of the lowest amount between the carrying amount and the NRV per each item of inventory;

2) **method of homogeneous group of inventories** which provides for the determination of the lowest amount between the carrying amount and the NRV per homogeneous group of inventories;

3) **total inventories method** that consists of determination of the smallest amount of the book value and the NRV of all the entity's inventories.

The method selected for determining the NRV of inventories should be set out in the accounting policies of the entity,

According to international accounting regulations [12, IAS 2, p. 29], the book value of inventories is reduced item-by-item to NRV. At the same time, it is allowed to group similar or

related items. This method can be used in case for items of the same nature of inventories, belonging to the same product line, having similar final use or uses which are produced and marketed in the same geographical area and which cannot in practice be valued separately from other elements in that line of products. It is not appropriate to reduce the book value of inventories based on classification, for example, finished goods or all inventories in a particular segment of activity. In our opinion, the total inventory method acceptable in national regulations allows entities for a very broad interpretation of the NRV definition, and, therefore, is very rarely applied in practice in our country. We consider that this method should be excluded from national regulations.

For the determination of NRV, the entity should rely on the most reliable information available at the time of valuation, considering the destination of the inventories, the current market value of the finished product, and should take into account the price and cost fluctuations that are directly related to the events which occurred after the end of the period, to the extent that these events confirm the conditions at the end of the reporting period.

In accordance with p. 47 of the NAS "Inventories" [13], the NRV of inventories balances at the reporting date is determined on the basis of: 1) contract prices, if the inventories are for sale under the concluded agreements; 2) current market prices, if there are no concluded agreements for sale, but the destination of inventories are for sale; 3) other reliable information held by the entity. At the same time, materials and other inventories intended for use in the manufacture of finished products will not be valued lower than their cost if it is foreseen that the finished products manufactured from them will be sold at a price equal to or above their cost of production. If the cost of finished products is expected to be higher than current market prices, the cost of the materials used will be reduced to NRV.

It has to be mentioned that in practice, the first signs for NRV inventories valuation are determined during the stock count. According to p. 33, subp. 7 of the Regulation on inventories counting [10], the Stockcount Commission draws up the *Minutes of inventories count results* containing information on the value of the impaired, non-moving, slow-moving, difficult to sold or inventories having no market for sale. Thus, the Inventories Counting Committee should come up with proposals for the measurement of inventories at the NRV in the event of their detection until the financial statements are prepared.

Documentation of operations related to subsequent measurement of inventories should be performed based on the provisions of Law 287 [5]. According to art. 11, p. (1) of this law, economic facts are accounted for on the basis of primary documents. At the same time, the p. (4) of the same article states that the entity uses standard forms of primary documents approved by the Ministry of Finance and other public authorities, or may develop and use primary document forms approved by its management, subject to mandatory provisions regarding obligatory elements in the primary documents. Currently, there is no standardized form for documenting subsequent measurement. Therefore, the entity has the right to elaborate internally the document, taking into account the mandatory elements for the primary documents stated by Law 287, art. 11, p. (7) [5]. In our opinion, entities can use for documenting the operation of subsequent measurement at the NRV the document - *Obsolesce of Inventories Deed*, which contains, in addition to mandatory elements, elements such as: inventory item code, inventory group, inventory item name, cost according to current valuation, NRV, the lowest value of initial cost and NRV, the method used for determination NRV and conclusions / notices.

The accounting for differences between book value and NRV of inventories is provided in p. 49 of the NAS "Inventories" [13], accordingly the amount of any diminished inventory value to the NRV is accounted for as an increase in current expenses and a decrease in inventories. Under the provisions of the General Chart of Accounts [9], the difference between the carrying amount and the NRV of inventories is recognized as other operating expenses in the account of second grade - 7146 "Expenditure related to the valuation of inventories at net realizable value".

The differences between the book value and the NRV of inventories are recorded as increase in expenses, the **debit of the account 7146 "Expenses related to the valuation of inventories at net realizable value"** and the decrease in inventories, the **credit of one of the inventories accounts - 211, 213, 215, 216, 217**.

If inventories are damaged or destroyed as a result of fires, floods and other extraordinary events, the difference between their book value and the NRV is recorded as extraordinary expenses by the increase in expenses, the **debit of account 723 "Exceptional Expenditures"** and the decrease in inventories, the **credit of one of the accounts 211, 213, 215, 216, 217**.

For each subsequent period, a new NRV assessment is performed. If the conditions that determined the decision to reduce at NRV ceased to exist, then the amount recorded by the decrease will be reversed (recorded in revenue) so that the new book value of the inventories is equal to the lowest value of the initial cost and revised NRV.

The positive difference between the NRV in the previous period and the new NRV is accounted for in other operating income by increasing the value of inventories, **the debit one of the accounts 211, 213, 215, 216, 217** and increasing other operational revenues, the credit of account 6126 "Other operating income".

In international practice, there are several approaches to accounting for the differences between the book value and the NRV of inventories. Thus, in the Romanian accounting regulations is provided the group of accounts 39 "Adjustments for depreciation of inventories and production in progress" [10]. In Russia, distinct accounts are also used for adjusting the value of inventories at the reporting date, accordingly in the Russian Chart of Accounts is available the account 14 "Резервы под снижение стоимости материальных ценностей"[16] (in English – Reserves for reduction of inventories value). In this context, we propose that in national regulations for keeping information on the initial cost of inventories, accounting for the inventories value adjustment differences between the carrying amount and the NRV, a new distinct account is proposed to be recorded for - 219 "*Adjustments for impairment of inventories at the reporting date*", which will have a passive account function. Alternatively, the differences may be recorded in separate sub-accounts opened for second grade accounts **211, 213, 215, 216, 217**. Such sub-accounts are not provided for in the General Chart of Accounts [9], but under Section 1 - General Provisions, "entities may open additional accounts of second grade to the classes 1-7 and first and second grades for the classes 8-9 in accordance with their own informational needs, without doubling and distorting the General Chart of Accounts".

Thus, the differences between the book value and the NRV to be recorded in accounting entry by debiting account **7146 "Expenses related to the valuation of inventories at net realizable value"** and the increase in impairment adjustments, by crediting the account 219 "*Adjustments for impairment of inventories at the reporting date*". In case if in the subsequent period the NRV is higher than in the previous period, the favorable difference will be accounted for by decreasing inventory impairment adjustments, by debiting the account 219 "*Adjustments for impairment of inventories at the reporting date*" and increase of other operational revenue, by crediting the account 6126 "*Other operating income*".

Such an amendment will eliminate the difficulties that arise in determining the book value of inventories in future periods, in order to comply with p. 50 of the NAS "Inventories" [13] regarding the new measurement of inventories in each subsequent management period. Through such an approach, the entity will keep the information on initial and current inventories measurement in separate accounts.

For tax purposes, the difference between the carrying amount and the NRV of inventories recorded as current expenses are not recognized as deductible expenses, as they are not considered to be necessary and ordinary expenses for carrying out the entrepreneurial activity. The difference between book value of inventories and their NRV has an impact on the entity's financial result, however is not recognized while computing the corporate income tax in the Corporate Income tax Return (VEN-12). On the opposite side, if in subsequent periods the NRV increases and accordingly the entity corrects the book value of inventories by increasing revenue, such income is taxable in the case of entities that apply the simplified system of taxation stated in the Fiscal Code, Chapter 7¹ [2].

Such an approach in tax legislation does not motivate entities to carry out the subsequent measurement, accordingly the entity's financial results are over stated and afterwards dividends are distributed from this profits. In our opinion, the amounts resulting from adjusting the value of

inventories would be fair to be recognized for tax purposes, provided the fair value of the NRV of inventories is confirmed from reliable sources.

V. CONCLUSIONS

In accordance with national and international accounting regulations, inventories are measured at initial recognition, while are used, sold or written off and at reporting date. One of the most problematic aspects of inventory valuation is the subsequent measurement, which is performed at the reporting date, taking into account the entity's current valuation method in the reporting period. The NAS "Inventories" [13] provisions related to subsequent measurement of inventories are mostly in line with the requirements of Directive 2013/34/EU E [4] and IFRS [12].

Carrying out the subsequent measurement involves a significant effort for entities, especially in the part of NRV determination. The most of local entities do not apply the subsequent valuation stated in NAS "Inventories" [13] and IAS 2 [12]. As a result, the prudence principle is not followed and inventories balances are overstated and expenses - diminished in the financial statements.

We consider important to align the methods of determining the NRV with international regulations. The total inventories method, stated in NAS, allows entities a very broad interpretation of the NRV definition, therefore it is very rarely applied in practice. In our opinion, the method of total inventories should be excluded from national regulations.

The first signs for subsequent measurement at NRV can be distinguished during stockcount. Besides, an important aspect is related to the documentation of operations of measurement at NRV. In our opinion, although legislation does not provide for a specific primary document, Law 287 allows entities to elaborate primary documents for such purposes. We believe that entities may use for this purpose the primary document - *Obsolesce of Inventories Deed*, which should contain all mandatory elements for primary documents.

According to the current provisions, accounting for the differences between the book value and the NRV does not allow keeping the information on the initial and current inventories measurement. We consider it appropriate to keep the inventory cost information by recording the differences of the value adjustment between the book value and the VRN in a separate account - 219 "Adjustments for impairment of inventories at the reporting date".

Tax rules do not coincide with accounting regulations regarding subsequent measurement of inventories. Thus, it is not possible to deduct for tax purposes the adjustment of the book value and the NRV recorded to expenses. In our opinion, it would be reasonable to recognize the amount of these adjustments for tax purposes, provided that the NRV of inventories accuracy is confirmed.

VI. REFERENCES

1. Accounting Standards Codification Topic 330, Inventory, issued by Financial Accounting Standards Board, USA, În: *Financial Accounting Series* No. 2015-11, 2015 [citat 14.04.2019], Disponibil: <https://www.fasb.org/jsp/FASB/ISSN 0885-9051>
2. Codul fiscal al Republicii Moldova: nr. 1163 din 24.04.1997. În: *Monitorul Oficial al Republicii Moldova*, 2007, Ediție Specială, 08 februarie 2007, pp.4
3. Dahli Gray, Clemense Ehoff Jr., , Lower Of Cost Or Market Inventory Valuation: IFRS Versus US GAAP, Central Washington University, USA, *Journal of Business & Economics Research – First Quarter 2014* Volume 12, Number 1.
4. Directiva 2013/34/UE a Parlamentului European și a Consiliului din 26 iunie 2013 privind situațiile financiare anuale, situațiile financiare consolidate și rapoartele conexe ale anumitor tipuri de întreprinderi. În: *Jurnalul oficial al Uniunii Europene L 182/19 din 29.06.2013*.
5. Legea contabilității și raportării financiare nr. 287 din 15.12.2017, publicat în Monitorul Oficial nr. 1-5 din 05.01.2018, în vigoare din 01.01.2019.
6. NEDERIȚA AL., Recomandări practice privind aplicarea SNC „Stocuri”. În revista „Contabilitate și audit”, 2014, nr. 9.
7. NEDERIȚA AL., POPOVICI A. Probleme aferente evaluării inițiale și ulterioare a stocurilor. Publicații periodice Conferința științifică internațională "25 de ani de reformă economică în Republica Moldova", 23-24 Septembrie 2016 - Volumul 4
8. Ordin Ministrul Finanțelor Nr. OMF48/2019 din 12.03.2019 cu privire la aprobarea modificărilor la Ordinul ministrului finanțelor nr.118/2013 de modificare și completare a Standardelor Naționale de Contabilitate, publicat la 22.03.2019, în vigoare 01.01.2020

9. Planului general de conturi contabile Planul General de Conturi Contabile aprobat prin Ordinul Ministrului Finanțelor nr.119 din 06.08.2013, <http://mf.gov.md/ro/lex/contabilitate-%C8%99i-audit>
10. Reglementările contabile privind situațiile financiare anuale individuale și situațiile financiare anuale consolidate, aprobate prin Ordinul Ministrului Finanțelor Publice nr. 1802 din 29.12.2014. – Monitorul Oficial al României nr. 963 din 30.12.2014.
11. Regulamentul cu privire la inventariere, aprobat prin Ordinul Ministrului Finanțelor Nr. 60 din 29.05.2012, <http://lex.justice.md/md/344361/>
12. Standardele Internaționale de Raportare Financiară, acceptate prin Ordinul Ministrului Finanțelor al Republicii Moldova nr. 109 din 19 decembrie 2008. – www.mf.gov.md.
13. Standardele Naționale de Contabilitate, aprobate prin Ordinul Ministrului Finanțelor al Republicii Moldova nr. 118 din 06.08.2013. – www.mf.gov.md.
14. ZLATINA N., Opțiuni contabile privind aplicarea valorii realizabile nete în procesul evaluării stocurilor. În: *Analele științifice ale ASEM, ediția a VIII-a*. Chișinău, 2010, pp. 316-321. ISSN 1857-1433
15. НЕДЕРИЦА А, ТАБАН Е. Последующая оценка, списание и продажа запасов по цене ниже их балансовой стоимости в соответствии с новыми НСБУ. În revista „Contabilitate și audit”, 2014, nr. 11.
16. План счетов бухгалтерского учета финансово-хозяйственной деятельности организаций и Инструкции по его применению, утвержденный Приказом Минфина РФ от 31.10.2000 N 94н (ред. от 08.11.2010). www.minfin.ru
17. Поддубная З. В., Учет запасов по МСФО и РСБУ, УДК 657.2, <http://nf-innovate.com>.

ANALYTICAL PROCEDURES USED BY PUBLIC CATERING ESTABLISHMENTS

KHOROZOVA Valentina, PhD Student

e-mail: 123vx@mail.ru

Abstract. *The main features of analytical procedures used at public catering establishments were described. Bearing on the outcomes of the conducted research, proven was that the analytical procedures serve as the scientific-methodical toolkit allowing to reduce time and costs through formalization and unification of control and payment operations as well as to enhance the quality of analysis and audit by decreasing the technical risks stemming from human errors.*

Key words: *analytical procedures, audit, public catering sphere, methods.*

JEL Classification: *M-41*

Introduction

The complexity of bookkeeping in public catering establishment lies with the need of carrying out numerous operations such as purchasing foodstuffs, costing of platters, updating menu, production and selling of readymade products. Moreover, many of public catering establishments encounter additional income and expense items in connection with leisure and entertainment arrangements. All these pose a rather enhanced risk of material errors emergence in the accounting and financial statements. Usually, the financial control and audit serve to discover and clear the errors. In particular, application of financial control and audit furnishes assistance to an enterprise in as follows:

- detect errors emerging in the accounting (financial) reporting;
- facilitate minimization of entrepreneurial risks;
- gain reasonable assurance in that the accounting (financial) reporting does not contain any material distortions;
- get a clear understanding on company's assets and liabilities;
- develop tactics of solving the problems with the view of scaling up the activity conducted by the economic operators.

Challenges and Results

In order to improve the quality of audit it is feasible to make use of the *analytical procedures* as one of the most cost-effective method of collecting audit evidence.

The analytical procedures are the paramount component of the audit used both when planning audits as well as in the audit process regardless of its stage. In some cases, the use of analytical procedures could be more efficient than the application of detailed tests bearing in mind reduction of time and costs on carrying such out. The audit using analytical procedures allows for choosing the optimal way of conducting the audit while ensuring thereat high quality of auditing.

It is advisable to use in auditing such analytical procedures that account for the specifics of the line of business conducted by the enterprise, including public catering establishments. Hence, the aspects of applying analytical procedures when auditing public catering establishments require a comprehensive research. This being the core purpose of writing this article.

Pursuant to **IAS 520 Analytical Procedures**, the analytical procedures imply evaluation of financial information through analysis of plausible relationships among both financial and non-financial data. Analytical procedures also encompass such investigation as is necessary of identified fluctuations or relationships that are inconsistent with other relevant information or that differ from expected values by a significant amount [4].

The application of the analytical procedures is possible by using different methods of economic and financial analysis, the choice of which depends on the preset objective. There is no unified methodology for carrying out analysis when auditing the effectiveness of company activity, and therefore, the auditor determines independently the indicators and ratios as well as the methods of analysis arising from the availability of data and specifics of business. The analysis could be done using the following methods: *comparison method, analytical indicators systems and tables designing method, chain substitution and integral method, expert estimation technique, balance*

sheet method, mean value method, grouping method, situational analysis and forecasting methods, correlation and regression analysis, and other relevant methods [10].

Analytical procedures enjoy a wide spectrum of application in auditing offering solutions for key objectives pursued by the auditing and therefore it is necessary to highlight the specific features of using such in public catering establishments (*Table 1*).

Table 1. Specifics of application of analytical procedures in public catering establishments

Indicator	Description
Domain of application of analytical procedures	<ul style="list-style-type: none"> ✓ Audit of the reliability of the financial reporting indicators. ✓ Audit related services: <ul style="list-style-type: none"> - set up, recovery and accounting record; - tax and bookkeeping consulting; - enterprise operating and business review.
Auditing stage	<ul style="list-style-type: none"> ✓ Audit planning stage implies application of analytical procedures in order to identify the specific features of business conducted by public catering establishments, outlining the challenges in collecting financial information and assessing the risk of auditing. ✓ Audit <i>per se</i> stage implies identifying inaccuracies and distortions in records of availability and flow of goods, raw material, semi-finished products and finished product (platters). ✓ Audit completion stage implies comparison of generalizing reporting indicators with the past years' data.
Purpose of applying the analytical procedures	<ul style="list-style-type: none"> ✓ Operating and business analysis in public catering establishments. ✓ Research of the systems of internal control and accounting record concerning the availability and flow of goods, raw material, semi-finished products and finished product. ✓ Obtain audit evidence. ✓ Identify audit domains that require application of additional auditing procedures. ✓ Shaping up an opinion on the accuracy of reflecting balances in the accounting (financial) statements.
Nature of the analytical procedures	<ul style="list-style-type: none"> ✓ Qualitative procedures allow for drawing a conclusion on the completeness, lawfulness and accuracy of the turnovers and account balances. ✓ Quantitative procedures include use of comparison methods, analysis of ratios, relative indicators and trends.
Data sources for carrying out analytical procedures	<ul style="list-style-type: none"> ✓ External sources imply legislative acts, data made available by the tax and statistics authorities. ✓ Internal sources imply in-house regulations and statutory acts of the enterprise, primary documents, accounting ledgers, accounting (financial) statements.

Source: Developed by the author on the grounds of article titled *Methodological aspects of applying analytical procedures in auditing inventory of balneo-mud spa enterprises of Crimea*, N.V. Burdyug [12]

With the view of ensuring efficient audit in public catering establishments, generally recommended is to carry out a number of audit procedures among which the following are the core ones:

- checking out the system of internal control when purchasing goods and materials for making products, selling such and other cash write off or receipt;
- carrying out tests for balances of debtors and creditors across the individual customers: review of accompanying documentation on shipment and obtaining proceeds;

- performing analysis of inventory accounts titled “Goods”, “Finished product”, “Proceeds from selling values for cash” and other accounts/subaccounts with the purpose of identifying: substantial turnover, atypical economic transactions, violation in reflecting in accounting operations on purchasing, production and selling finished product and goods as well as compliance of their accounting following the procedure stipulated in the accounting policy of the audited institution as well as compliance with the regulatory acts. It is also necessary to review the information systems associated with preparation and , generation of accounting (financial) statements and other analytical procedures;
- performing targeted testing of debit entries on accounts 216, 217, and 832 (to identify understatement) and credit entries on account 521 (to identify overstatement);
- verifying the accuracy of reflecting in the accounting (financial) statements operations concerning entry and exit of goods, finished product, compliance of data produced in the statements with the bookkeeping data. Verifying the accuracy of compilation of commercial expenses in compliance with the procedure outlined on the accounting policy, compliance with the requirements set forth by the national legislation and other relevant issues;
- estimation of the outcomes should be targeted towards obtaining sufficient number of due audit evidence as required for generation of opinion on the integrity of the accounting (financial) statements of a company, primarily with regard to reflection in records and accounting trade operations associated with finished product;
- comparing factual indicators with the regulatory (estimated) or planned ones (for example, compliance of factual use of raw matter per portion with the data contained in master recipes list);
- comparing the reported period indicators with such of past periods as well as with the indicators of other establishments within the sector.

The practice of auditing public catering establishments allows for identification and systematization of the most typical errors specific for the given line of business:

- inappropriate set up of cost record of goods and finished product at the accountants’ office or at the warehouses, storerooms or other such storage premises;
- missing results of an inventory produced in compliance with the legislative requirements and conducted prior to preparing the annual accounting (financial) statements in cases of replacement of material accountable persons or inaccurate reflection of inventory results in the accounting;
- incorrect compilation of the actual production cost of finished product (overstated costs of raw matter stipulated in master recipes list compared to the factual);
- incorrect and untimely discharge of food wastage, etc.

All errors and distortions identified during the audit should be entered into the working documents developed by the auditing company.

However, before including the identified violations and comments into the audit opinion, it is necessary to obtain the legal evidence, that is, documented sources of data obtained through auditing the authenticity of the accounting (financial) statements in a public catering establishment. These include documents, ledgers/registers and financial statements, auditor’s estimates, experts’ opinion, information obtained from the staff of the audited establishment and from the third parties. Composition and content of evidence depend on the type of audit procedures applied and on the audit objects. An example of the like interrelation appears in Table 2.

Table 2. Interrelation between the audit objects, audit procedures and sources of evidence

No.	Audit object	Audit procedure	Source of evidence
1.	Goods	<i>Verifying the accuracy of reflection in the accounting and documentary record of goods entry and write off</i>	-Accounting policy. -Analytical record ledgers. -Sales contracts. -Delivery contract. -Invoices. -Purchase and sale books
2.	Revenue from sales	<i>Verifying completeness, timeliness and accuracy in reflection of revenue from product sales (works, services)</i>	-Accounting policy. -Analytical record ledgers. -Sales contracts. -Delivery contract. -Invoices. -Purchase and sale books
3.	Finished product	<i>Verifying accuracy in reflecting in accounting formation of the cost of finished product, recognition and write off</i>	-Master recipe list -Subsidiary ledgers -Accounting policy -Purchase and sale books
4.	Inventory of goods, raw matter (for platters) and semi- finished products	<i>Verifying the accuracy of inventory of goods, materials, semi-finished products and reflection of inventory results in the accounting and tax record</i>	-Orders entry log (Manager orders). -Manager orders. -Inventory sheets. -Inventory check sheets. -Stock-taking acts

Source: Developed by the author, bearing on the article titled "Stages of auditing: Specifics of auditing wholesale trading companies", E.N. Varlamova [6]

Interrelation, presented in Table 2 could be laid in foundation of drawing up the audit programme and developing substantive verification procedures.

Since the turnover serves as the main indicator of the activity conducted by public catering establishments, when applying the analytical procedures special attention should be paid to this very indicator.

The turnover in public catering stands for the volume of product (purchased or own) sold to the consumers.

Higher turnover number and improvement of its structure will allow to reduce selling expenses, which in its turn, will help in boosting the efficiency of public catering establishments. The economic efficiency of a commercial organization should be interpreted as commensuration of the results obtained with the available resources and expenditures. The following could serve as the indicators in assessment of the activity conducted by public catering establishments: the expenditure growth rate to the revenue growth rate, the monthly average wage paid to the employees, the growth rate of retail turnover of economic operator, return on sales, selling expenses ratio, turnover uniformity ratio, and price index.

It looks feasible to make use of the analytical table presented in Table 3 when carrying out analysis of the efficiency of public catering establishments.

Table 3. Indicators for assessing the efficiency of public catering establishments

Indicator	Formula
Expenditure growth rate (EGR) and revenue growth rate (RGR) <i>Comparison of the growth rates of these components allows to assess which of those produced positive or negative effect on the profit. Thereat, the expenditure growth rate < the revenue growth rate</i>	EGR= $E_1/E_0 \times 100\%$, where E₁ means reported period expenditures; E₀ means previous reported period expenditures. RGR= $RTO_1/RTO_0 \times 100\%$, where RTO₁ means retail turnover during the reported period; RTO₀ means retail turnover during previous reported period.
Monthly average wage paid to the employees (MAW) Average daily wage (ADw). <i>Serving as the source of indicator could be the statistical data</i>	MAW = ADw x D , where ADw means average daily wage; D means number of days due to be paid according to the average wage
Return on sales (ROS) – describes the efficiency of product sales. <i>Serving as the source of indicator could be the statistical data</i>	ROS= EBT/RTO , where EBT means earnings before tax; RTO means retail turnover.
Turnover uniformity ratio – allows to identify the uniformity of sales throughout the year and the degree of customers demand satisfaction	Qr = Quarterly RTO / Annual RTO , where Quarterly RTO means retail turnover per quarter of the reported year; Annual RTO means annual retail turnover.
Price index – shows change in the aggregate value of goods during certain period of time	Pi = Prep / Pbase , where Prep means price during the reported period; Pbase means price during previous period taken as 100%

Source: Developed by the author based on the article titled “Analytical procedures used by the internal audit to assess the efficiency of activity conducted by the restaurant business operators”, O.N. Fedorovskih [10].

Thus, carrying out analysis of indicators presented in Table 3, allows for assessment of the efficiency of activity conducted by the public catering establishments by computing and comparing the results obtained with the expected ones. If application of analytical procedures identifies any deviation from the expected results, then the auditor should explore these discrepancies and address the management for explanation. If the management is unable to produce any reasonable explanations, then the auditor could apply a different set of analytical procedures.

CONCLUSION

The study presented in the article proves the efficiency of application of the analytical procedures when carrying out audit in public catering establishments.

Described in the paper are specific analytical procedures enhancing the quality of audit with due account for the sectoral specifics of the activity conducted by the public catering establishments; also reflected are the specific features of applying the analytical procedures at all stages of the audit. Given were the recommendations on identifying certain most typical errors encountered in auditing public catering establishments.

Moreover, the author highlighted the possibility of identifying the effect of different factors onto the deviations from the pre-set parameters traced out in the production process while applying the analytical procedures.

REFERENCES

1. The Law of the Republic of Moldova No. 287 of 15.12.2017 on Accounting and Financial Reporting. In: The Official Gazette of the Republic of Moldova No. 1-6 of 05.01.2018.
2. The Law of the Republic of Moldova No. 231 of 23.09.2010 on Domestic Trade. In: The Official Gazette of the Republic of Moldova No. 265-276 of 19.08.2016.
3. The Law of the Republic of Moldova No. 271 of 15.12.2017 on Audit of Financial Statements. In: The Official Gazette of the Republic of Moldova No. 7-17 of 12.01.2018.
4. International Audit Standards, Order of the Ministry of Finance of the Republic of Moldova No. 64 of 14.06.2012. In: The Official Gazette of the Republic of Moldova No. 177-180 of 24.08.2012.
5. General Chart of Accounts for Bookkeeping, approved by the Order of the Ministry of Finance of the Republic of Moldova No. 119/2013 of 06.08.2013. In: The Official Gazette of the Republic of Moldova No. 177-181 of 16.08.2013.
6. Varlamova E.N. Stages of auditing: Specifics of auditing wholesale trading companies. International Accounting, Series: Economics and Economic Studies 2012, No. 4 (202), p. 56-63. ISBN: 2073-5081
7. Kochinev Yu.Yu. Audit: Theory and Practice. 5th Edition: Peter; STP; 2010. 347c. ISBN 978-5-49807-579-2.
8. Kazakova N.A. Analytical Procedures: Experience of Using in Auditing and Assessment of Economic Activities. Finances: Theory and Practice, Series: Economics and Economic Studies, 2017, vol. 21, No. 2, p. 113-120. ISBN: 2221-1632
9. Sikorskaya O.I. Audit Planning Process, International Scientific Journal of Innovative Science, 2016, No. 11-1, p. 35-42, ISSN 2410-6070.
10. Fedorovskih O.N. Analytical Procedures Used by the Internal Audit to Assess the Efficiency of Activity Conducted by the Restaurant Business Operators, Modern Scientific Research and Innovations. 2017. No. 3 [Electronic Resource].
URL: <http://web.snauka.ru/issues/2017/03/79040> (accessed on 23.09.2018).
11. Sharovatova E.A., Klopotova K.B. Sectoral Features of Auditing Commercial Companies. Accounting and Statistics, Series: Economics and Economic Studies, 2016, No. 3 (43), p. 35-41. ISBN: 1994-08744
12. Burdyug N.V., Methodological Aspects of Applying Analytical Procedures in Auditing Inventory of Balneo-Mud Spa Enterprises of Crimea, International Accounting, Series: Economics and Economic Studies, 2015, No. 5(347), p. 51-62. ISBN: ISSN 2311-9381

THE ORGANIZATION OF MANAGEMENT CONTROL IN TRADE ENTITIES

NUME AUTOR: JIZDAN ANDREI
e-mail autor: jizdanandrei@yahoo.com

Nume instituție, Adresa: Academia de Studii Economice a Moldovei, Republica Moldova, mun. Chișinău, str. Bănulescu-Bodoni, 61, tel. 22-41-28, ase.md

Abstract.

At the moment, there are a lot of actual problems related to management control that have arisen in connection with the development of new types of trade and the emergence of trade units whose trade activity is fundamentally different from the traditional trade activity practiced by the vast majority of local trade entities. The importance and timeliness of the studied topic lies in the fact that the management control is an information system which accumulates and manages information, in order to assess and manage the business performance of organizations. The main purpose of the study is to develop the theoretical base regarding the particularities of management control for commercial entities which are practicing e-commerce transactions. The present article includes complex scientific and methodological materials related to all aspects of the particularities of management control in commercial entities which practice in addition to traditional types of commerce, new trade activities such as e-commerce, involving scientific research methods such as: classification, observation, deductive and inductive reasoning, synthesis, analysis, recording and documentation. Among the most important and relevant obtained results there can be mentioned: the development of the theoretical and practical basis regarding the management control system in trade entities.

Key words: accounting, management control, decisions, financial information, analysis

JEL CLASSIFICATION: M41 - Accounting

INTRODUCTION.

The importance and timeliness of the studied topic lies in the fact that the management control is a complex information system that gathers and treats the information deemed necessary to assess and monitor the performance of an economic entity. The management control is largely devoted to designing and implementing tools capable of ensuring the coherence of the relationship between the objectives, means and results of an economic agent in general and of a commercial organization, in particular. The management control provides useful and pertinent information for diagnosing the existing situation, decision-making and forecasting, budgeting and control over the implementation of the decisions already taken by company management. The management control represents the means, processes and tools used by company management to ensure it's the most important role in the decision-making process, in assessing performance and developing the relationship with the general strategy of the company. Its theoretical and methodological - applicative character presupposes the discussion of the objectives, the terminology, the means and the procedures used by the management control, in order to assure this privileged role in the decision making process of the commercial organizations.

At present, the Moldovan trade entities still have important reserves in the field of correct elaboration and implementation of an efficient management control system, which places these issues in the sight of the management of commercial companies as well as in the sight of researchers and specialists in the field. The examination of the particularities of management control in trading entities is often the starting point in the decision-making process which is of major importance for the activity of the commercial units and serves as a point of reference when developing and implementing the development strategies on medium and long term.

In economic theory, an entity uses production factors, while its management, depending on the specificity of the optimization process, aims at maximizing profits or minimizing losses. In the decision-making process, decision makers need relevant, current and accurate information to base their choice. Thus, it is identified that decisions are to be taken in a context of perfect rationality, and the manager decides which are the most optimal decisions that ultimately ensure maximization of utility.

Although the issues related to management control in commercial entities concentrates a whole range of specialized works, there are still loopholes related to examination of the particularities of management control system in commercial entities that operate in addition to traditional forms of trade, new trade activities such as e-commerce, a new type of trade activity that record larger and larger volumes, ensuring the opportunity, for local producers and traders, to enter easier, faster and more efficient the foreign markets.

Nowadays, there are a lot of problems that have arisen in connection with the fast development of new forms of trade and the emergence of commercial units whose commercial activity is totally different from the traditional trade activity practiced by the majority of local trade entities. We are all witnessing the accelerated growth of information technologies, the development of which has resulted in the disturbance of all economic activities, not least of commercial activity.

At the moment we are looking at the spectacular evolution of a new form of trade - e-Commerce. This form of trade, also called e-Commerce, is already a well-developed form of commerce in other foreign countries, but which is in the early stages of development in the Republic of Moldova. At the same time, the legal basis and the management control are at a rudimentary stage of evolution in this narrow and relatively new field. So, as a result, is being watched the creation of a theoretical basis for the implementation in practice of knowledge, in order to facilitate the correct implementation of management control by the entities that practice e-commerce. Difficulties also present the elaboration of a working management control system, the examination of which is also being pursued through this article.

Achieving of the pursued goals by studying the theme involves the following general objectives: developing the definitions, notions related to management control, examining the problems related to the implementation of management control in the trade units that practice e-Commerce, and the detailed examination of the implementation of new management control systems by trade units from accounting standpoint.

The conjuncture exposed above confirms and reconfirms the timeliness and importance of the investigated topic, thus establishing the necessity of approaching the complex problems related to the management control in trade units, as well as its improvement by taking into account the changes and the metamorphoses produced in the local business environment.

ANALYSIS OF BIBLIOGRAPHIC SOURCES.

The research topic presents gaps and problems in the management control of the modern forms of trade practiced by the local economic entities. One of these issues relates to the methodology of implementing control within business entities using the most advanced software and applications. The fundamental research question would be: how does insufficient methodology for implementing management control within the business entities with the use of the best software and applications affect the fairness and the possibility of performing management control within the units of commerce?

Regarding the degree of study of the research topic, we mention that although the issue of the particularities of the management control in the commercial entities concentrates a whole series of specialized works, there are still gaps in the examination of the particularities of the management control in the commercial entities that practice alongside traditional forms of trade and new businesses, such as e-commerce that is growing in volume, and ensure that retailers and domestic producers can enter more easily, faster and more efficient the foreign markets. There are also gaps in addressing the technological solutions emerging on the international and native markets for a more effective implementation of management control in business entities.

In order to deepen the chosen research theme, it started from the present stage of knowledge pointing out from the bibliography, the reference authors who have deepened most significantly in the field of management control in commercial entities. Relevant studies in the field of management control in commercial entities are found in the researches conducted by: BĂRBULESCU, C. Pilotajul performant al întreprinderii. Editura Economică, București, 2000 [1]; BOISSELIER P. Contrôle de gestion. Vuibert, 2013, 672 p. [2]; BUCȘĂ R. Dimensionarea strategică a informației costurilor în contabilitatea managerială. Iași: Ed. Tehnopress, 2009, 246 p. [3]; HONGREN T. Ch., DATAR M. S., FOSTER G. Contabilitatea costurilor, o abordare managerială. Ediția a XI-a.

Chișinău: ARC, 2006, 939 p. [4]; RADU M. Contabilitate de gestiune. Târgoviște: Ed. Bibliotheca, 2010, 343 p. [5]; TABĂRĂ N., BRICIU S. Actualități și perspective în contabilitate și control de gestiune. Tipo Moldova, Iași 2012. [6].

The main directions of these researches concern aspects of management control in economic units. These papers examine the core issues of management control - as a tool of performance and decision support for managers.

In the field of relevant management control are studies conducted by foreign researchers, including *Instrumente de management al performanței: Vol. I, Contabilitatea de gestiune*. București: Ed. Economică, 2002, 288 p. [7], and *Instrumente de management al performanței. Control de gestiune. Vol. II*. București: Ed. Economică, 2003, 272 p. [8].

MATERIALS AND METHODS.

The investigation methodology involves both general and specific approaches to management control in trade entities. The article includes complex scientific and methodological materials related to all aspects of the particularities of management control in commercial entities which practice in addition to traditional forms of commerce, new trade activities such as e-commerce, involving scientific research methods such as: classification, observation, inductive and deductive reasoning, synthesis, analysis, recording and documentation.

The legal and normative documents in the field of accounting serve as support for the present research, as well as the theoretical conceptions exposed in the specialized works of foreign and local scholars and specialists.

In order to deepen the chosen research theme, it was started from the current stage of knowledge, beginning from the bibliography, the reference authors who have deepened the most significant in the field of management control in trade entities.

Relevant local studies in the field of management control in trade entities are found in the research carried out by the team of authors Bajorean Eudochia, Melnic Georgeta, Țugulschi Iuliana and Bugan Corneliu in the book „Contabilitatea în comerț conform noilor reglementări contabile” (Accounting in trade according to the new accounting regulations) [9].

RESULTS AND DISCUSSIONS.

Trade activity in general and in particular electronic commerce, is regulated by the *Legea cu privire la comerțul interior nr. 231 din 23.09.2010* (Internal trade Law nr. 231 from 23.09.2010) [10]. E-commerce is defined as the entrepreneurial activity of natural and legal persons selling goods, performing works or providing services, using electronic communications and / or electronic contracts in accordance with *Legea privind comerțul electronic nr. 284 din 22.07.2004* (Electronic Commerce Law nr. 284 from 22.07.2004) [11].

In order to obtain the results expected from the taken decisions, it is necessary to carry out the systematic analysis and control on how to fulfill the established measures. The management control aims at knowing and analyzing the results obtained during the reference period, identifying the factors with negative action or errors committed in the decision making process and neutralizing them. As a result, management control becomes a pilot system of the entity that intervenes at all hierarchical levels.

In this sense, by control, managers provide their dynamic, real, preventive information, which increases the value of the conclusions and the quality of the taken decisions. As a result, it became a "common language for all managers", without the optimal operation of the entities being unthinkable.

In order to acquire ownership, it is necessary to act on the structures or, rather, to adapt the management control to the various possible forms of organization, which depends on the distribution of responsibilities.

The scope of management control within the entity is reflected in two main areas of action and responsibility:

- an axis relates to the use of management control by operational managers who adopt action plans to achieve the objectives and measure their achievements;

- at another level, the management of the entity, which collects, summarizes and presents useful information for exercising management control. The calculations and analyzes are subject to the judgment of the operational managers. So management control ensures consistency between strategic objectives and operational decisions of the entity.

The development of management control is closely linked to a decentralized decision-making structure. The entity must be cut into subdivisions called accountability centers, each center assigning it a mission and goals to achieve.

Decentralization is the process that supports the leaders of entities by focusing on strategic issues. This has some advantages:

- releasing managers from current problems by empowering subordinates, thus contributing to their qualification, widening the field of competence and increasing motivation through greater decision-making autonomy;
- improves the entity's rapid response by reducing the decision-making process.

In other words, entity segmentation by accountability centers facilitates leadership by assigning responsibilities to managers at all levels, which, through management control, measures the contribution of each center to overall performance.

We mention that the establishment of accountability centers in practice is difficult to achieve and encounters some problems:

- segmentation should be in line with the organizational structure of the entity by activity centers;
- presupposes a good knowledge of the functions of the entity;
- in view of the introduction of management control within the entity, particular attention should be paid to establishing an optimal number of hierarchical levels in order to achieve decentralization of activities and the delegation of responsibilities.

The role of management control within entities is to make responsible people to cooperate in the same mood by leaning on:

- structuring the entity with an optimal number of hierarchical levels, setting the rules for the exercise of responsibilities, the attributions and the degree of subordination within the delegations granted;
- total adherence to all the hierarchical levels of those responsible people for budgeting;
- the quality of communication of financial and accounting information;
- getting accurate information on the achievements of the entity as quickly as possible.

The management control can be exercised at all organizational levels of the entity where an activity is carried out. This becomes an essential factor for the operation and evolution of entities. In this sense, management control becomes the pivot of the operational control process, which assumes the role of binder, by taking into account the key success factors, strategic of the current management and providing the managers with the means to adapt the objectives to the constant realities and tendencies.

To achieve its objectives, management control uses a budgetary, informational and performance measurement system. Regarding this perspective, management control, as an information system, influences both the tactical decisions and the strategic decisions of the entity. As an integral part of the information system, management control interferes, along with other components of the entity's overall information system, in decision-making.

The purpose of management control lies in providing information to managers for decision-making on the entity's current and long-term management. However, the quality of the decision and the achievement of performance also depend on the quality of the information provided by it.

The production of information by management control for managerial decisions must be conditional on the relationship between the cost of information and the value of this information for managers. In this sense, management control can be viewed as a tool that allows the manager to adopt a set of options and choose a satisfactory solution depending on a particular context.

Management control - as decision support for industrial production management, has a cyclic structure: information - analysis - decision - action - control.

Management control should develop analytical procedures to highlight the impact of the main factors of influence, comparing both to the standard (budget) and to the corresponding period of the previous year.

It is not just a finding of deviations, it is an instrument, a means to know the reality as well as the possibilities to identify and prevent deficiencies and anomalies.

Control permeates the essence of the phenomenon, supports managers in effective leadership, allows the negative aspects to be noticed when they manifest themselves as a tendency, and intervenes operative to prevent and eliminate the causes that have led to their emergence.

Customer-relationship management (CRM) is an approach to managing the company's interaction with current and potential customers. It uses data analysis on customers' history with a company to improve business relationships with customers, specifically focusing on customer retention and ultimately driving sales growth.

One important aspect of the CRM approach is the CRM systems that compile data from a range of different communication channels, including a company's website, telephone, email, live chat, marketing materials and, more recently, social media. Through the CRM approach and the systems used to facilitate it, businesses learn more about their target audiences and how best to cater to their needs.

The CRM system can be personalized for any business. 75% of consumers prefer companies to use personal information to improve their shopping experience, and recent studies show that more than two-thirds of consumers are willing to provide more personal information to receive a personalized service.

Businesses come in different shapes and sizes and therefore it is always important to find a CRM solution that can be tailored to the needs of each business. This solution allows you to modify, remove or incorporate your own settings to get the perfect CRM system for every business.

CONCLUSIONS.

Thus, it should be noted that the managerial decisions and decision-making are the key points of the entity, around which the activities and actions of collecting, processing, analyzing, interpreting, centralizing financial information, and beyond, within the entity revolve.

By studying the topic approached, it is intended to obtain results that will materialize in the development of the theoretical basis regarding the particularities of management control in commercial entities, as well as the formulation of some original proposals regarding the improvement of the management control adapted to the "mutations" over a decade after the accounting reform.

The scientific results submitted for support consist of the improvement and application of the budget-based management control as well as the argumentation of the implementation of a more efficient system of managerial reporting - as an effective tool for management control in order to substantiate managerial decisions.

"Driving a firm is to be a master in her future, and being a master in the future means knowing how to work with information," said M. Jr. Harper. All modern theories of the organization attest to leadership in a quasi-automated manner, which is the very essence of management control. But in order to gain such control, it is necessary to act on the structures, or rather to adapt management control to the various possible forms of organization that depend on the division of power and responsibilities. Management control can be exercised at all organizational levels, it is present everywhere an activity is carried out. As an integral part of the information system, management control interferes, along with other components of the entity's overall information system, in decision-making.

Currently, the economic environment requires many changes in the way businesses are organized and structured. This is due to the fact that organizations operate in an unstable environment characterized by rapid, large, scattered, unpredictable developments in time and space that make the information uncertain. For managers, it is a real challenge to identify from the avalanche of indicators, those who can be used today, the most important ones to stay afloat. Under these circumstances, management control must intervene to enable business activity and decision-

making so that economic entities in general and commercial entities in particular achieve their proposed objectives.

To date, the vast majority of foreign business entities use a customer relationship management system (abbreviated CRM in English Customer Relationship Management), which can be considered an integral part of the management control system within the business entities. CRM is a set of strategies, policies and technologies designed to attract, retain and reward customers. In a broad sense, CRM includes the activities of marketing, sales, financial and technical support departments that relate to customers, potential customers, suppliers and partners.

REFERENCES

1. BĂRBULESCU, C. *Pilotajul performant al întreprinderii*. Editura Economică, București, 2000;
2. BOISSELIER P. *Contrôle de gestion*. Vuibert, 2013, 672 p.
3. BUCȘĂ R. *Dimensionarea strategică a informației costurilor în contabilitatea managerială*. Iași: Ed. Tehnopress, 2009, 246 p.
4. HONGREN T. Ch., DATAR M. S., FOSTER G. *Contabilitatea costurilor, o abordare managerială*. Ediția a XI-a. Chișinău: ARC, 2006, 939 p.
5. RADU M. *Contabilitate de gestiune*. Târgoviște: Ed. Bibliotheca, 2010, 343 p.
6. TABĂRĂ N., BRICIU S. *Actualități și perspective în contabilitate și control de gestiune*. Tipo Moldova, Iași 2012.
7. ALBU N. ALBU C. *Instrumente de management al performanței: Vol. I, Contabilitatea de gestiune*. București: Ed. Economică, 2002, 288 p.
8. ALBU N. ALBU C. *Instrumente de management al performanței. Control de gestiune. Vol. II*. București: Ed. Economică, 2003, 272 p.
9. BAJEREAN, Eudochia, MELNIC, Georgeta, ȚUGULSCHI, Iuliana, BUGAN, Corneliu. *Contabilitatea în comerț conform noilor reglementări contabile*. Chișinău: ASEM, 2016. 310 p. ISBN 978-9975-53-613-4.
10. Legea cu privire la comerțul interior nr. 231 din 23.09.2010. În: *Monitorul Oficial al Republicii Moldova*. 2010, nr. 206-209, art. 681.
11. Legea privind comerțul electronic Nr. 284 din 22.07.2004. În: *Monitorul Oficial al Republicii Moldova*. 2004, Nr. 138-146, art. 741.

THE INFLUENCE OF THE URBAN CENTERS FROM THE CENTRAL DEVELOPMENT REGION ON THE CONSUMPTION OF WATER RESOURCES

BURDUJA DANIELA ^{1,2}

e-mail: dana.virlan@mail.ru

Scientific coordinator: dr., conf. BACAL PETRU

e-mail: pbacal16@gmail.com

1. Institute of Ecology and Geography

Republic of Moldova, Chisinau, Academiei, 1 Street

(+373 22) 73-15-50, (+373) 695-94-540

2. Academy of Economic Studies of Moldova

Republic of Moldova, Chisinau, Banulescu-Bodoni, 61 Street

(+373 22) 22-41-28

Abstract. *This paper includes a study on the use of water resources in the urban centers of Central Development Region of the Republic of Moldova. This study aims at highlighting and analyzing the water consumption in the urban centers and their influence on total water consumption in this region, namely with regard to the sources of water capture for consumption as well as its branch structure*

Key words: *urban centers, water resources, consumption, branch structure, region.*

JEL CLASSIFICATION: Q 25 Water

INTRODUCTION

Water is an essential natural resource for developing urban areas in the world. Commercial, residential and industrial consumers already make considerable demands on this resource, which often requires treatment, and which can be located at a distance from the city and which is almost always required by multiple sectors. Urban water management is now at the brink of a revolution as response to the rapid rise in urban water requirements and the need to make urban water systems more resistant to climate change. Increased competition, conflicts, deficits, waste and degradation of water resources make it imperative to rethink conventional concepts - moving from an approach that attempts to manage isolated aspects of the urban water cycle in an integrated approach supported by all stakeholders [13].

The Central Development Region (CDR) of the Republic of Moldova includes 13 districts: Anenii Noi, Călărași, Criuleni, Dubăsari, Hâncești, Ialoveni, Nisporeni, Orhei, Rezina, Strășeni, Șoldănești, Telenești and Ungheni. The CDR comprises 354 administrative-territorial units: 14 cities and 340 villages (communes) [11]. The largest city in the region is Ungheni, with a population of 38,100 inhabitants, followed by Orhei - 33,500 inhabitants and Straseni - 21,200 inhabitants. The total number of localities in the region accounts for approximately 35.6% of the total number of localities in the country, the share of towns being about 23%. In the Central Development Region, most of the urban localities are in the direct influence area of Chisinau, with an influence range of 50 - 60 km, except for the towns of Ungheni, Telenești, Soldanesti, Rezina, which are at distances of 100-130 km.

MATERIALS AND METHODS

The recent intensification of natural and anthropogenic risks alarmingly affects the water supply capability of the population and of the economic activities in most of the world's countries. Complex assessment of water resources and their consumption in relation to the manifestation of these risks becomes a priority research direction for geographic, social and economic sciences. Geographic surveys also play a leading role in creating methodological and scientific support for the application of OECD principles on good water governance [8], including the principles of regionalization and decentralization of water management, actively promoted by the OECD, both in the developed states and in the developing countries.

The present study is based on the analysis of the statistical data on the consumption of water resources, and for this purpose, the methods were used: analysis and synthesis, comparative, statistical and graphics. The use of the analysis and synthesis method allowed assessment of the water resources consumption in the CDR urban area as well as the branch structure of water use. Also, the analytical method was used for: a) to identify quantitative and qualitative aspects of water use; b) diagnosis of situation of water use and elaboration of recommendations to prevent problematic situations in this field; c) definition of priority directions of activity optimization of water resources management in the towns of region study. The statistical and mathematical methods have been selected and processed the water consumption data that was rendered by the graphic method, which allowed a clear image for analysis to be obtained. The comparative method was applied for establishing the trends in the branch and spatial aspects of the water use and this method also analysed the ratio of the sources of the abstracted water in each administrative-territorial unit in this region.

The main sources of this research were: 1) Generalized Annual Reports on Water Management Indicators of the Basins Department of National Agency „Apele Moldovei” [1]; 2) Annual Reports of Ecological Agencies and Inspection [9]; The Reports on water supply and sanitation companies of Association „Moldova Apa-Canal” [2]; The Report of National Bureau of Statistics on the public water supply and sewerages networks [6] and on the number of population by municipalities, towns, communes [7]. The study comprised the 2007-2017 years.

The field of water supply and consumption of water resources is reflected in various publications, especially elaborated by local authors Todos I. [12], Bacal P. [3-5], Burduja D. [4-5] and others. But, as far as the urban consumption of these resources in our country is concerned, it has been analyzed and researched less, which has imposed making this study.

RESULTS AND DISCUSSIONS

1. The contribution of urban areas to total water use in the Central Development Region

In the year 2017, in the Central Development Region 12.6 mln m³ of water were used, with the largest quantity of water being supplied in the towns of Ungheni (1.2 mln m³) and Orhei (763 thousand m³), these being also the localities with the largest number of inhabitants in the region, which explains the larger volume of water used. Although the city of Ialoveni has a smaller population than Strășeni, it has consumed more water, explaining the existence and influence of major enterprises on water consumption.

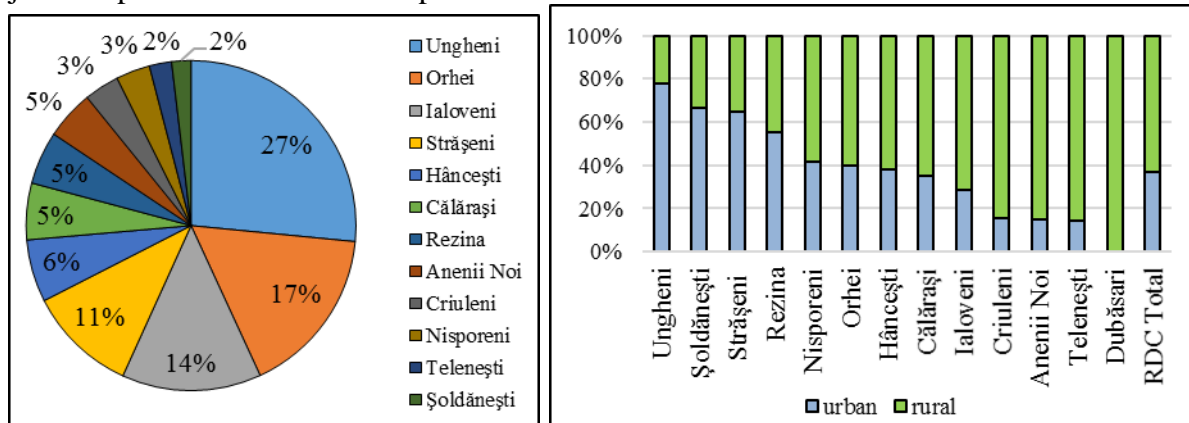


Figure 1. The share of urban centers in the CDR in the volume of water supplied in the urban area (in 2017)

Figure 2. The ratio of the amount of water supplied to urban and rural localities in the CDR (in 2017)

In the CDR cities, in the study year, 4.6 million cubic meters of water were supplied to consumers, accounting for approximately 37% of the total volume of water supplied throughout the region. The significant volume of water used in the cities of the region imposes the necessity to the estimation of water consumption for the elaboration of some measures to make this consumption more efficient in the context of the urbanization phenomenon that encompassed the entire world. Of

the 13 districts of the region, in 4 of them (Ungheni, Șoldănești, Strășeni, Rezina) more than 50% of the supplied water is for the urban area. The lowest amount of water supplied to the urban area is attested by Criuleni and Telenesti.

2. The peculiarities of water consumption in the urban area of the CDR and its dynamics

Water is supplied to 3 categories of consumers: the population, budgetary organizations and economic agents. The ratio of these categories of consumers of water resources varies from one city to another depending on the population number and the level of development of the city. Households remain major consumers of drinking water in the region. About 81% of the total water sold is used by the residential sector, while industrial consumption is about 11% and institutional consumption of 7%.

Table 1. Volume of water supplied in urban areas of CDR by categories of consumers, year 2017

The city		The volume of water supplied (thousand m3)		
		to the population	budgetary organizations	economic agents (to other consumers)
1	Șoldănești	73,6	5,5	8
2	Rezina	196	23,1	20,2
3	Telenesti	84,1	10,2	6,3
4	Orhei	563	47,8	152
5	Criuleni	142	11,1	4,7
6	Anenii Noi	19d	11	16,6
7	Ialoveni	550	19,5	60,6
8	Strășeni	393	47,7	52,3
9	Călărași	509	24,6	25,7
10	Ungheni	941	115	167
11	Nisporeni	120	20,3	13,8
12	Hâncești	234	24,4	23,5
Total		3999	360	551

Source: Developed by author according to data NBS [6]

In all cities under study, more than 80% of the water is supplied to the population, with the exception of Orhei (74%), Ungheni (77%) and Nisporeni (78%). Only 8% of the water supplied to all the cities of these regions is provided to budgetary organizations, the lowest value being certified in the city of Ialoveni (3%), while the largest is in the city of Nisporeni - 13%. In the case of economic agents, the largest volume of water is supplied in the cities of Orhei and Ungheni, being 20% and 14% respectively of the total volume of water supplied in these cities. It is worth noting that the data presented refer only to consumption public water supply systems, while the industry feeds from private deepwater drilling. Currently a structured evidence of industrial consumption is not available.

Analyzing in dynamics, over the period 2007-2017, the total volume of water supplied in the CDR increased approximately 2.3 times, while in the urban areas it was 1.4 times only. Perhaps not so much has increased consumption as its monitoring has intensified due to the expansion of water supply networks in many rural areas. However, the volume of water supplied is much smaller than the actual volume of water consumed, since only 49% of the total water produced is sold to consumers, while 51% is considered as non-invoiced water. Hence, the extension of water supply networks will not only improve the quality of life of the population but will also allow for more efficient monitoring of the volume of water consumed, which is very important for the sustainable use of water resources.

The density of the aqueduct networks in the CDR is 25.8 km / 100 km², which ranks second after the SDR, which has a density of 31.3 km / 100 km², and is lower than the national average of 29.3 km / 100 km². The total length of drinking water distribution networks and aqueducts in 2013 amounted to 2 745,5 km or 779,6 (40%) km more than in 2009. All urban localities (100%) and approximately 46% rural SDRs have centralized water supply systems, providing drinking water to only 74% of the urban population and 39%. of rural population [10]. The total share of the

population connected to water systems in the CDR is estimated at around 46%, while the countrywide connection rate is about 54%.

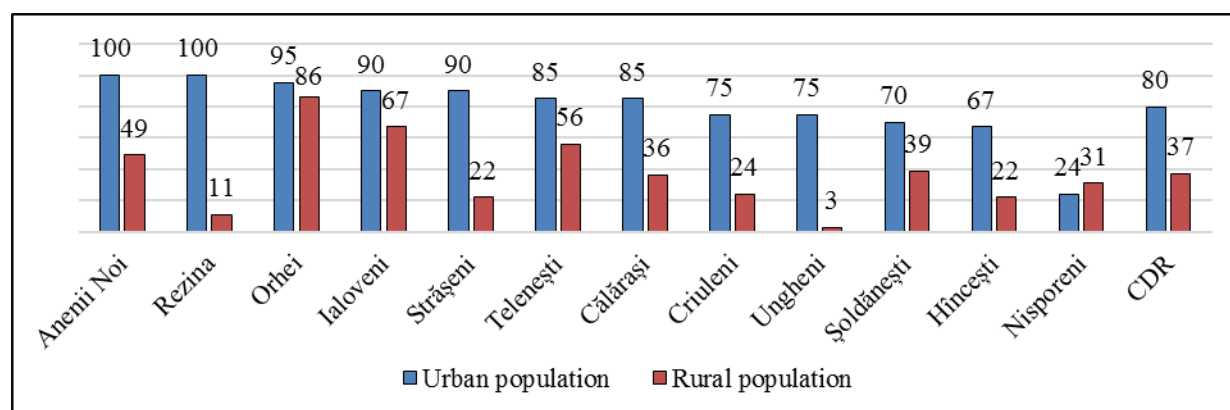


Figure 3. The population connected to the public water supply system in the CDR, % (2013) [2;6]

From Figure 4 we can see that although 100% of urban localities have centralized water supply systems, the percentage of population connected to these systems only in Anenii Noi and Rezina reaches the 100% threshold, in other cities this percentage being lower. Only in the district of Nisporeni the urban population that is connected to the water supply system is only 24% being even less by 7% than the rural population connected. Overall, the best situation is in the Orhei district, where 95% of the urban population and 86% of the rural population is connected to water supply systems. A major gap between the urban and the rural population is attested in the Ungheni district, where only 3% of the rural population is connected to the water supply systems, a similar situation is in Rezina district where the connected rural population represents 11% compared to 100% of the connected city. The continuity of water supply services in most urban areas in the CDR reaches 100%, while Calarasi provides water for 18 hours a day.

The state of the existing Moldova Apa-Canal Association infrastructure varies considerably from urban to rural areas. In recent years, with the financial support from international funding agencies, budget and state funds, as well as benefiting from the improvement of the national economy and individual welfare (due to remittances), in the regional context of EU expansion, a positive change has been observed in the state of the Moldova Apa-Canal Association infrastructure, and the quality of water supply services for most urban localities. The following cities benefited from the donor support: Nisporeni, Orhei, Ungheni, Hincesti, Ialoveni, which brought about a substantial improvement of the Moldova Apa-Canal Association infrastructure existing in the respective cities. However, some segments of distribution networks can not be refurbished, requiring an urgent replacement [2].

Increased of urbanization, population growth and living standards have been major drivers in the increase of urban water use in the past century. The amount of urban water use depends on climate, level and efficiency of public supply services, patterns and habits of water use by the population, technological changes (for example, water saving technologies and use of alternative sources) and socioeconomic instruments. The connection of populations to water supply systems has also increased over recent decades. Urban water use is not evenly distributed over time as households and services tend to demand more water in hot and dry periods. There are also seasonal variations in population, due to tourism, that influence the amount of water used at a particular time. At the same time, population density varies over regions and countries. Yearly country aggregated figures do not reflect these seasonal and regional variations [14]. In the CDR, average per capita consumption is on average 65 l / person per day, the lower limit being in the Nisporeni district (39 l / person per day) and the upper limit in Ialoveni (83 l/person per day). In the rural area of the CDR, this consumption is 58 l / person per day, being 23 l lower than in the urban area where in the case of the Ialoveni and Ungheni districts it is more than 2.5 times higher than in the rural area. However, in the rural areas of Criuleni, Anenii Noi and Calarasi districts this consumption exceeds the value recorded in the urban area of these districts.

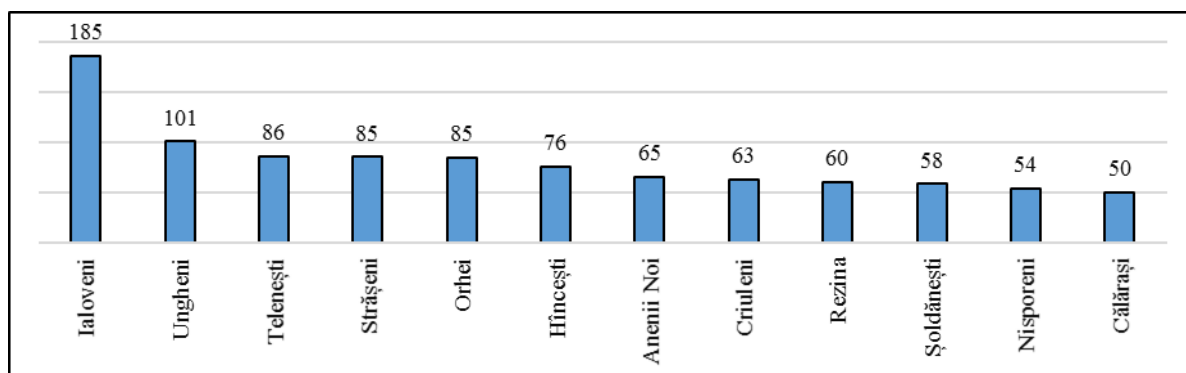


Figure 4. The consume of water per capita in the urban area of CDR, 2017 year

Source: Developed by author according to data NBS [6]

On average, in the urban area of CDR, water consumption per capita is about 81 l / person per day, varying from one city to another within the limits of 50 - 185 l / person per day, depending on the area, population, level of development and requirements. Although we have the highest water consumption in the town of Ungheni and Orhei, the highest consumption per capita is in Ialoveni city - 185 l / person per day and the lowest in Calarasi, being only 50 l / person per day. And if we look at the percentage of the population connected to the water supply systems, Ialoveni is ranked 4th and in Ungheni this percentage is 10% lower than in Călărași, although the water consumption per capita in Ungheni is 2 times higher.

2. Analysis of sources of water resources capture and the branch structure of their consumption

Water management is usually affected by the geographical location of a city. The main sources of drinking water in the urban areas of the Center Region are the surface sources (Nistru and Prut) as well as the underground waters. The surface water captured is treated at treatment plants: in Chisinau (Vadul lui Voda being the largest surface water in the Republic of Moldova, designed to supply water for Chisinau municipality, with possible extension to neighboring districts - Criuleni, Dubasari, Ialoveni, Straseni and Călărași), Rezina (Nistru), designed to supply water to both the population and the industrial sector in Rezina) as well as Ungheni and Nisporeni (the outlets are designed to supply water from the Prut River).

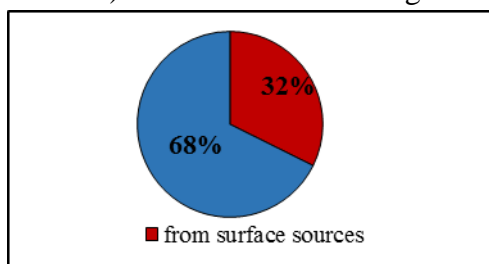


Figura 5 Water sources for water consumption in the CDR urban area (2017) **Source:** Developed by the author according to the data SEI [9]

A new catchment system in Hincesti district (Cotul Morii) is designed to supply water in the neighboring villages along the Prut River. Rural settlements are mostly supplied with underground water, which often does not meet the requirements of drinking water quality standards. As in the whole of the CDR, in the cities of this region groundwater represents the main source of water accounting for 68%. Surface water is only 32% due to the city of Ungheni, which is the largest consumer, which in 2017 consumed 1, 22 million m³ of water (27% of the total volume of water supplied in the urban area of the CDR, being conditioned by the fact that this city is located in the immediate vicinity of the Prut River. But we can say that the city of Ialoveni uses priority water from surface sources because the water and sewerage services in Ialoveni city are provided by SA "Apă Canal Chișinău", which distributes the captured water from the Dniester River.

The branch structure of water consumption in the CDR's urban area is similar to that for the CDR as a whole, the main categories of use being: communal, food, service, construction and transport. According to IES data, which provides information on water management indices, the communal sector is the largest water consumer (83%) that exceeds total water consumption in the CDR for this purpose.

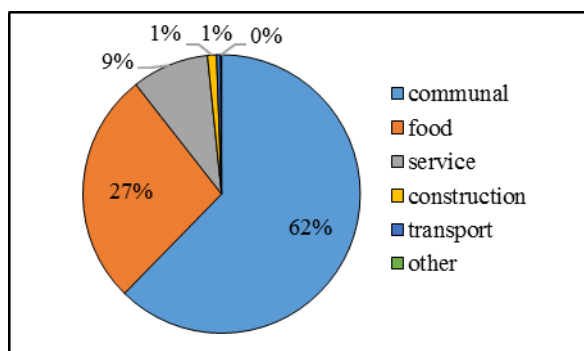


Figure 6. Main water use categories in the CDR (year 2017)

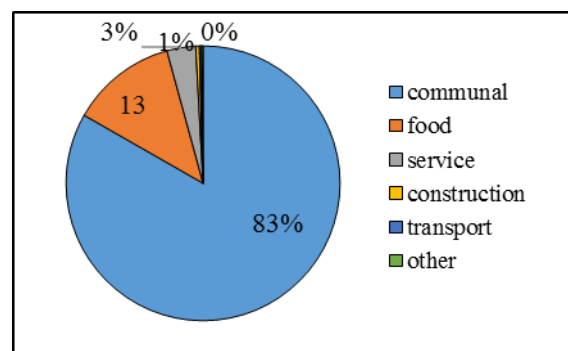


Figure 7. Main water use categories in the cities of the CDR (2017)

Source: Developed by the author according to the data SEI [9]

Household water use is usually the most important part of municipal water use, because it accounts for over half of the total municipal water use in many countries. It usually requires high water quality and reliability which leads to high cost. Residential water use is also directly linked to the general public health. Improving the health of the poor is one of the main goals of water and sanitation projects. Therefore, household water use is always the top priority in the municipal water supply [9]. In the CDR cities, unlike the whole region, the communal setter is the largest water consumer, the agro-food complex having a rather small contribution (3%). In the CDR, the volume of water used by the agri-food complex is 27%, being twice as large as in the urban area of the region, and in the case of water used for servicing in the CDR it is 3 times higher than in the urban area [4].

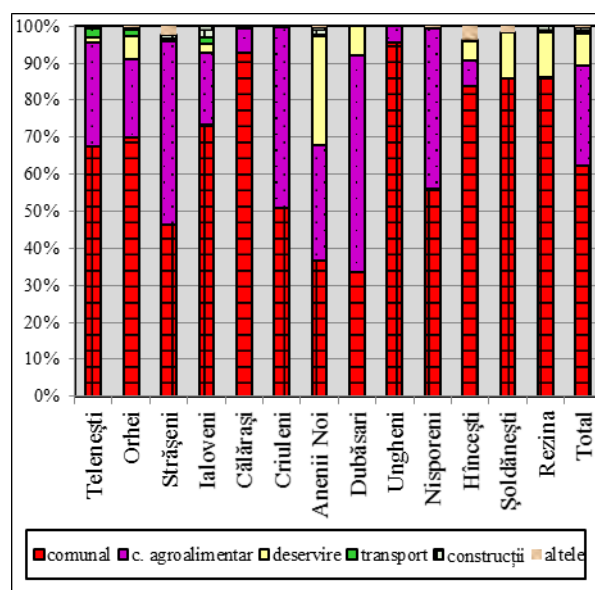


Figure 8. Branch structure of water consumption in CDR (2017)

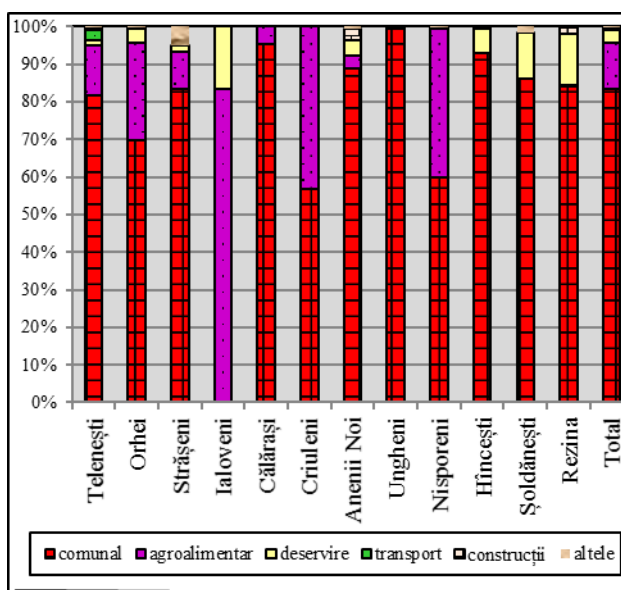


Figure 9. Branch structure of water consumption in urban area of CDR (2017)

Source: Developed by the author according to the data SEI [9]

In the urban area of the Central Development Region, the largest consumers of water for production are SA Orhei Vit juice factory - 276 thousand m³, ice cream factory "Sandriliona" from Ialoveni (17 thousand m³), SRL "Lapmol" in Călărași (19 thousand m³), also the Orhei wine factories: Chateau Vartely (16,4 thousand m³), from Călărași: SA Călărași Divin (14 thousand m³); from Strășeni: SA Migdal P, SRL "Nectar-S" (5 thousand m³), also "Cascad-vin" SRL from Ialoveni (7 thousand m³), S.A. "Ungheni vin" (8 thousand m³), NIS "Struguraș" from Nisporeni (28,4 thousand m³). As far as service, is highlighted the hospitals, namely the Orhei district hospital

(40 thousand m³), SMPS "Anenii Noi Hospital" with a consumption of about 12 thousand m³, Hâncești district Hospital 16 thousand m³, as well as Rezina penitentiary No.7, with 85 thousand m³. In the category of construction, is highlighted "Lafarge" in Rezina, which uses an average of 11.5 thousand m³ of water.

CONCLUSIONS:

1. Urban centers have a contribution of about 37% to total water consumption in the Center Development Region, with priority being given to underground water sources except for Ungheni, which uses surface water, being the largest city and consumer water in the region.
2. The communal sector is the largest water consumer (83%), overall in the CDR, this sector uses a smaller percentage because the agro-industrial sector in rural areas is more diverse and uses more water.
3. From all the cities of the region only in Nisporeni 24% of the urban population is connected to the water supply systems and only 100% of Orhei and Rezina
4. Of the 13 districts of the CDR, only 4 of them (Ungheni, Soldanesti, Strasenii and Rezina) urban centers consume over 50% of the total volume.
5. On average, in the urban area of CDR, water consumption per capita is about 81 l / person per day, the highest water consumption being in the town of Ungheni and Orhei, the highest consumption per capita is in Ialoveni city - 185 l / person per day and the lowest in Calarasi, being only 50 l / person per day.
6. In view of the pressure on water bases, the use of existing reserves must become more efficient. Service providers lose large volumes of water to losses in the distribution system due to the state of these systems that have a rather large wear.

BIBLIOGRAPHY

1. Agenția „Apele Moldovei”. Direcția Bazinieră. Rapoartele anuale (2007-2017) generalizate privind Indicii de gospodărire a apelor în Republica Moldova.
2. Asociația „Moldova Apă-Canal”. Indicii financiari și de producție ai activității întreprinderilor de alimentare cu apă și canalizare (2011-2017). In: www.amac.md/ (accessed on 17.04.2019).
3. BACAL P. *Gestiunea protecției mediului înconjurător în Republica Moldova (Aspecte teoretice și aplicative)* Editura ASEM Chișinău 2010, 240 p
4. BACAL, P. BURDUJA, D. *The regional peculiarities of water use in the Republic of Moldova* În: *Lucrările Seminarului Geografic „D. Cantemir”*, Ediția XXXVII, Vol. 46, Nr. 2. Iași 2018, p. 19-37.
5. BACAL, P. BURDUJA, D. *Dynamics and branch structure of water consumption in the Republic of Moldova*. In: *Present Environment and Sustainable Development*, Volume 11, no. 2, 2017. p. 187-201.
6. Biroul Național de Statistică. *Rapoartele anuale (2007-2017) privind activitatea sistemelor de aprovizionare cu apă și canalizare*.
7. Biroul Național de Statistică al Republicii Moldova. *Rapoartele anuale (2007-2018) cu privire la numărul populației stabile pe municipii, orașe, comune*. (accessed on 17.01.2019).
8. OECD EAP Task Force (2003), Key Issues and Recommendations for Consumer Protection: Affordability, Social Protection, and Public Participation in Urban Water Sector Reform in Eastern Europe, Caucasus and Central Asia, <http://www.oecd.org/env/outreach/14636760.pdf>.
9. Inspectoratul Ecologic de Stat. (2007-2017). *Anuarele privind calitatea factorilor de mediu și activitatea Agențiilor și Inspekțiilor Ecologice*.
10. Raportul Național de Dezvoltare Umană în Moldova 2015-2016
11. Strategia de Dezvoltare Regională a ADR Centru (2016-2020). În: adr.centru.md
12. TODOS I., Teză de doctor în economie „*Particularitățile managementului calității serviciilor publice locale de aprovizionare cu apă potabilă și canalizare*”, Chișinău, 2009. În: cnaa.acad.md
13. AKIÇA BAHRI. *Managementul integrat al apei urbane*. Available online: <https://www.gwp.org/globalassets/global/toolbox/publications/background-papers/16.-integrated-urban-water-management-2012-rumanian.pdf>
14. European Environment Agency. *Water use in urban areas*. Available online: <https://www.eea.europa.eu/data-and-maps/indicators/water-use-in-urban-areas>
15. TINGYI LU. *Research of domestic water consumption: a field study in Harbin, China*. Available online: http://www.switchurbanwater.eu/outputs/pdfs/W3-1_GEN_PHD_Research_of_domestic_water_consumption_-_a_field_study_in_Harbin_China.pdf

BUDGETING AND KEY PERFORMANCE INDICATORS ESTABLISHMENT AS A TOOL FOR DECISION-MAKING PROCESS OPTIMIZATION

ROTARU DARIA, PhD student,
rotaru.daria.94@gmail.com,

Academy of Economic Studies of Moldova,
Republic of Moldova, Chișinău, Bănulescu-Bodoni st., 61,
<http://www.ase.md/>, tel.: 079963326

Abstract. *Traditional budgeting methods and planning of business activities have been widely used as one of the basic management techniques. Traditional budgeting methods are very often criticized for the low flexibility and strong focus on resource allocation. The current business framework points at the necessity of adopting modern budgeting methods, which could help to both: better management performance and efficiently control of financial activity. Actually trends lie in adopting flexible budgeting system focused on the use of key performance indicators (KPI). The objective of the study was to analyze the importance of the budgeting systems for company decisional process based on KPI. The study is realized using the interdisciplinary, descriptive and dialectical methods of research, which allowed to confirm research hypothesis based on the fact that budgeting is an instrument of planning, which makes a higher efficiency of decision making process and which allow to achieve higher level of performance using financial and non-financial key performance indicators.*

Key words: *budgeting; planning; KPI; decisional process; management; control environment;*

JEL CLASSIFICATION: M-40, M-41

INTRODUCTION.

The key to success of a profitable economic activity is based on a rational and efficient budgeting process. In the absence of an adequate budgeting process, managers get an unclear image of the entity's financial performance. Thus, the efficient organization of the budgetary system helps to identify the entity's strengths and weaknesses by comparing the actual results with the budgeted indicators. The main objective of this research is to identify the key performance indicators reasonable for the budget elaboration which can be relevant for the overall corporate performance as well as for the entity's managers in their decision-making process.

MATERIALS AND METHODS.

The research has been conducted by making use of outcomes of studies carried out by national and foreign scholars as Ahmed P. K., Bahrusina M.A. Hrushchii B.E., Sizova T.B., Gamaiunov B.B. Belverd E. Needles, JR. Henry R. Anderson, James C. Caldwell, Grabarovschi L., Constantinescu V., Bugaian L., Boulescu M., Ghita M., Gunasekaran A., Kobu B., Doran G.T. and others.

The study is based on the interdisciplinary, descriptive and dialectical methods of research, including also the fundamental elements, i.e. deduction, synthesis, analysis, as well as on methods appropriate to economic disciplines such as comparison, observation, selection, etc.

To identify the relationship between selected KPI and overall corporate performance, the following research hypothesis were formulated:

1. The author assume that if businesses use a system of key performance indicators (KPI) will achieve higher level of performance;
2. The author assume that businesses applying in addition to financial indicators also non-financial indicator, will achieve better performance;

RESULTS AND DISCUSSIONS.

The content of the researchers approaches in the field of budgeting can be reduced to identifying the budget as:

- an estimate, a financial document created prior to the proposed or established objectives related to the future periods [1, p.305];
- quantitative expression of the planned activities, which reflects the possible and necessary financial and natural economic indicators of the enterprise for a certain period [2, p.294];
- financial plan of the enterprise, which covers all aspects of its functionality, to forecast the future financial transactions [3, p.178];

- planning document, drawn up before the anticipated operations [4, p.1045];
- financial plan that covers all aspects of the entity's activities and compares all expenses incurred and revenues received for the upcoming period as a whole and in parts.[5, p.185].

From the author's point of view, the budget is the tool that allows achieving the company's strategic goals through timely monitoring of planned objectives. The managers establish at the initial phase the plan of activities that includes the general strategic objectives of the entity, as well as the deadlines for their implementation using a planning (Table no.1). Operational objectives are derived from strategic objectives, which allow task segregation between the responsible persons of departmental structures. The overall corporate performance of the budgeted activity largely depends on the established objectives and the relevant indicators required to be monitored in order to avoid the risk factors with negative influence timely.

Table 1. The model for strategic and operational objectives planning on the first phase of budgeting

Strategic planned objectives	Period of implementation	Departments	Operational planned objectives	Indicators	Responsible persons
Profit increase with 5%	9 months	Sales	1.Sales increase with 13% 2. etc.	1.Sales revenue; 2.Sales costs; 3. etc.	Sales manager
		Supply	1.Increasing the materials supply at the lower cost and at the same level of quality 2. etc.	1.Percent of damaged materials; 2. etc.	Supply manager
		Production	1.Production increase with 11% 2. etc.	1.Perecent of material waist;	Director of production department
		Marketing	1.Increase the number of regional advertising 2. etc.	1.Sales by region;	Director of marketing department

Source: Developed by the author based on [6, p.27];

Any economic or financial operation or activity is analyzed not only by itself, but also related with established criteria, or with a basis of comparison [7, p.35]. Thus, in the author's opinion, the *comparison* process is the point of contact between the budgeting and operational phases and the decision-making process (figure 1).

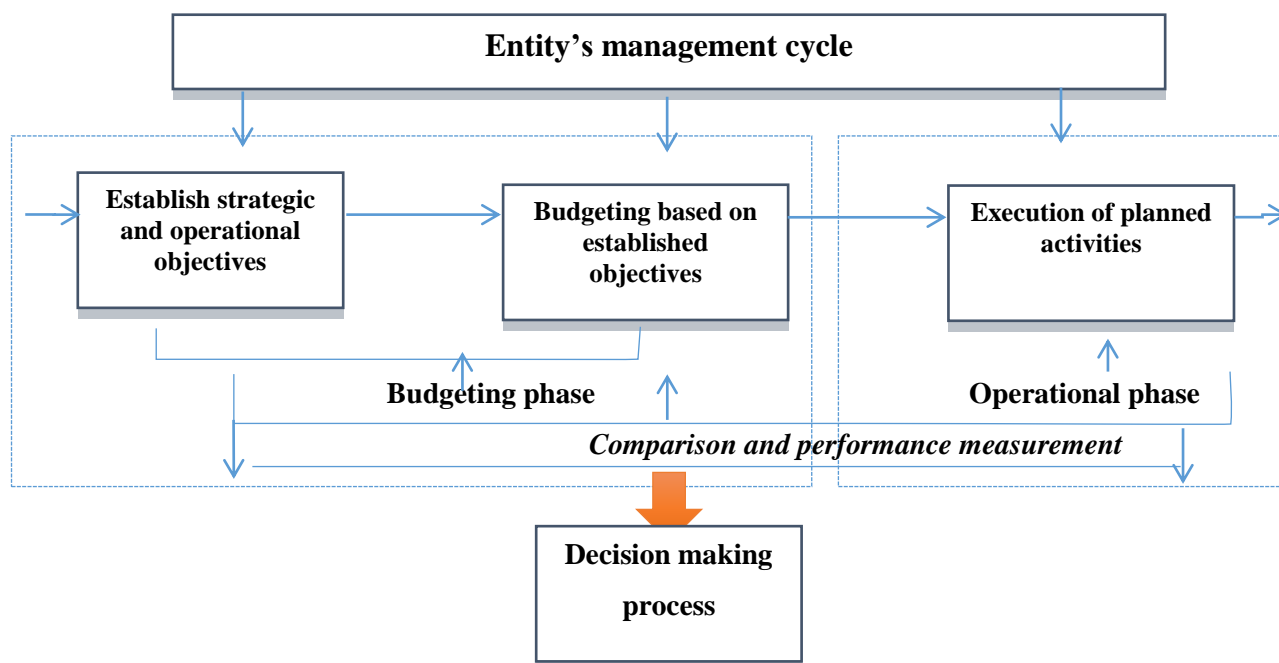


Figure 1: Phases of the entity's management cycle

Source: Developed by the author

Namely, the comparison process helps managers in decision making process following the certain objectives:

- ✓ Identification of positive and negative deviations from the budgeted level;
- ✓ Determination of the factors that contributed to the deviations occurrence with both, positive and negative influence;
- ✓ Analyze of internal and external factors of influence;
- ✓ Quantification of losses;
- ✓ Developing internal regulations for adjusting negative deviations and reducing risk factors in future;
- ✓ Taking conclusions and approving optimization steps for the next financial year.

Traditional corporate performance measures have mostly financial character which measures the rate of return on investment, cash flow and profit margins [8, p.26]. From the author's point of view and after extensive literature resources search, the issue of business performance measurement system should combine the financial and non-financial indicators which can be applied using Key Performance Indicators.

Key Performance Indicators (KPIs) are the main indicators of progress toward an intended goals. KPIs provides a focus for strategic and operational improvement, create an analytical basis for decision making process [9, p.2821]. A key performance indicator may be a number or a ratio. As defined by Doran, G. T, the KPI should also meet the SMART principals. [10, p.35–36.]

- **Specific**—it is clearly defined, and targets a specific area of improvement;
- **Measurable**—it can be quantified;
- **Assignable/Attainable**—it is someone's responsibility, it is realistic and achievable;
- **Realistic**—it is based on practical, not theoretical considerations;
- **Time-related**—it can be measured over time;

The KPI objectives are settled in order to improve the corporate performance measurement through obtaining a clear framework of the entity's business position at a certain moment. The main KPI aims is to:

1. Provide objective evidence of progress towards achieving a desired result;
2. Measure what is intended to be measured to help inform better decision making;
3. Offer a comparison that gauges the degree of performance change over time;

4. Can track efficiency, effectiveness, quality, timeliness, governance, compliance, behaviors, economics, project performance, personnel performance or resource utilization;
5. Are balanced between leading and lagging indicators;

Based on performed research, the author propose a model of KPIs (Table 2) which should be established by the entity's managers with a quiet confidence that the results obtained by using selected KPIs would be reasonable for the decision making process.

Table 2. Model of financial and non-financial KPIs

KPI (Key performance indicators)		Budget	Actually	Ratio (Actually/Budget)
Financial indicators	Revenue			<i>the ratio of the actual indicator to the planned</i>
	Cost			<i>the ratio of the actual indicator to the planned</i>
	Profit			<i>the ratio of the actual indicator to the planned</i>
	Accounts receivable			<i>the ratio of the actual indicator to the planned</i>
	Solvency			<i>the ratio of the actual indicator to the planned</i>
	EBITDA (Earnings Before Interest, Taxes, Depreciation, & Amortization)			<i>the ratio of the actual indicator to the planned</i>
Non-financial indicators	Number of new attracted clients			<i>the ratio of the actual number of attracted customers to the planned number</i>
	Timeliness of reports submission			<i>the ratio of the actual deadline for report filing to the planned deadline</i>
	Staff turnover rate			<i>the ratio of actual% of "turnover" to planned% of "turnover"</i>
	Percentage of product defects			<i>the number of defective units divided to the total number of units produced. Actual vs budgeted percentage.</i>
	Machine downtime			<i>the actual machine downtime divided to the planned downtime</i>

Source: Developed by the author

It is important to note that the KPIs are absolutely flexible and can be set by the entity's managers depending on the established strategic objectives, the type of activity, financial and human resources available. Thus, budgeting through key performance indicators allows to obtain complete information and clear image on overall corporate performance by comparing actual data with budgeted figures and as a result, to answer at the general question: are the strategic objectives met or not? Managers of the entity should follow four steps to answer the above mentioned question (Figure 2).

	Defining the strategic goals and objectives;
Decision making process based on Key Performance Indicators	Identifying the KPIs that align with strategic goals and objectives
	Selecting the KPIs that meet the SMART criteria and align with the stated goals and objectives
	Monitoring and comparing the budgeted indicators with the actual ones, and taking a decision based on the results obtained

Figure no.2: Decision making process based on KPI;

Source: Developed by the author;

With the help of the KPI system, the managers can not only to monitor and evaluate the performance and effectiveness of the actions performed, but also build an effective payroll system through employees stimulation for successful completion of the actions proposed.

CONCLUSIONS.

Over the last decades, the budget system has been actively developed and improved. In order to ensure the functionality of the budgeting system, it is necessary to create a mechanism of data collection and verification, which will allow objective assessment of the achievement of the proposed objectives [11, p.8].

Actually, the budgeting system comes as a universal tool applied by entities for the financial management and decisional making process. The decisional making process is based on the results obtained through the measurement of performance and the degree of strategic achievements in correlation with the established criteria, or with a basis of comparison.

Further development of the budget tool makes it more adapted to new trends, namely a modern model based on KPI. Nevertheless, the entity's budgeting practices are based mainly on financial KPIs, which limited the understanding of the overall corporate situation at a certain moment and negatively affect the decision making process efficiency. The research results confirm that budgeting system based on key performance indicators (KPI) allow to achieve higher level of performance through applying financial indicators and also non-financial indicators.

If the entity decides to implement budgeting system based on KPI, in order to optimize the decisional making process the following actions are recommended:

- *Identification of the business strategies.* Here the author refers to concrete actions and the deadlines established for achieving the planned outcomes;
- *Developing the operational tasks and functions.* Establishing the result-oriented operational objectives and dividing them through the appropriate departments under the responsibility of the pre-determined persons.
- *Selection of the appropriate KPIs according to S.M.A.R.T criteria.* The established KPIs should match the chosen strategy and may include financial and non-financial indicators in order to cover larger area of the entity's operational objectives. For example, in the production processes the non-financial KPIs can include the percentage of product defects, scrap, machine downtime, customer returns, on-time delivery and others.
- *Making decision process based on results obtained.* Comparing the budgeted indicators with the actual ones, and taking a decision based on the results obtained.

REFERENCES

1. AHMED, P. K., LIM, K. K., ZAIRI, M. *Measurement practice for knowledge management.* In *Journal of Workplace Learning*, 1999, Vol. 11 Issue: 8, pp.304-311, <https://doi.org/10.1108/13665629910300478>
2. BAHRUSINA M.A. *Бухгалтерский управленческий учет.* Moscow: Ed. OMEGA-L, 2002, 528 p.
3. VOLCOVA O.N., *Бюджетирование и финансовый контроль в коммерческих организациях.* Moscow: Ed. Финансы и статистика, 2007, 272 p.

4. HRUTCHII B.E., SIZOVA T.B., GAMAIUNOV B.B. *Внутрифирменное бюджетирование: Настольная книга по постановке финансового планирования*. Moscow: Ed. Финансы и статистика, 2005, 464 p.
5. BELVERD,E., NEEDLES, JR.,HENRY R. ANDERSON, JAMES C. CALDWELL, *Principle of accounting*. Chișinău: Ed. ARC,2000,1240 p.
6. GRABAROVSKI L., CONSTANTINESCU V., *Бюджетирование в управленческом учете как инструмент стратегического планирования*. In Science Journal Studia Universitatis, No.3(13), Chișinău, 2008, p.p. 185-191.
7. BOULESCU M., GHÎȚĂ M. *Control financiar și expertiză contabilă*. București: COPYRIGHT,1996. 372p.
8. BUGAIAN, L.,ȘONTEA, D., *Coordination of budgeting with management by objectives*. In Economic growth in conditions of globalization: international scientific and practical conference, october 13-14 2016. XI-th edition. Ed. a 11-a/Vol. 2. 2016. Chișinău: Ed. Complexul Editorial INCE, 2016, pp.25-29.
9. GUNASEKARAN, A., KOBU B. (2007). *Performance measures and metrics in logistics and supply chain management: a review of recent literature (1995-2004) for research and applications*. In International Journal of Production Research, pp. 2819-2840. <https://doi.org/10.1080/00207540600806513>
10. DORAN, G.T. *There's a S.M.A.R.T. way to write management's goals and objectives*. In Management Review 1981, Vol.70, Issue 11, pp.35-36.
11. GANEA V., MIHAILA A. *Procesul de bugetare pe bază de performanță: Evoluție și avantaje*. In Science Journal Studia Universitatis, No.7(107), Chișinău, 2017, pp.3-9.

SECȚIUNEA V:

Suportul informatic și metode cantitative în economie

MOBILE APPLICATIONS WITH BIOMETRIC AUTHENTICATION IN BUSINESS ACTIVITIES

Nastas Vasile
vasilenastas.c@gmail.com

**Academia de Studii Economice a Moldovei, Republica Moldova, Chișinău, str. Bănulescu-Bodoni
61, www.ase.md**

Abstract. *Today the mobile applications and the services provided by them have become a necessity for different business activities, although the majority of users from business environment focus mainly on the security issues emitted by similar applications. This article examines the concept of biometric authentication through the mobile device and its applicability within mobile applications targeting various business activities.*

Key words: *Business Activities, Mobile Applications, Biometrical Authentication, Security.*

JEL: A12, K22, C83, C88, C91

1. Introduction

The explosive development of the Internet since the 1990's, together with the mobile applications since 2000, inspired and triggered a new class of entrepreneurs who turned the mobile phones and tablets, in a record time, into a multibillion-dollar industry that provides a new set of informational services [1].

Today, the mobile app market includes smartphone and tablet applications, distinct from those for personal computers. Although it appeared only a few years ago, it is one of the most dynamic segments of the IT application market, with spectacular growth every year [1]. Much of these mobile applications are used as a computer support for various business activities, aiming at simple principles such as:

- Portability
- Ease of Use
- Quick access
- Minimum steps to perform any activity.

The fast access to informational services for business people has become a critical point in the digital age, although the issue of security of communication through mobile applications and user authentication in the system arises because both agents do not have full control over this type of communication and confidence-based factor.

This problem generates a bilateral distrust between the computer system communicating through mobile applications and the end-user who also uses this communication path. The consequences of losing the mobile device may be critical for the user who has lost this device and also for the software system owner's, because of computer systems regulations imposed by certain states, countries, areas, continents, organizations or unions. In order to minimize these risks and attract more users of such mobile services, various methods have been introduced to add an additional layer to existing security, but they require the user to take several steps that violates one of the principles of mobile applications, mentioned previously [2].

In the near past, with the launch of certain technologies and mobile devices by Google and Apple giants, a new opportunity has emerged to use the biometric authentication of the mobile device to do any activity within its control [3, 8].

The purpose of the research is to investigate the biometric applicability of authentication in mobile applications, the security of biometric authentication, the usage in business activities and the usability for the end users.

2. Materials and methods

While working on this article, the following methodologies were used:

Fundamental research has been used to study trends in the use of mobile applications in business environments and the common problems faced by users using such type of applications. In fundamental research, investigations were included in theoretical studies, which led to the formulation of some reasoned practical conclusions.

Development research was intended to implement proto-types to assess the functionality of biometric authentication on Android and iOS platforms. Developing such a proto-type based on a concept, technically highlights the implementation problems of this idea and the usability, whether a user is familiar or not with the terminology and how to use this functionally on his personal device.

Practical research was tasked with selecting the information needed to direct the practical work in order to increase the applicability for implementation. The research process has considered the results of investigations with the practical aspects of international specialists and the case study applied to a group of users of different categories.

3. Results and discussions

According to the statistics provided by various private organizations, the mobile applications market is of great magnitude. On average, a man uses a mobile device about 2 hours a day, of which 1.5 hours are spent in mobile applications [1]. Each mobile app is designed to solve one or more problems the daily user encounters using a minimum number of steps and providing a nice, though sometimes limited, interface. The biggest problem that any mobile application faces is data security and user confidence in the application it intends to use. Attempts to solve this problem have been made, for the most part, by increasing password security and adding to another layer of security, usually by adding Multi-Factor Authentication (MFA) or Two-Factor Authentication (2FA) using third-party services that transmit a temporary password to validate the user's identity. Users are reluctant to adopt strong security practice and there are many password attacks that ignore the complexity of the password itself.

At present, cyber-crime has become a common issue or question to raise, personal data is always under risk, and users have greater doubts about using personal data or business applications. Some users are forced to use mobile applications due to the lack of alternatives, although they can only be temporarily followed by deleting definitive applications on the mobile device.

Mobile platform giants have provided a solution to raise users' confidence, using so-called biometric authentication. This feature was accessible for the iOS platform starting with all devices released since 2013 and for the Android platform at the end of 2015 and for all devices that have the operating system version 6.0 and have hardware support [12].

Mobile devices (iPhone and iPads) offered by Apple currently have this functionality already implemented in approximately 99% of active devices, according to statistics. The Apple device breakdown distribution is presented in the Table 1 shown below.

Table 1. iOS Device Breakdown [9]

Device Model Name	Distribution
iPod touch 3G	0.1%
iPod touch 5G	2%
iPad 2G	2%
iPad 5	2%
iPad Mini 2	2%
iPad Air	2%
iPad Air 2	3%
iPhone 5S	3%
iPhone 6	11%
iPhone 6S	13%
iPhone 6+	2%
iPhone 6S+	7%
iPhone SE	7%
iPhone 7	9%
iPhone 7+	7%
iPhone 8	5%
iPhone 8+	4%
iPhone X	4%
iPhone XS Max	2%
iPhone XR	2%

At the same time, with the release of this functionality, Apple strongly recommends or in some cases forces users to use biometric authentication to access certain services such as online payments or other fraudulent functionality.

Google, being the only base operating system vendor, has recorded about 6,000 mobile device models (smartphones and tablets) that support biometric authentication according to Google Play Store statistics. This number of devices is selected from 62.6% of the total number of models running on OS 6.0 and higher [11]. The Android Operating System distribution is presented on creating any new project in Android Studio and the latest one, made on 18.02.2019, is presented in Table 2 shown below.

Table 2. Android OS Distribution Statistics from Android Studio [10, 11]

Android Version	Codename	API Level	Device Distribution
2.3.3 - 2.3.7	Gingerbread	10	0.2%
4.0.3- 4.0.4	Ice Cream Sandwich	15	0.3%
4.1.x	Jelly Bean	16	1.1%
4.2.x		17	1.5%
4.3		18	0.4%
4.4	KitKat	19	7.6%
5.0	Lollipop	21	3.5%
5.5		22	14.4%
6.0	Marshmallow	23	21.3%
7.0	Nougat	24	18.1%
7.1		25	10.1%
8.0	Oreo	26	14.0%
8.1		27	7.5%
9.0	Pie	28	5%

By developing 2 mobile applications as a proto-type, the following code-specific features were observed:

- They cannot fully substitute the mobile security option by passcode because they cannot guarantee the device's operation in case of damage to the fingerprint scanner;
- Cryptography is based on scanned fingerprints and uses the Fingerprint Hardware Abstraction Layer (HAL) to connect to a vendor-specific cryptography library;
- The system does not export the fingerprint stored in the operating system itself, in order not to breach the security of personal data;
- The fingerprint scanning system can only give the following possible answers:
 - a) Yes, this fingerprint coincides with one of the fingerprints recorded on the device;
 - b) No, this fingerprint does not coincide with any of the fingerprints recorded on the device.

The main use cases of developing and using the biometrical authentication functionality is presented in Figure 3 shown below.



Figure 3. Mobile Application, Fingerprint Scan Use Cases [11, 12]

Another important remark is that current biometric authentication is not at all deterministic, for the following reasons:

- Various mobile device vendors are based on different fingerprint scanning algorithm and different scanner vendors [6, 7];
- Scanning the same fingerprint on the same device permanently generates different pairs of private and public keys [7].

For the purpose of this research, these proto-types were presented to a closed group of 25 users. This group included the following categories:

- a) 10 people from business environments;
- b) 5 people who are non-technical or unfamiliar with this functional;
- c) 10 people who are technical or who are familiar with this functional.

At the end of this practical test and questionnaire, the following conclusions were noted:

- From category A, 6 people in the business environment tried the application and were interested in its exploitation, while others wanted to become familiar with the concept and detailed description of this prototype;
- From Category B, 4 people did not understand how to use this functionality, although they were interested and curious to try it out;
- From category C, 9 people have encountered no obstacles and wanted to see this more functional and a guide inside the app to emphasize all cases of use.

The result of the practical test, that was made during the development phase and testing phase is presented in the Figure 4 shown below.

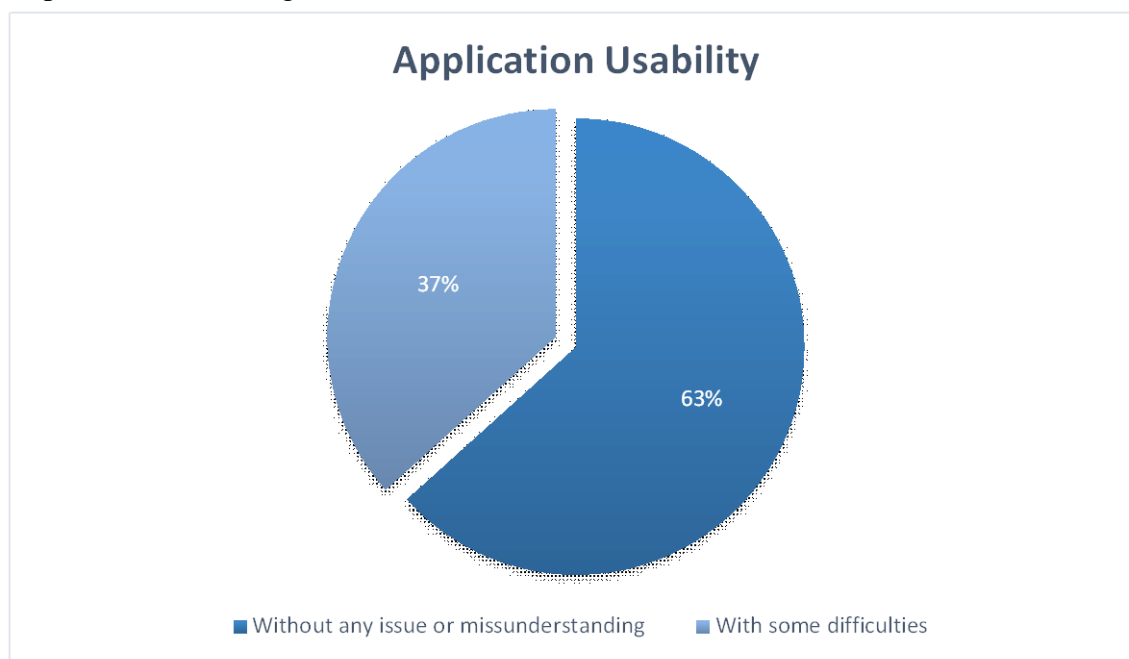


Figure 4. Mobile Application, Fingerprint Authentication Usability

Currently, this biometric authentication is used extensively on mobile applications in various business environments. These types of applications use biometric authentication only to access the application, but not to authenticate each action, in order to authenticate each application within the application, they currently prefer to use standard services such as MFA or 2FA.

4. CONCLUSIONS

In the literature, biometric authentication through mobile devices has become a well-developed instrument with a small audience of trained and trustworthy users, but is not mentioned the percentage of involvement of this functionality in the different business environments. This biometric authentication can replace the same digital signature in the future and close other mobile security issues that currently persist. Once it becomes more mature and widespread, it can be used in the future in such business areas as those specified in Figure 5 shown below.



Figure 5. Mobile Application with Biometrical Authentication, Domains of Use

REFERENCES

1. App, Annie. Online platform that collects information regarding apps & markets. <https://www.appannie.com/en/> (accessed 20.02.2019).
2. Chen, Joy C., Eng, M. Mobile application for sharing the status of serious stuff", <http://hdl.handle.net/1721.1/91447> (accessed 18.02.2019).
3. Rui, Zhang, and Yan, Zheng. A Survey on Biometric Authentication: Toward Secure and Privacy-Preserving Identification. *IEEE Access* 7.99 (2019): 5994-6009. https://research.aalto.fi/files/31264428/ELEC_Rui_survey_on_biometric_authentication_IEEE_ACCESS.pdf (accessed 22.03.2019).
4. Alhayajneh, Abdullah; Baccarini, Alessandro N.; Weiss, Gary M.; Hayajneh, Thaier and Farajidavar, Aydin. Biometric Authentication and Verification for Medical Cyber Physical Systems. *Electronics* 7.12 (2018): 436. <https://www.mdpi.com/2079-9292/7/12/436/xml> (accessed 01.03.2019).
5. Grigorescu, Andrea; Boche, Holger; and Schaefer, Rafael F. Robust Biometric Authentication from an Information Theoretic Perspective. *Entropy* 19.9 (2017): 480. <https://mediatum.ub.tum.de/doc/1433003/1433003.pdf> (accessed 15.03.2019).
6. Taheri, Shayan and Yuan, Jiann-Shiun. A Cross-Layer Biometric Recognition System for Mobile IoT Devices. *Electronics* 7.2 (2018): 26. <https://www.mdpi.com/2079-9292/7/2/26> (accessed 27.02.2019).
7. Stefani, Elisabetta and Ferrari, Carlo. Design and Implementation of a Multi-Modal Biometric System for Company Access Control. *Algorithms* 10.2 (2017): 61. <https://www.mdpi.com/1999-4893/10/2/61/pdf> (accessed 14.02.2019).
8. Vanderkolk, Josh. Biometric and Mobile Devices. (2014). https://figshare.com/articles/Biometric_and_mobile_devices/1270779 (accessed 18.01.2019).
9. Smith, David. iOS Version Distribution. <https://david-smith.org/iosversionstats/> (accessed 18.02.2019).
10. Android Studio, <https://developer.android.com/studio> (accessed 18.02.2019).
11. Android Fingerprint Authentication SDK. <https://developer.android.com/about/versions/marshmallow/android-6.0#fingerprint-authentication> (accessed 01.03.2019).
12. iOS TouchId SDK. https://developer.apple.com/documentation/localauthentication/logging_a_user_into_your_app_with_face_id_or_touch_id (accessed 01.03.2019).

ALGORITHMS FOR PREDICTING THE MONOPOLIST BEHAVIOUR IN VIEW OF THE WALD AND SAVAGE DECISION CRITERIA

PhD Student, LILIAN GOLBAN

Academy of Economic Studies of Moldova,
61 Mitropolit Gavriil Bănulescu-Bodoni St, Chișinău, Moldova, Republic of,
tel. (+373) 22 41 28
Email: golban.lilian@gmail.com

Abstract. *In this study are defined two decision-making models for analysis and the solution of manufacturing problems in the case of monopolistic markets, considering that consumer behavior is uncertain and demand cannot be derived beforehand, and with knowledge of only some possible situations arise concerning demand.*

Keywords: *monopoly, decision criteria, function of regrets, states of nature, uncertainty.*

JEL CLASSIFICATION: C02, C61.

INTRODUCTION.

Depending on the characteristics of the competition, an outlet market can be structured differently. At one extreme is placed the perfect competition, where more producers and consumers are present, and the activity is determined by very strict and clear rules, with no barriers to access or leaving the market. The monopoly market is characterized by the existence of only one producer and several consumers.

Monopolies are characterized by an absence of economic competition in the production of goods or services, as well as the absence of any other substitutable goods. Thus, only one producer has control of setting the price of the products offered to the market. A monopoly has the possibility to establish for what price a product will be sold and then, obviously, to decide what quantity should be marketed. For situations where the monopoly is acting under uncertainty (and this is given by the fact that the forecasts of the results are not accurate and may vary within a given range, the value of the risk cannot be quantified not at all and, regardless of the quantity or chose price, the same profit can no longer be guaranteed), it may be determined that market demand, as part of the training of the profit, it represents a random value, dependent on the fact that a monopolistic producer determines the quantum of the product or service sale [1].

Because uncertainty is the most commonly encountered condition in most economic systems, is actual to be analyzed how the monopoly will formulate its decisions, before is guaranteed a certain offer. At first sight, it may be considered that the monopolistic producer is likely to manufacture significant quantities of a product, as it is certain that consumers will be receptive and thus an extra profit will be ensured. But there are chances that this product will not enjoy such a high popularity and the manufacturer's expectations are far from the expected ones. If the manufacturer sees the situation from another point of view and prefers to be extremely careful, obviously, could decide to issue a smaller goods quantity on the market. Then, if the market will not be fully covered up, will result in a possible loss of profit from not providing sufficient goods quantities, corresponding to the actual market demand [2,3]. Therefore, it would be logical to consider new decision-making criteria for the design of decisions under uncertainty, by not being able to assess the probability of manifestation of nature's states.

MATERIALS AND METHODS.

There are several strategies for managing the behavior of the monopoly producer. One of them involves maximizing the profit, by determining a certain production limit and marketing it at a price which is higher than its cost of production [3].

It is assumed a decision-making situation of production activity, in a monopoly market structure, as follows:

$$R(x, y, Y) = \sum_{j=1}^n \left[c_j(y_j) \cdot \min\{y_j, Y_j\} - p_i \cdot \max\{0, y_j - Y_j\} \right] - \sum_{i=1}^m q_i \cdot x_i \quad (1)$$

in accordance with the following conditions:

$$\sum_{j=1}^n a_{ij} y_j \leq b_i + x_i, \quad i = \overline{1, m} \quad (2)$$

$$y = (y_1, \dots, y_j, \dots, y_n) \in D_y = \{y \in E^n : \underline{y_j} \leq y_j \leq \overline{y_j}, j = \overline{1, n}\} \quad (3)$$

$$Y = (Y_1, \dots, Y_j, \dots, Y_n) \in D_Y = \{Y \in E^n : \underline{Y_j} \leq Y_j \leq \overline{Y_j}, j = \overline{1, n}\} \quad (4)$$

$$x = (x_1, \dots, x_i, \dots, x_m) \in D_x = \{x \in E^m : \underline{x_i} \leq x_i \leq \overline{x_i}, i = \overline{1, m}\} \quad (5)$$

$R(x, y, Y)$ - producer's profit;

y_j - amount of supply;

Y_j - given amount of the good j , $j = \overline{1, n}$;

x_i - amount of resource i , purchased at price q_i , $i = \overline{1, m}$,

b_i - the available quantity of resources i .

It is considered that the price for the good j , $c_j(y_j)$ decreases linearly in the report with

$$y_j: \quad c_j(y_j) = \overline{c_j} - (\overline{c_j} - \underline{c_j}) \cdot (y_j - \underline{y_j}) / (\overline{y_j} - \underline{y_j}) \quad (6)$$

Where: $\underline{c_j}$ - price floor,

$\underline{y_j}$ - lowest demanded quantity,

$\overline{c_j}$ - price ceiling,

$\overline{y_j}$ - maximum demanded quantity.

Such the classical decision-making situations, two decision-making criteria are to be examined, namely:

- Pessimistic criterion or Wald criterion [4];
- Regret criterion or Savage's criterion [4].

RESULTS AND DISCUSSIONS.

THE "WALD" CRITERION OR PESSIMISTIC CRITERION.

According to this criterion, for production models, the purpose of the decision maker is to identify that offer that would give him maximum profit for the most unfavorable conditions. The best option that determines the maximum profit, in accordance with Wald's criterion, will be identified according to the following rule:

$$R_w(x, y) = \min_Y R(x, y, Y) \rightarrow \max_{(x, y)}, \quad (7)$$

where Y - domain determined by the restriction (4).

The function $R_w(x, y)$ has the property to be concave relative to the set (x, y) on the domain $D_x \times D_y$.

Applying the generalized gradient method [5,6], an algorithm is to be built that will solve the problem of the function maximization $R_w(x, y)$ pe $D_x \times D_y$.

Initially, are defined the following functions:

$$\Phi_i(x_i, y) = \sum_{j=1}^n a_{ij} y_j - b_i - x_i, \quad i = \overline{1, m}; \quad (8)$$

$$\Phi(x, y) = \max\{\Phi_1(x_1, y), \dots, \Phi_m(x_m, y)\} \quad (9)$$

For each $k = 0, 1, \dots$, an iterative calculation process is launched, which consists in building two series of vectors $\{y^k\}$ and $\{x^k\}$ according to the rules:

$$\text{dacă } \Phi(x^k, y^k) \leq \delta_k, \text{ atunci: } \begin{cases} y^{k+1} = P_{D_y}(y^k + h_k \cdot g_y^k), \text{ unde } g_y^k = \text{grad} R_y(x^k, y^k, Y^k), \\ x^{k+1} = P_{D_x}(x^k + h_k \cdot g_x^k), \text{ unde } g_x^k = \text{grad} R_x(x^k, y^k, Y^k). \end{cases} \quad (10)$$

$$\text{dacă } \Phi(x^k, y^k) > \delta_k, \text{ atunci: } \begin{cases} y^{k+1} = P_{D_y}(y^k - h_k \cdot g_y^k), \text{ unde } g_y^k = \text{grad} \Phi_y(x^k, y^k), \\ x^{k+1} = P_{D_x}(x^k - h_k \cdot g_x^k), \text{ unde } g_x^k = \text{grad} \Phi_x(x^k, y^k). \end{cases} \quad (11)$$

In that case, Y^0 - is an arbitrate element from D_Y (for example, randomly generated).

For each $k \geq 1$, the element Y^k the element is determined as follows:

$$Y^k = \begin{cases} Y^{k-1}, \text{ dacă } R(x^k, y^k, Y^{k-1}) \leq R(x^k, y^k, Y^k) \\ Y^k, \text{ dacă } R(x^k, y^k, Y^{k-1}) > R(x^k, y^k, Y^k) \end{cases} \quad (12)$$

Here Y^k is an element from D_Y randomly generated at iteration k according to the distribution law $p(dY)$ (which, for example, it may be uniform distribution on the D_Y domain).

THE "SAVAGE" CRITERION OR REGRET CRITERION.

Conform to Savage [7,8], the regret is the decider's loss by the failure to select the best alternative in relation to the achievement of a given nature's state. The goal to minimize the objective function (known as Savage's function) is the following:

$$R_S(x, y) = \max_Y \left(\max_{(x, y)} R(x, y, Y) - R(x, y, Y) \right) \rightarrow \min_{(x, y)} \quad (13)$$

The function $R_S(x, y)$ The function is convex in relation to set (x, y) on $D_x \times D_y$.

Thus, in Savage's approach, it is considered the following algorithm for solving the monopoly market model:

1) In conformity with the uniform distribution law on the domain D_Y , a set of components is generated randomly (these are independent random generated vectors) $Y^1, \dots, Y^l, \dots, Y^L$, being considered, on the whole, as a sample of the crowd D_Y .

2) Are considered L optimization problems, known as "internal problems"

$$R^l(x, y) = R(x, y, Y^l) \rightarrow \max_{(x, y)}, l = 1, 2, \dots, L \quad (14)$$

respecting the condition: $\Phi(x, y) \leq 0$; $(x, y) \in D_x \times D_y$

Whether $(x^*, y^*)^l$ is the optimal solution of the problem $l(l = \overline{1, L})$ and $R^{*l} = \max_{(x, y)} R^l(x, y)$

3) It is considered the following problem (known as "external problems"), which, as a matter of fact, it is a stochastic approximation of the Savage criterion.

$$R_S(x, y) = \max_{l \leq L} [R^{*l} - R^l(x, y)] \rightarrow \min_{(x, y)} \quad (15)$$

4) Are set up $L+1$ sequence of numbers as follows:

$\{x^{kl}, y^{kl}\}$, $l = \overline{1, L}$, $\{x^k, y^k\}$, $k = 0, 1, 2, \dots$, where (x^{0l}, y^{0l}) and (x^0, y^0) they are a priori determined from the crowd $D_x \times D_y$. The elements (x^{0l}, y^{0l}) , $l = \overline{1, L}$, (x^0, y^0) they'll name points of start for the $L+1$ problems.

5) Two numeric strings are going to be determined, h_k and δ_k :

$$h_k > 0, h_k \rightarrow 0, \delta_k > 0, \delta_k \rightarrow 0, \sum_{k=0}^{\infty} h_k \delta_k = \infty, h_k / \delta_k \rightarrow 0. \quad (16)$$

Note: the conditions for determining of h_k and δ_k have to be applied also for Wald's criterion.

6) Is considered that already are known the points $\{x^{kl}, y^{kl}\}$, $l=\overline{1, L}$ and $\{x^k, y^k\}$. The successive elements $\{x^{(k+1)l}, y^{(k+1)l}\}$, $l=\overline{1, L}$, $\{x^{k+1}, y^{k+1}\}$ are calculated as follows:

$$\text{if } \Phi(x^{kl}, y^{kl}) \leq \delta_k, \text{ then: } \left\{ \begin{array}{l} x^{(k+1)l} = P_{D_x}(x^{kl} + h_k \cdot g_x^{kl}), g_x^{kl} = \text{grad}_x R^l(x^{kl}, y^{kl}), \\ y^{(k+1)l} = P_{D_y}(y^{kl} + h_k \cdot g_y^{kl}), g_y^{kl} = \text{grad}_y R^l(x^{kl}, y^{kl}). \end{array} \right\}, \quad (17)$$

$$\text{if } \Phi(x^{kl}, y^{kl}) > \delta_k, \text{ then: } \left\{ \begin{array}{l} x^{(k+1)l} = P_{D_x}(x^{kl} - h_k \cdot g_x^{kl}), g_x^{kl} = \text{grad}_x \Phi(x^{kl}, y^{kl}), \\ y^{(k+1)l} = P_{D_y}(y^{kl} - h_k \cdot g_y^{kl}), g_y^{kl} = \text{grad}_y \Phi(x^{kl}, y^{kl}). \end{array} \right\}, \quad (18)$$

$$\text{if } \Phi(x^k, y^k) \leq \delta_k, \text{ then: } \left\{ \begin{array}{l} x^{k+1} = P_{D_x}(x^k + h_k \cdot g_x^k), g_x^k = \text{grad}_x R_S^k(x^k, y^k), \\ y^{k+1} = P_{D_y}(y^k + h_k \cdot g_y^k), g_y^k = \text{grad}_y R_S^k(x^k, y^k). \end{array} \right\}, \quad (19)$$

$$\text{if } \Phi(x^k, y^k) > \delta_k, \text{ then: } \left\{ \begin{array}{l} x^{k+1} = P_{D_x}(x^k - h_k \cdot g_x^k), g_x^k = \text{grad}_x \Phi(x^k, y^k), \\ y^{k+1} = P_{D_y}(y^k - h_k \cdot g_y^k), g_y^k = \text{grad}_y \Phi(x^k, y^k). \end{array} \right\}. \quad (20)$$

Here:

$$R_S^k(x^k, y^k) = \max_{l \leq l \leq L} [R^l(x^{kl}, y^{kl}) - R^l(x^k, y^k)] \rightarrow \min_{(x, y)}. \quad (21)$$

CONCLUSIONS.

Under uncertainty, the decider should choose one of the existing alternatives having only some information on their profitability. In this paper are describe the theoretical aspects of the applicability of Wald and Savage criteria, adjusted to the goal of maximizing the profit of the monopoly with the direct use of the generalized gradient method. The described algorithms are iterative; their special feature consists of "getting closer" to the proximity of the optimal solution, with some approximation, acceptable for all the nature states included in the mathematical model. The algorithm described for the pessimistic criterion, as its name says, is characterized by providing a solution which will guarantee the decider a certain profit, despite the realization of even the most unfavorable state of nature. This approach will help the producer to ensure that for any market configuration, even close to pure uncertainty, will not result in losses of profitability. Obviously, for situations where the monopoly is tending to achieve maximum profit, with a minimal regret, it is advisable to apply the SAVAGE criterion. It differs from the pessimistic regret because the purpose of the problem is fixed to minimize the regret, which indirectly implies the building of the best offer that will maximize profit for all the states of nature. In parallel with the solving of the global problem, at every iteration, the so-called "internal problems" are solved as well, which describes, in particular, the states of nature. This particularity of the algorithm, grace to its integration with the method of the generalized gradient, allows being built a new solution, for every iteration, which is an admissible solution but has the trend to approach the very close vicinity of the existing optimal solution. In the case of acting according to SAVAGE criterion, the velocity of achieving the optimal solution depends on the maximum number of iteration the algorithm is going to be executed for, but not less important, the automatic step change scheme h_k and the tolerance threshold δ_k . The tolerance threshold represents the approximation which the decedent may neglect, but it has the role to stop the algorithm at the moment when it does not exceed a certain predefined value. This part of the algorithm helps to reduce the time for a response obtaining and to

diminish overstrain of the sub-system. The desire to achieve a solution that is much too accurate can no longer be current at the time it will be generated by algorithm.

REFERENCES.

1. E. Zabel, "Monopoly and Uncertainty". The Review of Economic Studies Vol. 37, No. 2 (Apr., 1970), pp. 205-219;
2. James D. Dana, Jr., "Monopoly Price Dispersion under Demand Uncertainty". International Economic Review Vol. 42, No. 3 (Aug., 2001), pp. 649-670;
3. Andrei Gameți, Dumitru Solomon, Modelarea matematică a proceselor economice. Editura Evrica, Chișinău – 1998, pp. 164-210, 222-223, 248-253;
4. Hamdy A. Taha, Operations research an introduction, 3rd edition. London 1982;
5. Шор Н. З., Методы минимизации недифференцируемых функций и их приложения. Киев, „Наукова Думка”, 1979;
6. Anatol Godonoagă, Anatolie Baractari, Modele economice nediferențiabile. Aspecte decizionale. Editura ASEM, Chișinău – 2011, pp. 52-100;
7. Savage L. J., The theory of statistical decision. J. Amer. Statist. Assoc., 1951, vol. 46, no. 1, pp. 55-67;
8. Ionescu Gh., Cazan E., Negrușă A., Modelarea și optimizarea deciziilor manageriale. Cluj-Napoca, Editura Dacia, 1999.

INTERNET DEVICES FOR SMART HOUSES DEVELOPMENT CONDITION AND PERSPECTIVES

Phd student Adriana Catruc-Inculeț

Academy of Economic Studies of Moldova, 61 Banulescu-Bodoni Street, MD-2005, Chisinau,
Republic of Moldova, Email: catrucadriana@gmail.com

Abstract. *The development of smart technologies in the Republic of Moldova is in constant growth, "Smart Houses" technologies have a special place. The latter being at a relatively early stage in our country, it has a lot of opportunities for development and diversification. The most famous companies that provide services and sell products in this field are: SMART HOUSE LLC, SMARTTRONIC ENVIRONMENT LLC, TOP LIGHT LLC, IDOMUS COMPANY LLC, and the equipment is spread across most top distributors of household and electronic products.*

In the paper are presented some summary information on the importance, the condition and some perspectives for the development of smart houses systems. Although relatively new, the scientific subject of Smart House (or Smart House) benefits of particular interest from researchers and industry. It falls within the general domain of the Internet of Things (IoT). The most significant reported results and also future and immediate research directions are highlighted.

Key words: Smart house, IoT, energy efficiency, home robot, smart device

1. Introduction

People have begun to deal with smart house systems for decades, but those smart house systems were very simple. Recently, they are used to provide security, control, energy efficiency, comfort, quality of life, etc. Smart House includes centralized control for lighting, heating, ventilation and air conditioning, device management and other. Now, the smartest houses are used to provide ease to people with disabilities and elderly people.

One of the biggest advantages of smart houses is easy control and management from multiple devices such as a tablet, desktop, laptop and smart phone. Thanks of the range of applications for the Wireless Sensor Networks (WSNs) derived from distributed monitoring of embedded smart management systems, WSN can be used for smart house. Terminal nodes WSNs are included to monitor the statistics of things or events in their coverage areas. Information received through these nodes is transmitted by wire to the Base Station (BS) or a wireless network. Tolerance to defects and WSN precision are improved through scattered processing and, as a result, they find a wide demand in industries, army, gardening and everyday life.

The Internet of Things (IoT) covers multiple networks of physical objects with action and detection of embedded units. IoT uses multiple network protocols to communicate between devices. For example, the different components in physical locations transmit information or act on the information received through network communications. One of the fields that benefited from IoT is the smart house that uses different types of network protocols such as Wi-Fi and Bluetooth. The growth of mobile technology and the rapid development of integrated systems have made it possible to integrate mobile technology into the design of smart house systems.

The smart house incorporates several classes of devices to be monitored and controlled by a single system and provides home-based customers with better compatibility, greater security and greater energy efficiency. Integration of smart systems gives customers the ability to control their home system and save energy more efficiently in the future. Recently, internal energy management has become an active subject of research. The involvement of smart networks in building and home automation has led to the improvement of various standards for interoperable products for device control, lighting, security and energy management.

The smart network allows users to control power consumption according to demand and price. The efficiency of management at home is based on a number of different factors, such as the type

of home system (such as management at home on the Internet, by GSM, etc.) and the consumer's personal needs. Smart Home system can be defined as a system that enables devices to make the most of their potential. In this system, managing the process at home will be automatically based on conditions that the designer will determine or according to the frequent tasks. This system has many advantages: it saves time for the owner of the house, good house management, lowers the need for owner intervention for many processes, offers more free time and saves energy resources.

2. Some statistics

In order to identify and argue the importance of this field, some statistical data have been studied.

One of the most persuasive can be considered as the spending forecast in the IoT field for the next year presented in Figure 1 [1].

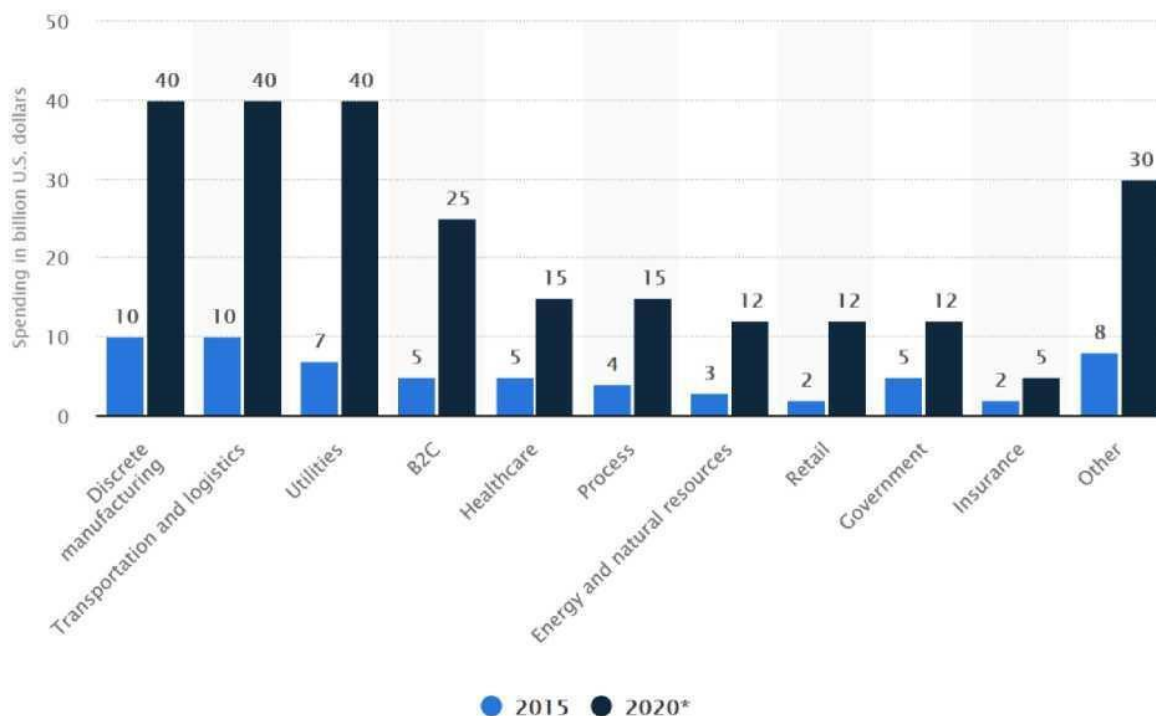


Fig.1. Spending on Internet of Things worldwide by vertical in 2015 and 2020

From Figure 1, it can be easily noticed that much of the IoT expenditure relates to the development of smart house systems. Such directions, such as discrete manufacturing, transportation and logistics, utilities, healthcare, energy and natural resources, have a direct impact on the development of home automation. Almost each of them plans to spend four times higher than four years ago.

Such expenditures are due both to the quantitative and qualitative increase of the smart systems. From a quantitative point of view, the evolution of smart systems (within IoT) during 2015-20125 is presented in Figure 2 [1].

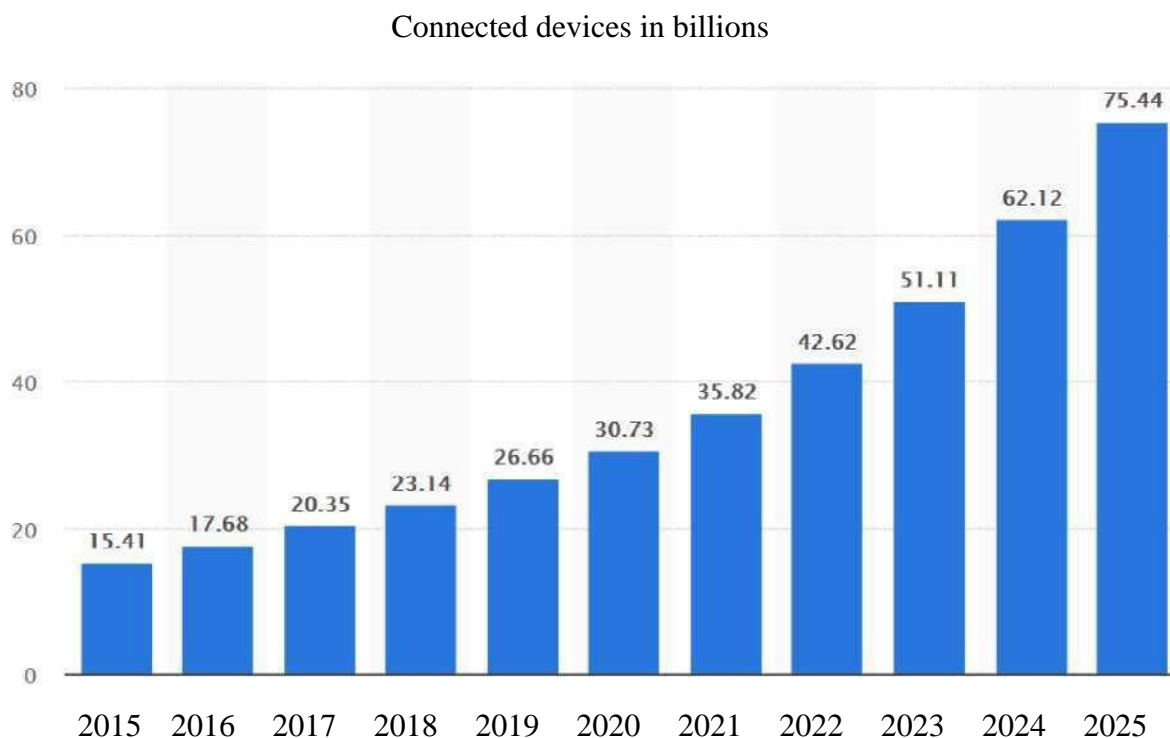


Fig. 2. Internet of Things (IoT) connected devices installed base worldwide from 2015 to 2025

Increasing the number of devices will also increase the complexity of the development of software. Figure 2 shows that this trend can be approximated by an exponential growth. A similar trend can be said about the number of devices for smart homes. With the increase in the number of devices, the complexity of the software needed to control and meet the increasingly complex requirements is increasing.

3. Impact of smart homes

Although not as revolutionary as the radio, the TV, the phone (the cell), the emergence of smart houses in the modern world becomes inevitable anyway. Familiarizing the population with new realities is slower (or better said more attentive) because of the various components that this product may contain. The phenomenon in question can be explained, especially for the post-Soviet region, with the lower exposure of the user from that period to an election. But the impact of the technology house promises to be more sensible in the long run.

It has become not only a household item, but rather a new member, with almost equal control over all devices. The smart house will create sensation of presence through the ability to communicate verbally, to understand gestures and even to identify the emotional state of the people. It can be assumed that the culmination of the exteriorization of the smart house control element will be a humanoid, which will penetrate the user's lifestyle thus adjusting to the smallest detail the habitat. The information processed by such a smart system can be even obtained from a coffee.

Returning to reality, the impact of this technology on everyday life can already be analyzed. Such a tool replaces a lot of routines, which we continue to execute because we have become accustomed to this. It would seem trivial to pay attention to such utilities as, for example, connecting and disconnecting lighting sources; but the smallest detail must be taken into account when talking about smart houses.

The intelligent house could save lives. Providing the system with devices such as fire prevention (gas and water sensors) and the fight against them (automated extinguishers, ventilation system) could save human lives. The importance of such a system increases considerably when fires occur during the night, when people sleep.

Another way of saving lives by a smart house is to endow it with *machine learning* technology that could detect the unusual behavior of family members, especially when only one of them is at home. The smart house, through specialized software, can detect such cases as accident and intervene by questioning the resident about the situation. If he does not receive a response, he will automatically call the rescue services.

Looking from the economic perspective, it does not mean every time that these technologies are a burden to a family's savings. On the contrary, besides the energy saving that promises to provide us with a smart house, its presence can also save us some payments for goods insurance. That is, the endowment of the house with smart fire prevention and flood prevention can significantly reduce the cost of property insurance against these types of accidents.

Another impact of the smart house is security. Until now, security features such as video cameras, alarm systems, lockers, automated gates were perceived as a special system, a service we call for, now we see their integration in a whole.

4. Problems of smart houses

The most important problem of a smart home, on merit, can be considered vulnerability. The main danger to such a home is the attack of cybercriminals. They can remotely control smart devices as well as capture video. Such a vulnerability can be considered a webcam, which besides the property of recording video and sound, it is also endowed with a series of sensors: movement, temperature, humidity. If it is also equipped with speakers, it can be used both as a surveillance device and for the care of a child. The temptation to have a multifunctional device exposes to a greater risk the security of the data that can be obtained through it.

A common mistake, often encountered, is to connect devices to an open hotspot that does not require username and password.

As mentioned above, the number of devices that ensure the functionality of a smart house is steadily increasing, so the amount of information provided by it continues to grow. To meet the requirements of such information flow, an efficient router is needed, the price of which may increase exponentially in relation to performance.

Another problem that comes from the previous one is the ability to interconnect more devices. It goes without saying that the smart devices proposed on the market can not belong to a single producer. And their diversity results in a discontinuity in their operation together. Such situations could cause a minor discomfort, such as the refusal to disconnect light from a smart bulb, to the loss of video data from a surveillance camera.

While the smart control system becomes more complex, and the demands on it are growing, it is becoming increasingly difficult to adapt its functionality to the actual situations that may come from. Hence the next issue is to activate smart home devices at the wrong time. For example, activating the alarm system and the arrival of messages on the phone every time the branches hit the window or a pet pass through the room [2].

With the increase in the number of devices in a smart house, it is easy to assume that the operation of such a system can sometimes be interrupted because some of them will fail. The solution would be a diagnostic system that would detect damage or loss of connection with any device. A particular timeliness has this problem when using wireless devices. Even more, some smart home appliances may have an autonomous power source that should be periodically renewed.

CONCLUSIONS

When analyzing the statistics about smart houses, it is remarkable that the development trend of this field is constantly increasing. It is forecast that turnover in this area in 2022 will exceed USD 50 billion [xxxxx].

The smart house becomes more and more indispensable to the everyday life of a contemporary person. This inclusion has been favored by the promising facilities such a technology brings, but also by the human property to get used to things that make it simpler.

A smart house can have a direct positive economic effect (e.g. energy savings) and indirectly (reducing the price to the property insurance bill, but also house goods if it has a smart management).

At the present stage, the smart house also has a fire protection and prevention system. It is equipped with video cameras, sensors and an Internet connection. Under these circumstances, we can always check the status of homework, and in case of a breakdown, the protection organs (guard, police, etc.) will be automatically notified.

The smart house can save lives. By continuously monitoring the data from sensors and cameras, the system can take concrete action to warn people about the danger they are exposed to or take automatically protective measures.

Such a performance can be achieved with the help of a technologically simple system. It is known that as the system becomes more complicated, it becomes more unstable, thus causing risks of inappropriate operation, including disconnection.

Besides all the benefits that can be gained from a smart house, there will be a lot of problems, difficulties. The most important is the security of the information that is in the system management. It is of major importance that when a smart house is used to make sure it is protected against cybercrime.

REFERENCES

1. Spending on Internet of Things worldwide by vertical in 2015 and 2020. Statista, 2019 (<https://www.statista.com/statistics/666864/iot-spending-by-vertical-worldwide/>, accesat 06.04.2019).
2. Murrell, Eric. The Top 5 Problems with Smart Home Tech and How to Troubleshoot Them (www.nachi.org/problems-smart-home-tech.htm, accesat 04.04.2019).

ADOPTING THE BEHAVIOR OF PRODUCTION SYSTEMS TO MARKET DEMANDS

PhD Student ȘTEFAN BLANUȚA

Academy of Economic Studies of Moldova,
61 Mitropolit Gavriil Bănulescu-Bodoni St, Chișinău, Moldova, Republic of
e-mail: stefan.blanuta@gmail.com

Abstract. *In this work are characterized some decisional situations that the management company's production subsystem can face in order to obtain a maximum possible income. Initially, the classic linear production model is introduced, which then is adapted to certain forms of demand for goods, but also to the needs of the enterprise to ensure the necessary resources. In the new conditions, the corresponding patterns become non-linear. That is why the study of such models becomes essentially more complicated and the adapted models are much closer to reality.*

Key words: *Production system, supply, demand, income, deterministic models, non-deterministic models.*

JEL CLASSIFICATION: C61, D24

INTRODUCTION

Knowing the operating conditions of the market, each producer agent is concerned with managing its business so that the company is as competitive as possible and the net gain is as good as possible. In the market economy, there may be different situations in terms of competition or different combinations of the following: perfect, imperfect, monopolistic, duo and oligopolistic. But regardless of these particularities, any production system is in a constant interaction, but also interdependence with the environment, which is made up of two components of primary importance: the goods and services market and the market of the factors of production, or resources.

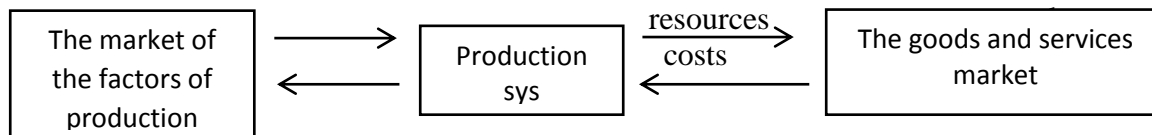


Figure 1. *The relations between the production system and the environment.*

MATERIALS AND METHODS.

The linear model of a production system is well known, where the emphasis is on maximizing hypothetical income(profit).

$$\sum_{j=1}^n c_j u_j \rightarrow \max \quad (1)$$

$$\sum_{j=1}^n a_{ij} u_j \leq b_i, \quad i = \overline{1, m} \quad (2)$$

$$u_j \geq 0, \quad j = \overline{1, n} \quad (3)$$

Here : u_j – decision variable - the amount of asset j to be determined;

c_j – product j price ;

a_{ij} – the technological coefficients;

b_i – resource availability .

The model (1) - (3) does not take into account the balance between supply and demand. This model is obtained assuming that the whole product j will be sold.

If on the market some economic agent intends to conclude a contract with the manufacturer, and they conclude such an agreement, to certain quantities initially established $y_1, \dots, y_j, \dots, y_n$, then, the producer could reassess the income, in relation to the good j , given by the function :

$$v_j(u_j, y_j) = c_j \min \{u_j, y_j\} - p_j \max \{0; u_j - y_j\} - q_j \max \{0; y_j - u_j\} \quad (4)$$

Where : p_j – losses due to the failure of an 'extra' unit of good j ($u_j > y_j$) ;

q_j – the fine paid by the manufacturer for a unit not given by the product j ($u_j < y_j$) .

Formula (4) integrates 3 different conditions from the relationship between supply and demand, namely :

$$v_j(u_j, y_j) = \begin{cases} c_j u_j & , \text{ if } u_j = y_j \\ c_j u_j - q_j (y_j - u_j) & , \text{ if } u_j < y_j \\ c_j u_j - p_j (u_j - y_j) & , \text{ if } u_j > y_j \end{cases}$$

$v_j(\cdot)$ admits the following graphical representation in relation to u_j :

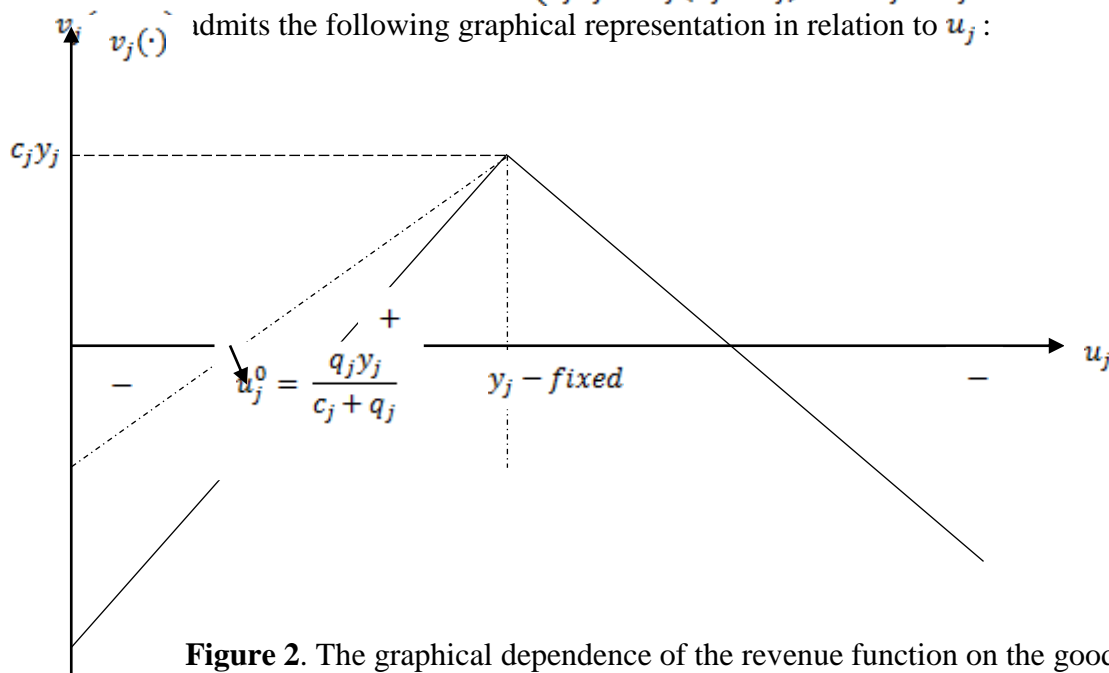


Figure 2. The graphical dependence of the revenue function on the good j .

If the manufacturer was not in a position to pay a fine, then the chart of addition $v_j(u_j, y_j)$, for $u_j \leq y_j$, would be the dotted line.

At the same time, analyzing the terms of the contract, the manufacturer can find out that his own resources $b_1, \dots, b_i, \dots, b_n$, may not be enough. Thus, there is a need to resort to the resource market (production factors) in order to obtain additional resources in unknown quantities, $x_1, \dots, x_i, \dots, x_m \geq 0$

If resource prices are specified by the sizes $r_1, \dots, r_i, \dots, r_m$, obviously, the linear model (1) - (3) is to be changed according to the new decisional situation ; in this case as a decision-maker, serve vectors $u = (u_1, \dots, u_j, \dots, u_n)$ and $x = (x_1, \dots, x_j, \dots, x_m)$, and the model itself has the form :

$$\sum_{j=1}^n v_j(u_j, y_j) - \sum_{i=1}^m r_i x_i \rightarrow \max (y, x) \quad (1')$$

Restrictions (2) and (3) are changing (or are to be adapted to this new situation) in this way :

$$\sum_{j=1}^n a_{ij} u_j \leq b_i + x_i, \quad i = 1, m \quad (2')$$

$$0 \leq \underline{u}_j \leq u_j \leq \overline{u}_j \quad (3')$$

$$0 \leq x_i \leq \overline{x}_i, \quad i = \overline{1, m} \quad (4')$$

In (3'), $\underline{u}_j, \overline{u}_j$ – the upper and lower ceilings in relation to product j , which are considered to be time-valued and known at the time.

Another situation, but also another complexity, would be the case that demand for products would behave randomly according to a determined distribution law, for example on the basis of a sample of observations $y^1, \dots, y^2, \dots, y^L$.

In such situations, the manufacturer may "walk" on several paths, choosing one of the possible ones:

I. Maximizing the revenue in order achieve the worst variation of demand [1], (in this case : $v_j(u_j, y_j) = c_j \min \{u_j, y_j\} - p_j \max \{0; u_j - y_j\}$) thus expressed:

$$\max_u \min_y \sum_{j=1}^n v_j(u_j, y_j)$$

Here u complies with the restrictions (2) or (2') and (3'); y being the element in the indicated sample, or from some known domain Y .

II. Maximizing revenue into Hurwicz's realism concept [1] :

$$\max_u \left[\alpha \min_y \sum_{j=1}^n v_j(u_j, y_j) + (1 - \alpha) \max_y \sum_{j=1}^n v_j(u_j, y_j) \right],$$

where $\alpha \in [0; 1]$, represents the agent's inclination to pessimism.

III. Maximizing your average revenue [] (expected earnings):

$$\max_u \left[M_y \left(\sum_{j=1}^n v_j(u_j, y_j) \right) \right],$$

$M_y(\cdot)$ means the mean value in relation to the random element y of the expression in brackets (\cdot).

IV. Optimizing income in the Savage concept[3] (minimize regret)

$$\min_u \left[\max_y (\max_u v(u, y) - v(u, y)) \right]$$

RESULTS AND DISCUSSIONS

Depending on the used criteria, decisional models of different complexity are obtained. Analysis, including the optimization of these models, is possible only in the application of numerical methods, such as, for example, the generalized gradient method [2], with some case-by-case changes [3]. Obviously, an analytical study of such situations can only be carried out in the simplest cases, but also in the latter case the study may be partial and not total (ample).

Further, an algorithm will be described for solving, with some approximation, the model in the layout (1' – (4') . The following notations will be used for this purpose :

$$R(u, x, y) = \sum_{j=1}^n h_j(u_j, y_j) - \sum_{i=1}^m r_i x_i$$

$$\varphi_i(u, x_i) = \sum_{j=1}^n a_{ij} u_j - b_i - x_i$$

$$\varphi(u, x) = \max\{\varphi_1(u, x_1), \dots, \varphi_m(u, x_m)\}$$

$$U = \{u = (u_1, \dots, u_j, \dots, u_n): \underline{u}_j \leq u_j \leq \bar{u}_j, j = \overline{1, n}\}$$

$$X = \{x = (x_1, \dots, x_i, \dots, x_m): 0 \leq x_i \leq \bar{x}_i, i = \overline{1, m}\}$$

The proposed algorithm operates in the process of working with two special numerical strings : $\{h_k\}, \{b_k\}$.

h_k represents the step size at the iteration k . b_k is called a tolerance threshold corresponding to the iteration k . In order for the algorithm to solve the problem it is necessary to meet the following conditions :

$$h_k > 0, h_k \rightarrow 0, b_k > 0, b_k \rightarrow 0$$

$$\sum_{k=0}^{\infty} h_k b_k = \infty, h_k/b_k \rightarrow 0$$

Initially, an arbitrary point is taken (u^0, x^0) , where $u^0 \in U$, and $x^0 \in X$. Calculate value $\varphi(u^0, x^0)$. Two cases are possible :

$$a_0) \varphi(u^0, x^0) \leq b_0$$

The following element is determined (u^1, x^1) like this :

$$u^1 = P_U(u^0 + h_0 g_u^0), \text{ where}$$

$g_u^0 = \text{grad } R_u(u^0, x^0, y)$ – the generalized gradient of the function $R(u, x, y)$ in relation to vector u , calculated in point (u^0, x^0, y) ;

$$x^1 = P_X(x^0 + h_0 g_x^0),$$

$g_x^0 = \text{grad } R_x(u^0, x^0, y)$ – the generalized gradient of the function $R(u, x, y)$ in relation to vector x , calculated in point (u^0, x^0, y) ;

$$b_0) \varphi(u^0, x^0) > b_0$$

In this case $u^1 = P_U(u^0 - h_0 g_u^0)$, for $g_u^0 = \text{grad } \varphi_u(u^0, x^0)$ – the generalized gradient of the function $\varphi(u, x)$ in relation to u , for $(u, x) = (u^0, x^0)$;

$$x^1 = P_X(x^0 - h_0 g_x^0), \text{ for}$$

$g_x^0 = \text{grad } \varphi_x(u^0, x^0)$ – the generalized gradient of the function $\varphi(u, x)$ in relation to vector x , for $(u, x) = (u^0, x^0)$;

$P_U(\cdot)$ and $P_X(\cdot)$ are the designers of the points in the brackets on the corresponding U and X domains []. Similarly, the points are built $(u^2, x^2), (u^3, x^3), \dots, (u^k, x^k)$. Thus :

$a_k)$ if $\varphi(u^k, x^k) \leq b_k$, then :

$$u^{k+1} = P_U(u^k + h_k g_u^k), \text{ where } g_u^k = \text{grad } R_u(u^k, x^k, y);$$

$$x^{k+1} = P_X(x^k + h_k g_x^k), \text{ for } g_x^k = \text{grad } R_x(u^k, x^k, y)$$

$b_k)$ if $\varphi(u^k, x^k) > b_k$, then :

$$u^{k+1} = P_U(u^k - h_k g_u^k), \text{ for } g_u^k = \text{grad } \varphi_u(u^k, x^k)$$

$$x^{k+1} = P_X(x^k - h_k g_x^k), \text{ for } g_x^k = \text{grad } \varphi_x(u^k, x^k, y)$$

The implementation of the algorithm can be performed in a programmed or dialog mode. Stopping the algorithm can take place in several situations:

1. It is obtained at some iteration $k = k_{stop}$, an acceptable value of the goal function $R(u, x, y)$ for $(u, x) = (u^k, x^k)$, where (u^k, x^k) is a decision variant for which function $\varphi(u^k, x^k) < b_k$;

2. Planned calculation time expires, and in this case the process can be resumed considering the last element as the starting point (u^k, x^k) obtained at the previous execution of the algorithm;

3. It is required to review the previous model (1' – (4')) from the need for certain clarifications;

CONCLUSIONS.

The linear model (1) - (3) can be solved using the known simplex method. Modified patterns, regrettably, can not be solved in this way. Adapting model (1) - (3) to different situations, nonlinear and non-differentiable models are obtained. These properties require the application of new ideas and tools for analyzing and optimizing the respective models. The latter are changes to the generalized gradient method.

REFERENCES:

1. A. Gamețchi, D. Solomon. Cercetări operaționale. Volomul I. Chișinău, "Evrca", 2015, pag. 27 – 45
2. Шор Н. З. Методы минимизации недифференцируемых функций и их приложения, Киев, "Наукова Думка", 1979.
3. A. Godonoagă, A. Baractari. Modele economice nediferențiable. Aspecte decizionale. Editura ASEM, Chișinău, 2011

SECȚIUNEA VI: *Econometrie și statistică economică*

ANALYTICAL REVIEW OF MONETARY POLICY TRANSMISSION MECHANISMS

PhD Student Panis Olga
e-mail autor: (olga_panis@gmail.com)
Academy of Economic Studies of Moldova,
(MD-2005, Chisinau, str. Banulescu-Bodoni, 59)

Abstract. *The role of the real sector is particularly significant and strategic. It is the sector responsible for the production and distribution of goods and services (from a combination of factor resources), necessary to meet the consumption demand of an economy. The sector generates better outcomes if accompanied with a healthier monetary system; thus, advancement of monetary sector is a mean for the growth of real sector. This paper explores the relationship between monetary and real sectors in term of the monetary policy transmission mechanism, considering theoretical and empirical representative research for the approached field. The study uses a qualitative approach based on a comparative analysis between points of views, methodological aspects and results.*

Key words: *monetary policy transmission mechanism, transmission channels, pass-through, real economy, monetary sector.*

JEL CLASSIFICATION: E52

1. INTRODUCTION

The national economy comprises of four interrelated sectors, operating to ensure that resources are best used in the production of goods and services. The sectors are the financial/monetary, fiscal/government, external and real. While all four sectors have important roles in the welfare of the citizens, the role of the real sector is particularly significant and strategic. It is the sector responsible for the production and distribution of goods and services (from a combination of factor resources), necessary to meet the consumption demand of an economy. The sector generates better outcomes if accompanied with a healthier monetary system; thus, advancement of monetary sector is a means for the growth of real sector. The financial sector is critical to the growth of the real sector [8, p.8]²⁴, it provides an appropriate direction for funds to be pooled together and risks diversified to fund economic activities, which would otherwise not have been funded. Furthermore, it provides an efficient avenue for selecting, funding and monitoring risky projects, which stimulate and sustain economic growth. Efficient financial market helps to moderate costs of transaction and information asymmetries modify the constraints and incentives of financial agents, as well as foster efficient allocation of resources by ensuring allocation of same to their most productive use [1, p. 261-300].

Despite the relatively short history of monetary policy in the Republic of Moldova, the regulator has changed its priority objectives several times, influencing the economic dynamics. The latest changes in this regard were made in 2012 by adopting a new strategy that follows the fundamental goal –ensure and maintain price stability, conducted under inflation targeting regime. The National Bank of Moldova's (NBM) objective is to stabilize the annual inflation rate at 5% (+/- 1.5 percentage points) using several monetary instruments to achieve this. By raising interest rates, for example, it aims to reduce demand for goods in the economy, thereby lowering inflationary pressures [7, p. 1].

²⁴ highlighted the relationship between the financial sector and the real economy, in particular how the financial sector facilitated the growth of the real sector.

Actual, the exchange rate is freely formed on the money market depending on the demand and supply of foreign currency, thereby assigning the role of the main tool of monetary policy - the base interest rate. At the same time, this regime as well as decisions take by the national bank are subject to criticism since, because the restrictive monetary policy due to the reduction of consumption and investment can inhibit economic growth.

Once adopting this strategy, increased need for analytical specific tools to facilitate better understanding of the transmission mechanism and the impact of monetary policy change has over the economy.

In order to measure the impact of a change in the monetary policy interest rate over the economy, multivariate time series model could be used, such as vector autoregressive models (VARs) and variants from these models.

This paper presents the following structure: the first part of study highlights the importance of the monetary policy transmission mechanism at macroeconomic level; section two sketches the issue of the transmission of monetary impulses on the real economy, in the light of representative literature in the field approached, including contemporary visions regarding monetary policy transmission mechanism; section three reviews some aspects of the research methodology. The study ends with some conclusions and directions for future research in the field.

2. PROMOTING THE MONETARY IMPACT ON REAL ECONOMY

The evolution of market economies for both developed and developing countries - presents a picture characterized by sudden and permanent fluctuations, reflected in the dynamics of prices and output. All these phenomena, irrespective of their nature, the rise in commodity prices or internal structural changes - all raise a very important issue for economic science: what policies should be applied, if necessary, to reduce the magnitude of price and production variations. Monetary policy decisions usually have a temporary lag on price developments. Also, the magnitude of the various shocks may vary depending on the state of the economy, which is why the exact impact of these shocks is complicated by the estimated, but extremely important.

The way in which monetary policy exerts its influence on the economy can be explained as follows. The central bank is the sole issuer of banknotes and sole provider of bank reserves, i.e. it is the monopoly supplier of the monetary base. By virtue of this monopoly, the central bank is able to influence money market conditions and steer short-term interest rates. In the short run, a change in money market interest rates induced by the central bank sets in motion a number of mechanisms and actions by economic agents, ultimately influencing developments in economic variables such as output or prices. This process – also known as the monetary policy transmission mechanism – is complex and, while its broad features are understood, there is no unique and undisputed view of all the aspects involved [2, p. 44-47]. The transmission mechanism of monetary policy can be presented as a chain of some chains. These relationships between elements can be reordered through theories, and economic theories are a combination - with different weightings - of the quantitative formalization of economic processes and a qualitative understanding of them.

Propagation of monetary impulses on the real economy can be found at institutional interpretation of Schumpeter's analysis of money, banking and finance. The scholar attributes a more important role to the banking sector, and he believes that banking investments, i.e. the monetary-financial sector, plays a role of supporter of the real sector. Financial institutions foster innovation and economic growth by ensuring that the sector allocates resources to entrepreneurs that are best capable of developing innovative products and production techniques, which would improve the welfare of economic agents as well as propel the economy to a higher growth path (Schumpeter, 1912). Neoclassical economists attempted to rehabilitate the classical theory. The monetary issues on which the neo-classical economists mainly concentrated are- neutrality of money, dichotomization of real and monetary sectors, and real balance effect. While the keynesist theory held an opinion, that monetary policy can influence the behavior of macroeconomic

variables. Monetarists said that monetary policy had an effect on the real economy only in the short term. If we refer to theoretical formalized models, we can mention the basic analytical model – Mundell-Fleming Model. The Mundell-Fleming Model (MFM) describes the workings of a small economy open to international trade in goods and financial assets, and provides a framework for monetary and fiscal policy analysis. The basic framework is a static, non-microfounded model extending the Keynesian IS-LM model. This model was mathematized by Dornbusch who introduced exchange rate as proxy variable for describes the external sector and studied the relationship between monetary policy actions and exchange rate fluctuations in two cases, in the case of the fixed exchange rate and floating exchange rate. Rational expectations theory has complimented the ideas of monetarists saying that the implementation of monetary policy measures must be unexpected for economic agents; exactly this school has led to the use of a complex mathematical-statistical tool, based on random variables, econometric estimates, tests and forecasts.

A bit later appeared the first stylized model of the monetary transmission mechanism in the IS-LM-CC model of Bernanke and Blinder (1988). The addition of CC in the title of the model can be interpreted as an abbreviation of “customer credit” or “commodity and credit”. This was the basis for the functioning credit channel - response to the shock of monetary policy, banks change credit supply, which leads to a change in lending volumes, investments and consumption and production.

Concurrently, it can be said that monetary policy is inefficient under the conditions of excess liquidity. Samuelson-Hicks-Twis model introduced notions of economic cycles. They analyzed the economic fluctuations in relation to the money market. The final conclusion of this model is that monetary policy can influence conjunctual oscillations in the real sector.

All these models underlie the contemporary approach to the monetary policy transmission mechanism (MPTM), which in the modern interpretation can be defined, according to Taylor, the transmission of monetary policy is “the process by which monetary policy decisions are transmitted in real GDP and inflation.”

Modern interpretation of transmission mechanisms is directly related to the central bank’s inflation forecasting framework, which has two complementary elements, namely, the Near-Term Forecasting (NTF) model and the Core Model for Medium-Term Forecasting that, in addition to expert analysis and judgement, are used to support monetary policy formulation. These are based on assumptions and research on the policy and price transmission process. Figure 1. shows, in broad terms, the transmission process. The NTF projects inflation for four quarters ahead and incorporates the influence of foreign inflation, exchange rate, inflation persistence (represented by past inflation – a quarter earlier) and known/projected adjustments to administered prices (e.g., fuel prices and utility tariffs), government levies and consumption taxes. Prospective developments with respect to these factors, therefore, determine the forecast path for inflation over the next four quarters.

The Core Model is a structural representation that captures key relationships (the transmission process) in the national economy. The model allows for consistent projections of up to 12 quarters ahead for key macroeconomic variables such as GDP, inflation, interest rates and exchange rates. In this formulation, the real variables are expressed in terms of the deviation from their trend values. An important feature of the model is the built-in policy response, in terms of: (a) adjustment to the policy interest rate (Bank Rate) to bring inflation to the target range, and (b) adjustment of the nominal effective exchange rate (through adjustment to the rate of crawl) in line with the inflation objective and underlying real trends.

The influences on the key variables are specified as follows:

- the output gap is determined by its past level, real monetary conditions index, output gap and any aggregate demand shocks (e.g., increase in incomes, taxes, etc.);
- inflation is explained by its past level, inflation expectations, import prices, output gap and shocks to aggregate supply;

- real marginal cost influences are in the form of imported inflation and domestic demand pressures arising from the output gap;
- exchange rate changes are consistent with the crawling band arrangement; and
- adjustment of the policy rate (Base Rate) to stabilise inflation around the objective and maintain trend output growth.

The output gap estimates the extent to which actual GDP is either above or below the long-run trend that is consistent with price stability. Excessively high output compared to trend is inflationary, while much lower output compared to trend is disinflationary. Real monetary conditions refer to the combination of the level of real interest rates and real exchange rates that define the extent to which monetary policy is restrictive or accommodative of output expansion in terms of financing and demand.

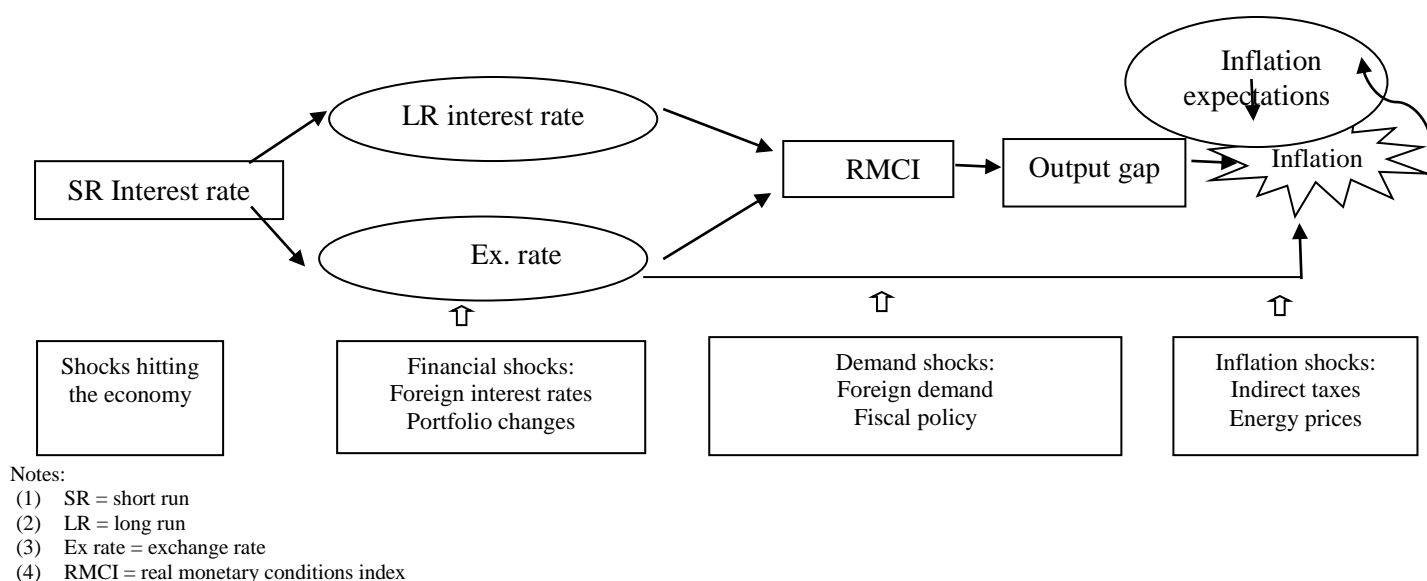


Figure 1. Monetary transmission mechanism in the structural New-Keynesian Model

Sources: Elaborated by the author

3. CONSIDERATIONS ON RESEARCH METHODOLOGY IN THE FIELD APPROACHED

In modern economic literature, there are a lot of studies that offer various approaches to the investigation of monetary transmission mechanism. Following Ganey et al. (2002) all these approaches can be classified within four broad categories. To the first category, can be attributed approaches based on descriptive methods of analysis, which deal with observation and comparison of relevant economic variables so as make inferences about MPTM. The second category includes approaches that use VAR methodology and its different variations like VECM and Granger causality test for the analysis of monetary transmission. Approaches that consider construction of small structural macroeconomic models and are aimed to investigate specific aspects of transmission mechanism constitute the third category (variants from VAR models: SVAR, SVAR-X, BVAR, FAVAR, and TVP-VAR, see figure 2.). Finally, the fourth category consists of approaches that try to develop large macroeconometric models in order to capture the various links in the monetary transmission process.

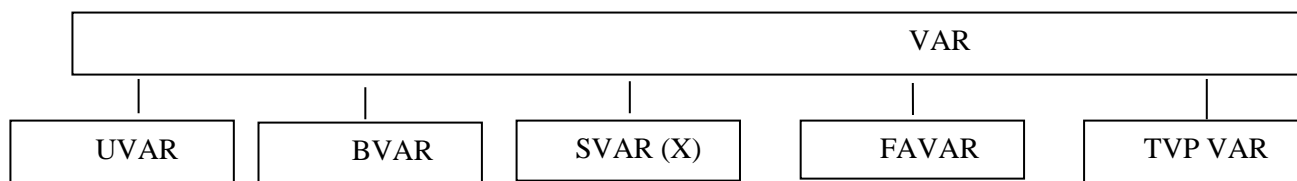


Figure 2. Classification of VAR models

Sources: Elaborated by the author

The vector autoregression (VAR) model is one of the most successful, flexible, and easy to use models for the analysis of multivariate time series. The VAR model has proven to be especially useful for describing the dynamic behavior of economic and financial time series and for forecasting. Forecasts from VAR models are quite flexible because they can be made conditional on the potential future paths of specified variables in the model. In addition to data description and forecasting, the VAR model is also used for structural inference and policy analysis.

Since the introduction by Sims (1980) of VAR model, this type of model yielded significant diversifications. The simplest model in the family of vector autoregression models is unrestricted vector autoregression model (UVAR). UVAR model is the standard tool for analyzing the dynamic properties of economic shocks manifests as complex dynamic systems with *feed-back* and reciprocal causality, remains the most popular starting point in most applications. A hallmark feature of any UVAR is that it has the same number of lags of each variable in each equation. Although these models capture the linear interdependencies among time series by not requiring as much knowledge about the influences to a variable as opposed to simultaneous equations, they have a large number of parameters and so overparameterization problems may arise. As a result, there are concerns about forecasting with UVAR models. Response to overparametrization in UVAR models is the Bayesian approach of Doan, et al. (1984) and Litterman (1986). A Bayesian VAR (BVAR) model avoids exclusion restrictions, such as the different lag lengths permitted under the AVAR approach (asymmetric VAR). Instead, BVAR models assume each VAR coefficient is drawn from a normal distribution and impose restrictions on the mean and the variance of each of those distributions [4, p. 214-220].

Going back to the VAR model need to notice that it has become a standard tool in various fields of applications. In economics and finance, the VAR model is typically used in structural analysis to study the dynamics and interrelationships between variables of interest. Another application of the VAR model is forecasting.

These models have the advantage of computational simplicity without neglecting the ability of providing results with plausible interpretations for the analysts. These results cover mainly the evolution of key macroeconomic variables after a shocks or a change in the monetary policy interest rate. Thus, it can answer questions extremely important in terms of economic policy authorities, like: "How sensitive are prices to changes in the interest rate?"

In VAR model, the system of equations allows the user to capture the macroeconomic dynamics for the variable included only in the model. And since the number of variable is usually small, important information can be omitted. On the other hand, these models face several drawbacks, some of them being the price puzzles: the liquidity puzzles or exchange rate puzzle. These are anomalies in the behavior of the above mentioned macroeconomic variables and were discussed in several papers such as: Bernanke, Boivin și Elias (2005), Andries (2008), Magdalena Boyes et al. (2008). Mentioned problems can be solved by adding behavioral variables or restrictions hypothetical on the classical model of vector autoregression, transforming in structural vector autoregression model (SVAR) or in structural vector autoregression model with exogenous variables (SVARX) [5, p. 3-4].

In order to avoid omitting valuable information when studying the transmission mechanism, a much larger set of time series could be used. This would lead to the necessity of estimating tens,

even thousands of parameters unless some latent factors are used, factors that summarize the information reflected by a large set of macroeconomic variables. And since a smaller number of factors can reflect the information offered by initially dataset, this can solve the problem of conserving the degrees of freedom in a regular VAR approach. Augmenting this regular VAR model with the factor leads to the appearance of the factor-augmented vector autoregressive model (FAVAR) [3, p. 5-11]. Several papers adopted this approach, such as: Bernanke, Boivin și Elias (2005), Bork (2009), Carvalho and Rossi (2009).

Changes in the economy related to policy changes or changes in the economy since the financial crisis can be estimated using a time varying methodology. And also a model of the economy with multiple equation is needed in order to understand how changes in policy are affecting the rest of the economy. Time-Varying Parameter Models (TVP-VAR) [6, p. 108-109] were applied in papers such as Primiceri (2005), Koop and Korobilis (2009), Bagzibagli (2012).

Analysis with this type of models include Granger-causality tests, the computation of impulse response functions, and forecast error variance decompositions and forecast scenarios.

4. CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

- According to the of theoretical models and literature which is the subject of this study and economical practice too, monetary policy has a significant impact on the real economy, through a range of channels that is in a continuous diversification and acting either simultaneously or in parallel.

- The IS-LM model as well as its extended version (with a certain degree of conventionality) can be used both for illustration and for assessing the impact of monetary policy on real economy.

- In view of the magnitude of the responsibility of monetary policy decision-makers, it is crucially to understand the transmission mechanisms of monetary impulses, the appropriate conduct of monetary policy and of the effects and intensity of their on the real economy.

The aim of this study was to show the particularities of econometric models of vector autoregression models, underlying assessment toolkit of monetary policy. After familiarization with the respective models and evaluation of monetary policy shock, it has been developed the following suggestions for future research:

- In subsequent papers promising to test different model specifications, the decomposition of the variance of variables, robustness tests, identifying causality between the variables in the system and introduction long-run restrictions in the model SVAR-X. Consider possible improvement of model and assessment of the model using the BVAR following examples of the model of Australia²⁵ (2002), Elena Pelinescu (2012), Julian Smith (2012).
- To use of TVP-VAR model for verifying the robustness of results based on SVAR-X model, so the results will be compared with the results of the model with time-varying parameters. This model allows to investigate changes in transmission mechanism caused either by the changing monetary policy regime, or other factors of conjunctual or structural nature. Following the examples of studies by Primieeri (2005), and Korobilis Koop (2009), Bagzibagli (2012), using three macroeconomic variables, namely: inflation, unemployment and interest rate monetary policy.
- The ultimate purpose is represented by the FAVAR model. This is a more difficult because it uses a much larger set of time series. The FAVAR approach has the advantage that the IRF can be computed for all the variables included in the model, not just for the factors. These variables covet data such as producer price indexes gruped by main activities: industry, mining and quarrying, manufacturing, electricity, consumer price indexes, exchange rates, interest rates, monetary aggregates, the unit labor costs. All these variables are used in order to extract the factors and one more time series is included as standalone

variable: monetary policy interest rate. The data will be taken from the NBS, NBM reports and additionally calculated and estimated by Eviews 9.0, following examples of Bernanke et al. (2005) and Magdalena Boyes et al. (2008).

REFERENCES

1. BECK, T., LEVINE, R., LOAYZA, N. *Finance and the Sources of Growth*. Journal of Financial Economics 58, 2000, p. 261-300.
2. BCE, *The monetary policy of the ECB*, 2004, p. 44-47
3. BERNANKE, BOIVIN, ELIASZ, *Measuring the effects of monetary policy: a factor-augmented vector autoregressive (FAVAR) approach*, 2005, p. 5-11
4. GRANGER J. *Modelling Economic Series: Readings in Econometric Methodology*, Oxford University Press, 1990, p. 214-220
5. RUMMEL O., *ECONOMIC MODELLING AND FORECASTING, Subset VAR, SVAR and VECM modelling*. Centre for Central Banking Studies. Bank of England, 2015, p. 3-4
6. NAKAJIMA J., *Time-Varying Parameter VAR Model with Stochastic Volatility: An Overview of Methodology and Empirical Applications*. The Institute for Monetary and Economic Studies (IMES), Bank of Japan (BOJ), 2011, p. 108-109
7. *MONETARY POLICY STRATEGY OF THE NATIONAL BANK OF MOLDOVA FOR 2010-2012*, National Bank of Moldova, 2010, p. 1
8. PAGANO M. Financial markets and growth: An overview, *European Economic Review* 37, 1993, p. 613-622.

RELEVANT INDICATORS OF THE MACROECONOMIC PERFORMANCE OF THE REPUBLIC OF MOLDOVA

Drd Victoria BLANUȚA,
The Academy of Economic Studies of Moldova,
victoria.blanuta@ase.md

Abstract. *The purpose of this research is to identify the main indicators which reflect the economic performance of a country and to analyze the macroeconomic performance of the Republic of Moldova using these indicators. The need to assess the macroeconomic performance lies in establishing the level of economic development of the Republic of Moldova and in comparison with the level of development of the other countries in the region. According to the international practice, there are several key indicators that are used to assess the macroeconomic performance of a country: Gross Domestic Product (GDP) per capita, Public Revenues and Expenditures /GDP, Budget deficit/GDP, Public Debt/GDP, Current Account/GDP, as well as the country's ability to attract foreign investments. Certainly, these indicators are the basic ones that highlight the country's macroeconomic performance and are analyzed in this article. However, there are a number of other indicators that might be additionally used to assess the country's development level: Potential Output, Economy Position in the Economic Cycle, Inflation Rate, National Currency Exchange Rate, Unemployment Rate, etc. The proposed research used the statistical and comparative analysis method of the data. As a result, have been concluded that in terms of macroeconomic performance, the Republic of Moldova is well behind the European Union countries.*

Key words: qualitative economic growth, macroeconomic performance, investments, external competitiveness.

Introduction

Macroeconomic performance indicators are those indicators that need to be considered when monitoring and assessing the effects of macroeconomic policies as well as when assessing their impacts - long-term effects - and how the objectives proposed were achieved. The main objectives of the generally accepted macroeconomic policies are the following: achieving a high and stable level of the labor force usage; maintaining a stable level of the overall price index; increasing real income /output (economic growth); achieving the balance of external payments. The level of policies implementation as well as their impact on the national economy and the population, is reflected in the macroeconomic performance indicators. The importance of evaluating these indicators lies in the need to identify the effectiveness of the macroeconomic policies implemented and, based on the results, to draw some conclusions that would serve to reformulate those policies.

Methods of research

The research methodology applied in the elaboration of this article was the quantitative analysis of the macroeconomic indicators, the comparative analysis with other countries in the region, the empirical analysis of the statistical data, of the development programs, as well as the critical analysis of the specialized literature in the field. In academic environments, there are few empirical researches that evaluates the macroeconomic performance of the Republic of Moldova. For the purpose of this article, in the first stage, the relevant indicators of a country's macroeconomic performance have been identified, including benchmarks accepted by international institutions such as the International Monetary Fund, the World Bank, the European Union. In the second stage, the main indicators of the Republic of Moldova's macroeconomic performance, as well as other countries in the region, were described and graphically represented. The limits of the research are lies in the unavailability of statistical data, the problems related to the modification of the calculation methodology of certain indicators, which makes it difficult to analyze the evolution of these indicators over the years.

Results

Macroeconomic performance represents an assessment of a country's performance in achieving government policy goals. The main purpose of the policy is usually to improve the wellness of the population.

The most important indicator that characterizes the macroeconomic performance is the **Gross Domestic Product per capita**. While the Gross Domestic Product refers to the total value of final

goods and services produced within a country in a given period, such as quarterly or annually, and is the most widespread measure of a country's economic activity, the GDP per capita is a better indicator that reflects the living standards of a nation because it takes into account the population. Additionally, this indicator ensures a clear comparison and is the basis for establishing the level of living standard.

According to the IMF World Economic Outlook Database (April 2019), GDP per capita in the Republic of Moldova amounted to 6,493 USD in 2018, by 1,756 USD higher than in the year 2010. The comparative analysis of the GDP per capita data of the Republic of Moldova and the other CIS countries showed a particularly different evolution of the member countries, the Republic of Moldova being the 9th among the CIS countries and thus surpassing only Kyrgyzstan and Tajikistan. Thus, the GDP per capita of the Republic of Moldova is 1.3 times smaller than Ukraine, 1.4 times than Armenia, 2.5 times than Azerbaijan, 2.7 times than Belarus, 3.8 times than Kazakhstan, 4 times compared to the Russian Federation (Figure 1).

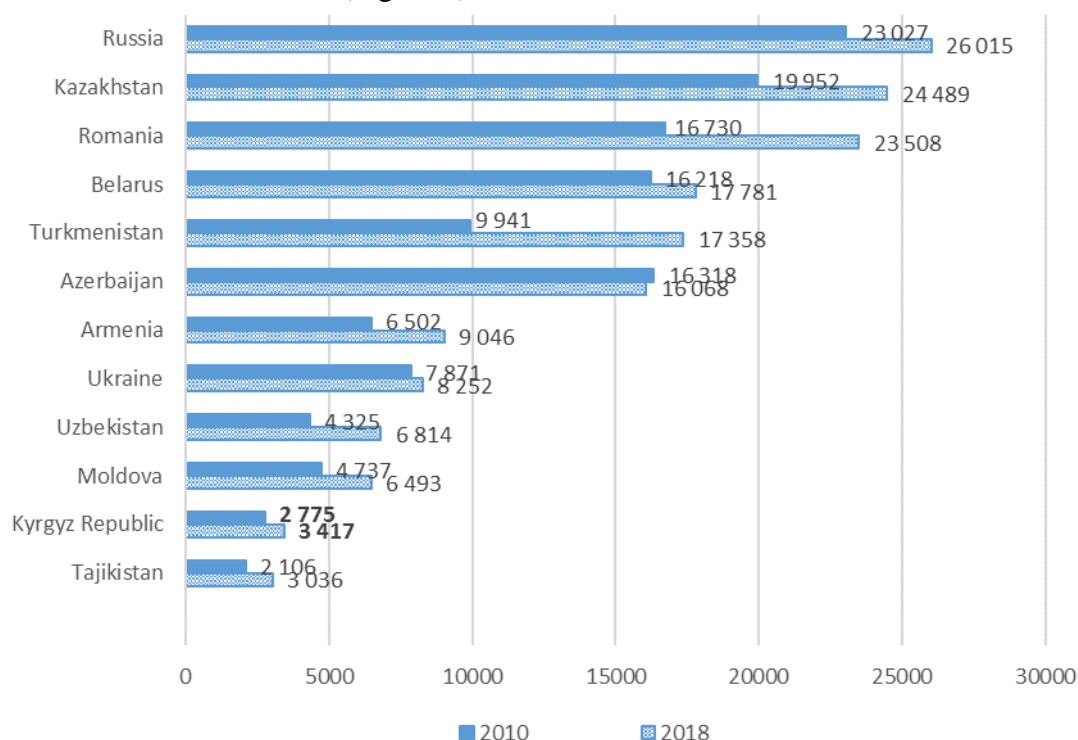


Figure 1. GDP per capita at PPP in the Republic of Moldova, other CIS countries and Romania, US dollars
Source: elaborated by the author using IMF World Economic Outlook Database (April 2019)

The analysis of this indicator compared to the European Union countries, for example, outlines even bigger differences. Compared to Romania, the neighboring country and also an EU member, we find a difference of about 3.6 times in terms of the GDP per capita. Compared to the EU countries where the work force emigrates, disparities are even deeper: 4 times for Greece, 5 times for Italy, 6 times for the United Kingdom, 7 times for Germany, etc. The existence of significant differences between the economies in the region and the economy of the Republic of Moldova is an important factor for labor force emigration.

The "financial health" of an economy is reflected by two important macroeconomic indicators: **Budget deficit/GDP** and **Public Debt/GDP**. According to the requirements of the Maastricht Treaty and the Stability and Growth Pact, the Budget deficit should not exceed 3% of GDP and the Public Debt - 60% of GDP.

As the main and irreversible objective of the internal and external agenda of the Republic of Moldova is the European integration, these criteria should serve as benchmarks for the assessment of macroeconomic stability and performance.

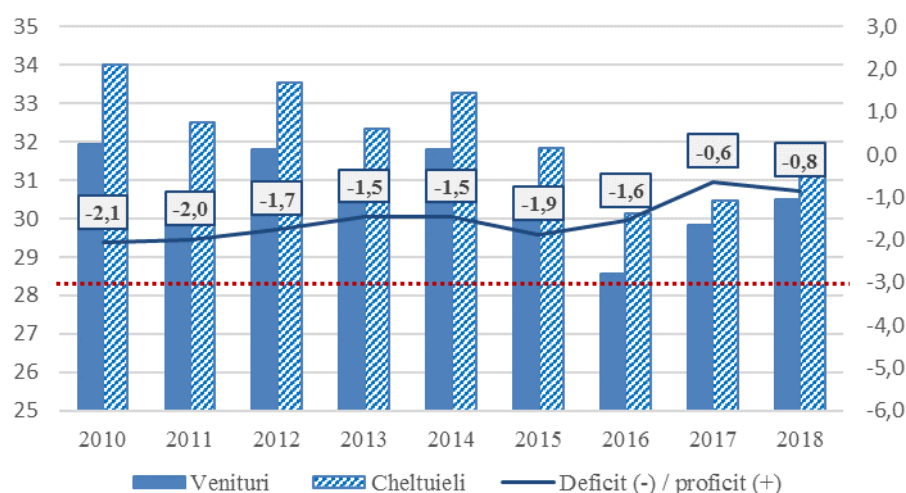


Figure 2. Public revenues and expenditures, and Budget deficit reported to GDP, %

Source: elaborated by the author using data from the Ministry of Finance and National Bureau of Statistics

The evolution analysis of the “Budget deficit / GDP” of the Republic of Moldova shows that in the period of years 2010 – 2018 it was in the above-mentioned limit of 3%. Exception was for 2009, when the Moldovan economy was affected by the global financial crisis and registered a 6% decrease in - real terms of the GDP. Only through a policy of maximum austerity was avoided the entry into incapacity payment and massive accumulations of wage debts. As a result, after 2009, the economy entered a stability period that lasted until now, with the budget deficit oscillating between the highest level of -2.1% in 2010 (Figure 2) and -0.6% the lowest level in 2017. Most economists believe that the size of the deficit that does not exceed 3% of GDP has a positive impact on the economy, and a larger deficit may lead to higher inflation and a reduction in investment activity. At the same time, according to the IMF methodology, the admissible level of the budget deficit is 7-8% of GDP. Respectively, we can conclude that the evolution of the budget deficit in Republic of Moldova does not indicate the existence of sustainability risks.

The overall situation in the economy is measured by the budget expenditures and revenues reported for the Gross Domestic Product. These indicators express that part of the GDP that is allocated to cover the collective needs of society. Thus, government revenue amounted to 32% of GDP in 2010 and 30% in 2018, and spending was 34% in 2010 and 31% in 2018. Although in absolute terms we see a nominal increase of budget revenues and expenditures of about 2 times during the respective period, reported to GDP they are in a slight decrease.

The second indicator that reflects a country's financial sustainability, Public Debt / GDP, indicates the capacity of an economy that produces and sells goods and services to pay its debts without additional borrowing. Or, otherwise expressed: what percentage of Gross Domestic Product should be used if the country's public debt should be fully reimbursed in the reference year. This indicator has a purely theoretical value because no country could allocate the entire Gross Domestic Product for debt repayment.

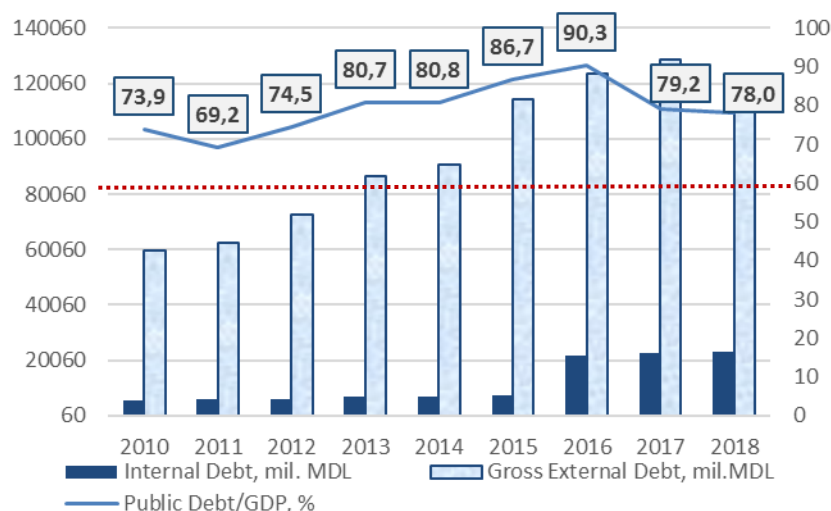


Figure 3. Public Debt reported to GDP, %

Source: elaborated by the author using data from the Ministry of Finance and National Bureau of Statistics

In 2009, Public debt/GDP reached 99.5%, after which decreased to 73.9% in 2010, fluctuating later in the range of 69-90% of GDP. The highest level was reached in 2016 (90.3%) due to the local financial-banking crisis and the increase of the domestic debt as result of treasury bonds issue to cover the execution of the state guarantee. According to data for 2018, this indicator reached a level of 78%.

Therefore, in the analyzed period the public debt/GDP in the Republic of Moldova overcome the accepted limit of 60%. However, internal and external government debt management is among the Government's priorities. According to the provisions of Law no. 419-XVI of December 22, 2006 on the public sector debt, state guarantees and state re-loaning, the Ministry of Finance manages state debt and state guarantees. To this end, the Ministry of Finance prepares medium-term government debt management programs. The last program developed is the "Medium-Term State Debt Management Program for the Years 2019-2021". The program establishes the fundamental objective of the state debt management process, the specific objectives, the actions to be taken to achieve the objectives, as well as a detailed analysis of the risks related to the state debt, the impact and the mitigation measures proposed.

The level of international competitiveness of the country is reflected by the ratio between the **Current account balance and the Gross Domestic Product**. The current account is one of the two components of a country's external balance of payments. It consists of the trade balance (the difference between the total value of exports of goods and services and the total value of imports of goods and services), production income (the difference between the return on investments made by foreigners and domestic payments to foreign investors) and transfers (including from external assistance). When a country's current account balance is positive (surplus), the country is a net creditor for the rest of the world. When a country's current account balance is negative (deficit), the country is a net borrower from the rest of the world.

Conventionally, deficits of 4% and above of GDP should cause concern to policy-makers and monetary authorities, because the large and unsustainable deficits put pressure on the country's international reserves and, moreover, have a negative impact on the country's ability to serve the debt.

Since the declaration of independence, the Republic of Moldova has been one of the importing countries. These countries usually have a lower level of development, which for the economic growth need to import. In this respect, imports for development are necessary to ensure the country's economic growth. However, there are imports of goods that are also produced in that country, but which under the conditions of the free market are imported from the outside - consumer goods that are imported to the detriment of domestic production. This is due to the low competitiveness of the domestic production of the country.

The ratio between the current account balance and GDP indicates the country's dependence and vulnerability to the external environment: the deeper the negative balance of the current account, the more vulnerable the economy to external shocks and the dependence on external resources. From figure 3 it is obvious that the Republic of Moldova is an importing country, which "absorbs" more than it produces. The tendency of our country to import result both from the lack of internal resources and from the need to supply the raw materials business and consumer products.

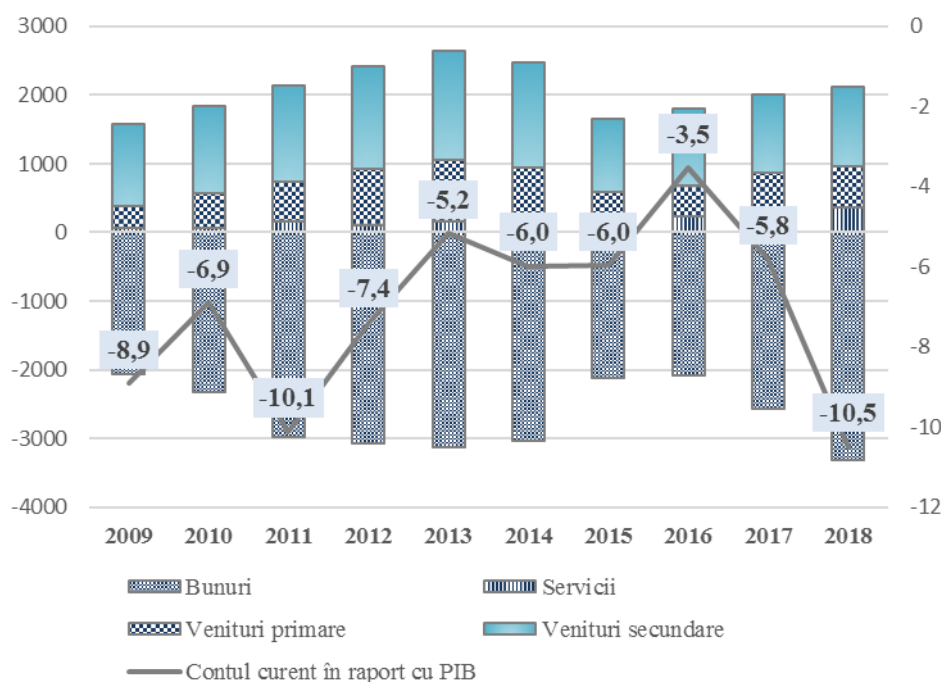


Figure 4. Current Account components (MBP 6)

Source: elaborated by the author using data from the National Bank of Moldova

Moreover, there are good reasons to anticipate a steady increase in the current account deficit. Undoubtedly, in the short term, economic growth will contribute to more imports and a higher deficit. Also, in the medium term, low current transfers, especially low remittances, will tend to increase the size of the deficit. Therefore, the problem of current account deficit has a quantitative importance that represent a challenge for policy-makers.

Actions to reduce a substantial current account deficit typically involve a rise in exports or a decrease in imports. Firstly, this is generally done directly through import restrictions, quotas or taxes (although they may indirectly limit exports) or by promoting exports (through subsidies, customs duties, etc.). The influence of the exchange rate to make cheaper exports to foreign buyers will indirectly increase the balance of payments. Also, "currency wars", a clear phenomenon in post-recession markets, is a protectionist policy whereby countries devalue their currencies to secure their export competitiveness. Second, adjusting government spending to domestic suppliers is also effective.

A country's ability to attract *foreign direct investment (FDI)* is another indicator of macroeconomic performance. This is a great challenge for the Republic of Moldova because of the low attractiveness of our country for foreign investors. Moldova has a FDI per capita performance almost 10 times lower than Romania, the neighbor country. The 2008-2009 crisis has significantly affected this low level of FDI. As is presented seen in Figure 5, FDI in the Republic of Moldova decreased from 11.7% of GDP in 2008 to only 3.8% of GDP in 2009, remaining at a low level to date (2.1% in 2017).

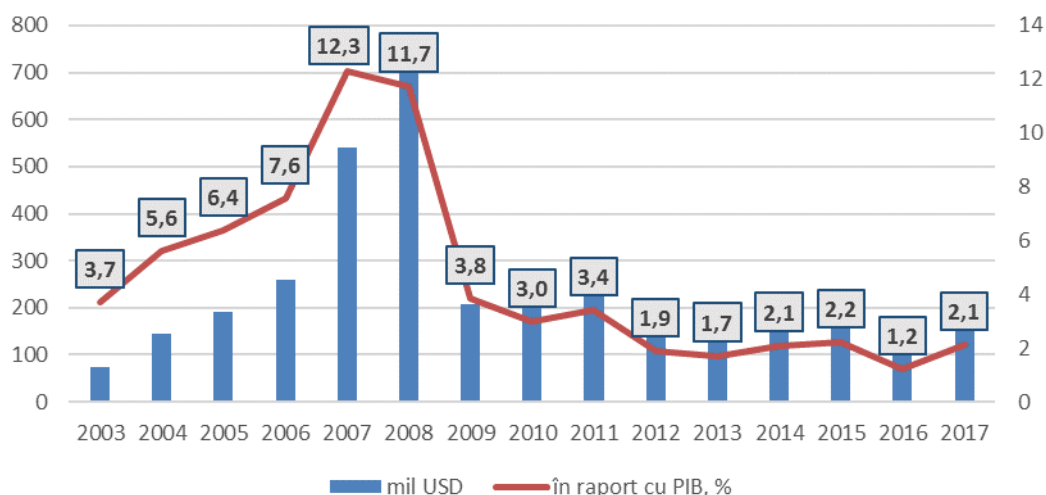


Figure 5. Foreign Direct Investments (MBP 5)

Source: elaborated by the author using data from the National Bank of Moldova

Compared to the Eastern Partnership countries, the Republic of Moldova has one of the weakest FDI attraction performances, calculated per capita. The performance of the Republic of Moldova is four times lower than the average of the other Eastern Partnership countries, with only 53 USD attracted to the average of 240 USD in the group of these countries. Moldova is attracting FDI by 1.6 times less than Armenia, 2.5 times less than Belarus, 5 times less than Azerbaijan, etc. Comparison with the EU countries reveals an even greater discrepancy (Figure 6).

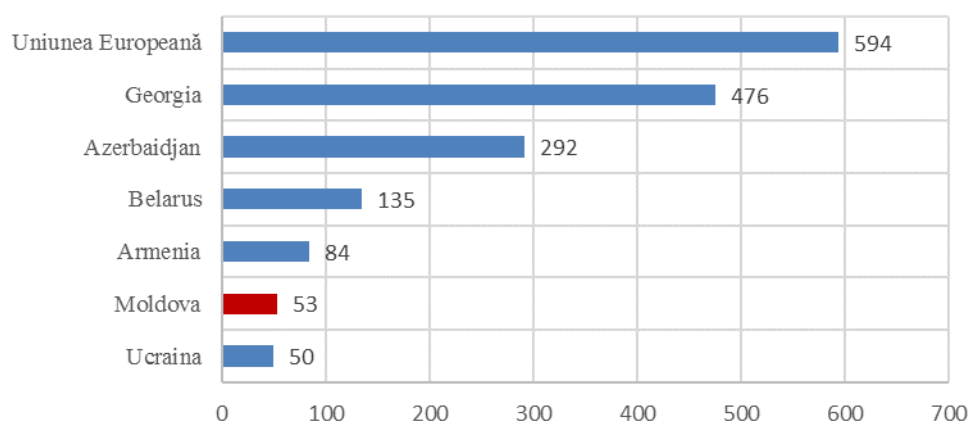


Figure 6. Foreign direct investment per capita in the Eastern Partnership countries, US dollars, 2017

Source: Developed by the author based on UNCTAD data

The investment climate is "responsible" for the performance of this indicator. The problems of the business environment in the Republic of Moldova are also confirmed by the international scores, which measure the economic performances on an international level. Thus, according to the Economic Freedom Index-2019, Moldova ranks in position 97 (down 8 positions versus 2018) out of 180 countries and territories. The Republic of Moldova is part of the state category "Mostly unfree". In the "Doing Business 2019" ranking by the World Bank Group, Moldova ranks 47th position (out of 190 countries). Regulatory framework reforms have enabled Moldova to advance in the global rating "Doing Business" from position 83 out of 185 countries in 2013 to 47 out of 190 countries in 2019, our country having an index of 73.5% of 100%.

CONCLUSIONS

The assessment of the macroeconomic performance of the Republic of Moldova has revealed some problems faced by our country: low standards of living of population, high external indebtedness, low competitiveness of domestic production, low attractiveness for foreign investors, vulnerability to external shocks, dependence on external resources. To regain external stability, policy-makers need to focus on structural issues. First, it is crucial to attract FDI, especially in agriculture and manufacturing, because it has a positive double effect. FDI provides not only a source of financing for the current account deficit, but also increases net export productivity, thereby reducing the current account deficit in the medium term. Secondly, Moldova's national savings are too low and must be increased to reduce the current account deficit. The Government and the National Bank should draft and implement measures that would lead to greater savings in the private sector.

Internally, Moldova needs a "friendly" business environment favorable to foreign investors. This will have an impact on the increase of physical and human potential, which will then generate a qualitative and sustainable economic growth, the development of export industries, job creation and increased labor productivity.

Bibliography:

1. Anghelache C., „România 2017 - Starea economică la un deceniu de la aderare”. București: Editura economică, 2017, 646 p.
2. SAGE Publications, “21st Century Economics: A Reference Handbook”, “Measuring and Evaluating Macroeconomic Performance”, 2010, 297-306 p.
3. Direcția politici publice, Secretariatul General al Guvernului, Guvernul României, “Ghid de monitorizare și evaluare”, Ianuarie 2009, 48 p.
4. Baza de date online a Fondului Monetar Internațional, World Economic Outlook, Aprilie 2019 (<https://www.imf.org/external/pubs/ft/weo/2019/01/weodata/index.aspx>).
5. Baza de date a Conferinței Organizației Națiunilor Unite pentru Comerț și Dezvoltare UNCTAD (<https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>).
6. Baza de date privind Balanța de plăți a Băncii Naționale a Moldovei (<http://bnm.md/ro/content/balanta-de-plati-pentru-anul-2018-date-provizorii>).

EVOLUTION AND ANALYSIS OF THE BANKING SYSTEM OF THE REPUBLIC OF MOLDOVA

ION VEVERIȚĂ

e-mail autor: Ion.Veverita@ase.md

Academy of Economic Studies of Moldova, Moldova, Chișinău, str. Banulescu-Bodoni 61, +373

2222 4128, www.ase.md

Abstract. *Having a short history of independence (only 28 years), the Republic of Moldova as a border country of the European Union is trying to apply the best practices in banking system (in all areas of financial services provided to customers) and the National Bank of Moldova has a mission in maintain a robust banking system and to evaluate in its area of competences in order to ensure the good and appropriate quality of services offered by banks. From statistical or data analysis point of view, any gap in data (sharp increase or decrease) should have an explanation, that support the data pattern. I will try to underline some facts that we need to know looking at data that explain the banking system of Republic of Moldova, for the period from Jan 2014 till Dec 2018.*

Key words: *banking system, nonbanking credit institutions, total assets, loans, deposits.*

JEL CLASSIFICATION: E58, G21

INTRODUCTION

Having the role of financial institution, provided by FSI – “to intermediate between those that provide funds and those that need funds, and typically involves transforming and managing risk”, we need to specify that all activities that a financial institution can provide are regulated and supervised by a central bank [1]. In this regards, depending on the size of bank, supervision should be adaptive to the impact of financial institution (in our case – bank) depending on several indicators that indicate the role of particular bank in the system. At the same time, the hole system should be considered as one unit when we try to find the impact of a sector in the entire economy.

The ratio of total assets of the banking system in the Republic of Moldova at the end of 2018 to GDP were 40%, and ratio of total loans to GDP – 19%. That can be a clear sign of importance of banking system for all sectors, and especially for net creditor sector – households and for net debtor sector – nonfinancial corporations.

Even if the modern history of the independence of the Republic of Moldova account only twenty-eight years, from a data series analysis point of view, we have a pattern that some time can be explained only by an exceptional event (shock) and not by some economic or structural evolution.

I will try to briefly underline shocks that were identified in recent five years and to comment on their impact.

MATERIALS AND METHODS

In order to perform a short analysis of banking system of Moldova, I will use data available at the web page pf the National Bank of Moldova (www.bnm.md) and some data from the web page of the National Commission for Financial Market (www.cnpf.md). A comparative analysis of stocks and year over year (y-o-y) ratios will be used, in order to have a large understanding of data evolutions.

It is needed to be mentioned that effect of shocks on data interpretation is very different, and is very informative to know what cause the effect of big spike in data. Having understanding in that will help to analyze and interpret data.

RESULTS

The banking system of the Republic of Moldova accounts now eleven banks, decreasing from fourteen in last five years. This decrease was caused by the withdrawing of three licenses from banks that were involved in fraudulent operations and as a result was the decision taken by the

National Bank of Moldova to follow the step-by-step resolution procedure, that was designed and implemented with no direct costs/losses for deposit holders.

Mentioned above actions impacted data evolution of banking system, because at the date of identification of problematic evolution of banking system and at the date of withdrawing of three licenses, the total assets of banking system indicate an unusual evolution (total asset decreased by 30 bn MDL – or 560 mln USD), which in general can be assigned to sock effect and affect the statistical time series (Chart 1).

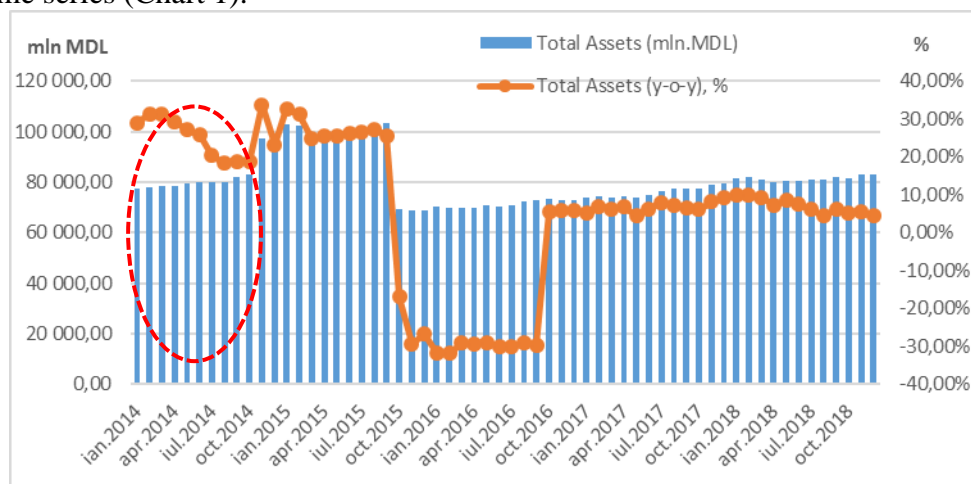


Chart 1. Evolution of total assets of the banking system
Source: Interactive Database of the NBM – www.bnm.md/bdi

At the same time, last three years an extensive update and reengineering approach was implemented in the supervision domain, especially in supervision of banks. These adjustments led to targeted goals – implementation of an international framework (known as Basel III), shareholder's transparency, applying of best practices in providing of on-site supervision and off-site evaluation.

The latest framework implemented is the COREP (Common reporting framework, issued by the European Banking Authority), it introduces the new approach in prudential indicators calculation. It is needed to mention that changes in the methodology of calculation of prudential indicators must be treated as a controlled behavior of data but not as a usual evolution (Chart 2).

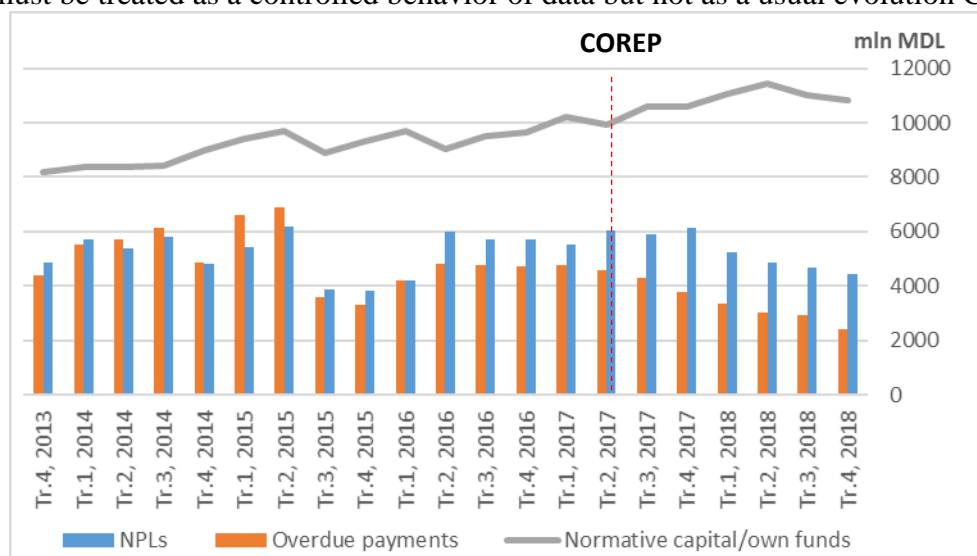


Chart 2. Evolution of some prudential indicators of the banking system
Source: Interactive Database of the NBM – www.bnm.md/bdi

As main business for banks is providing loans to customers, any shock that can affect the banking system can influence the lending activity (Chart 3). In our case, knowing that the National Bank of

Moldova will update the regulatory and supervision framework led to the decrease of total amount of loans, and increase the non-performing loans (NPL) – because of applying of more restrictive rules at the stage of examination of a loan requests.

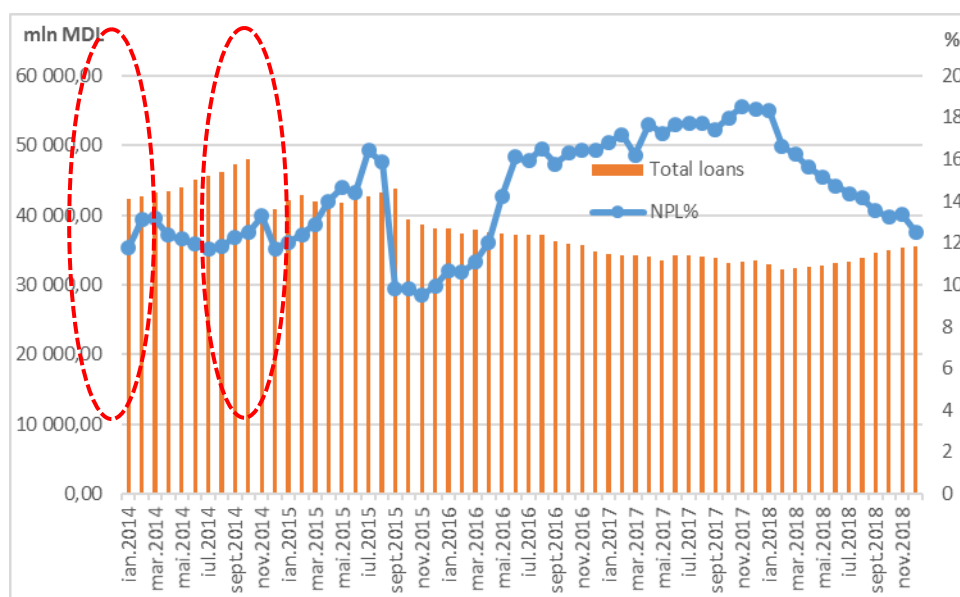


Chart 3. Loan portfolio evolution and share of the NPLs of the banking system

Source: Interactive Database of the NBM – www.bnm.md/bdi

In this regards, it is notable that lack of financing provided by banks was covered extremely comfortably by nonbanking credit institutions (Chart 4). We can see that from the end of 2015 till the end of 2018 the amount of loans provided by nonbanking credit institutions register an increase of more than 226% (31.12.2018 to 31.12.2015). A special remark here is that the rate applied by nonbanking credit institutions, because the average rate is much higher than banks ask, and we can derive a bigger risk premium can be affected by less demanded requirements to apply for a loan in nonbanking credit institutions. It is needed to be mentioned that from 2019 nonbanking credit institutions are under new regulations, and I expect that requirements for application to a loan will be adjusted, in order to apply more restrictive approach, because of higher prudential rules that will need to be applied by nonbanking credit institutions.

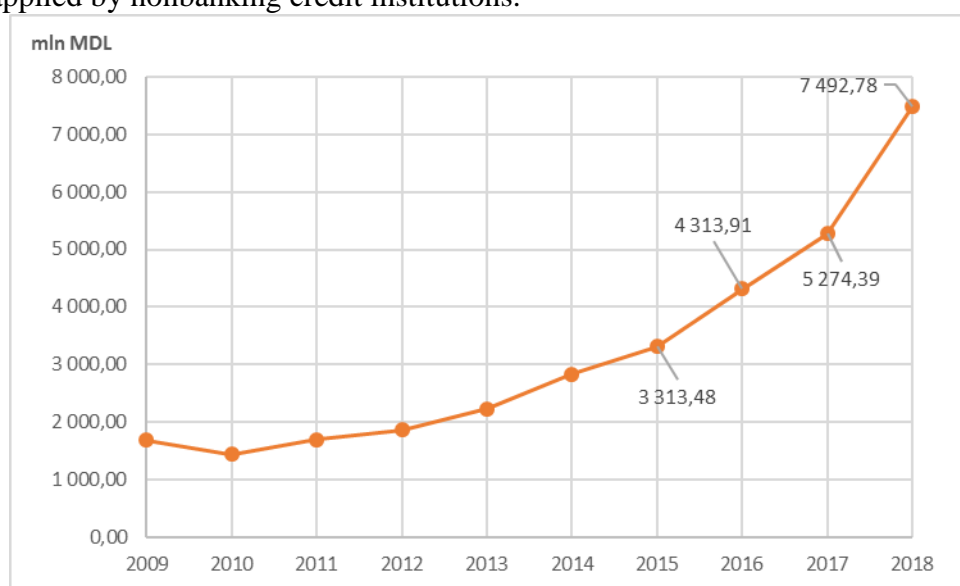


Chart 4. Evolution of loans portfolio of Nonbanking credit institutions

Source: National Commission for Financial Market – www.cnpf.md

Another factor that can influence data treatment is applying of a different accounting frameworks for loan loss provisions. In our case, application of new IFRS9 starting with jan.2018 was materialized in reducing the gap between prudential requirements, that is more restrictive and only forward looking approach and on the other hand – IFRS9 requirement that starting from 2018 allow banks to allocate more provision. In this regards, perhaps we can see the convergence and similarity in evolution of both dimensions (Chart 5), and maybe in the future a single approach can be chosen (it depends how similar and trustful will reflect the value of real exposure at risk).

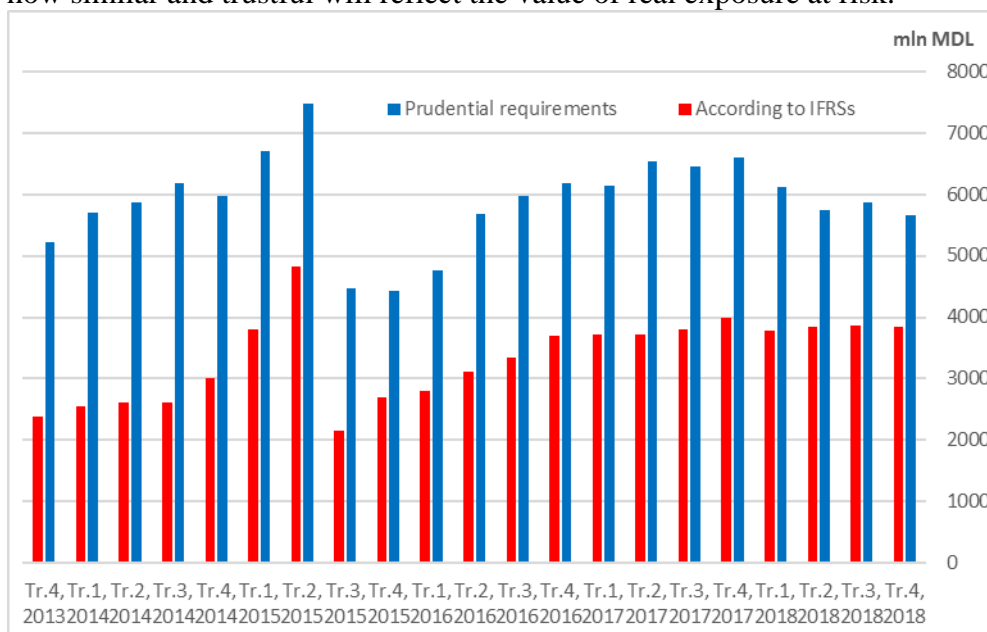


Chart 5. Loan loss provisions according to prudential and IFRS requirements

Source: Interactive Database of the NBM – www.bnm.md/bdi

Having started a state program named “Fists Home” – that is based on issuing by the Ministry of Finance of a guarantee for loans provided by banks to public workers. This program was designed in order to help young individuals or young families to obtain enough finance for buying their own house (or apartment). Started in 2017, program already has a visible impact on lending for individuals, especially we can see a big jump in loans amount at the end of 2018 has an increase comparing with end of 2017 more than 49% (Chart 6). This can be explained by the total increase registered in 2018 – 1 308.2 mil MDL, comparing with 332.2 mil MDL in 2017.

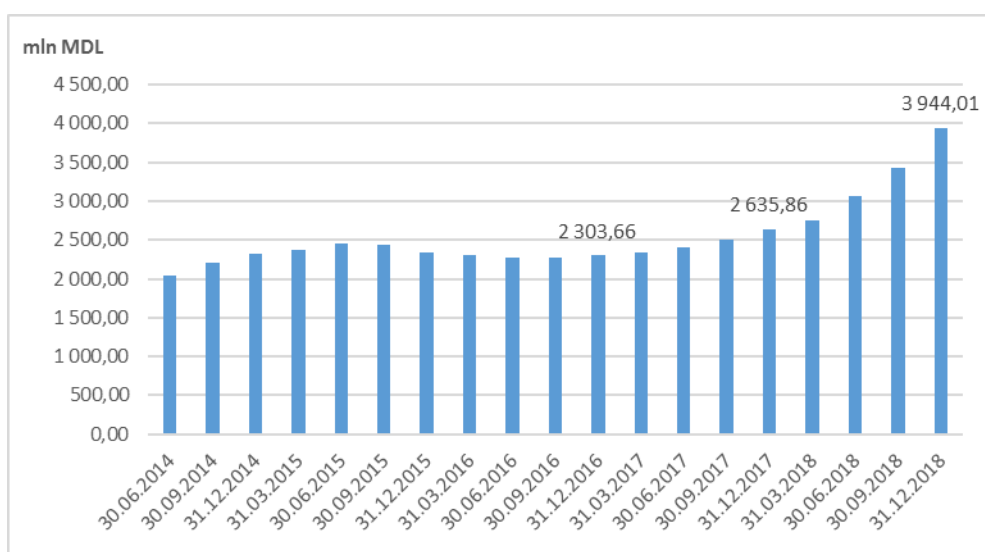


Chart 6. Evolution of value of mortgage loans provided by the banking system

Source: Interactive Database of the NBM – www.bnm.md/bdi

Of course it is clear that not all loans were provided under “First House” program, but banks that are included in mentioned project expand their products not only for public workers, and that is a key of strong an accelerate ascending of loans portfolio at the end of 2018 and the total number of such loans (Chart 7).

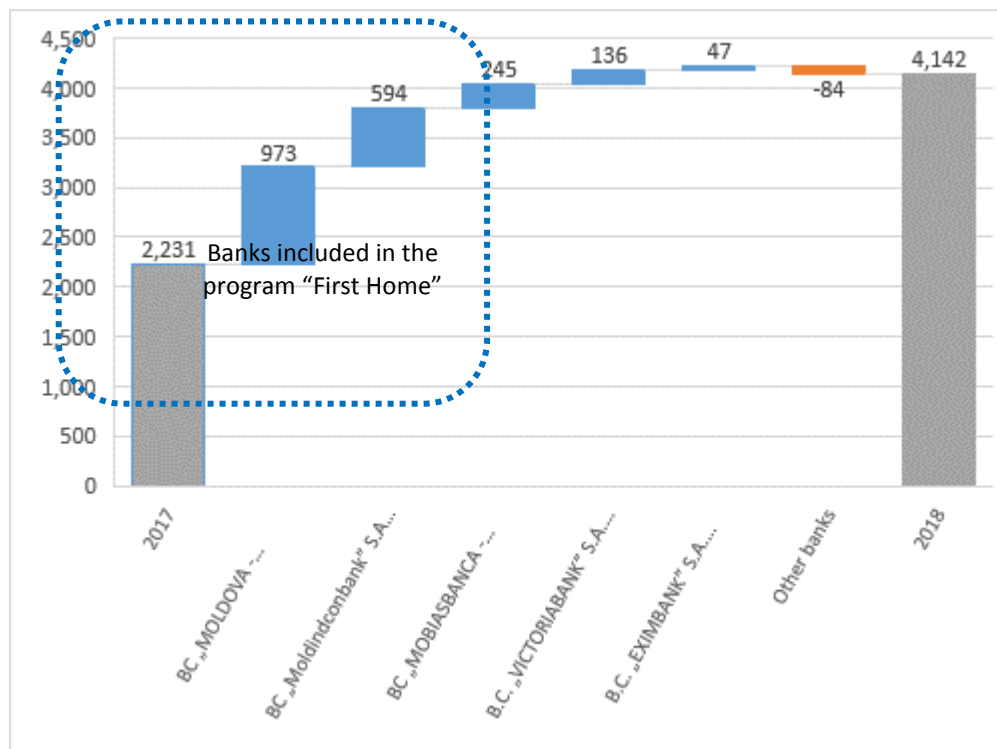


Chart 7. Evolution of number of mortgage loans provided by the banking system in 2018

Source: Interactive Database of the NBM – www.bnm.md/bdi

An important factor in the evolution of loans for houses/apartments is the regulated by law interest rate, that limit the premium of any participating bank to 3%, so having the rates evolution (Chart 8) we can see that it is at a very low level.

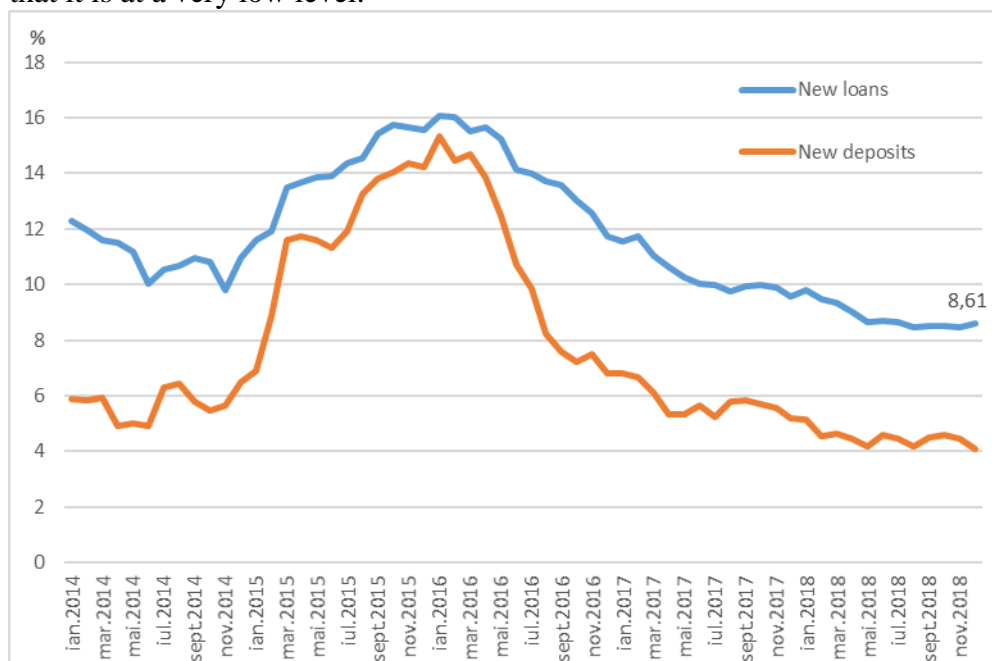


Chart 8. Evolution of interest rates for new deposits/loans accepted/provided by the banking system

Source: Interactive Database of the NBM – www.bnm.md/bdi

I would like to underline some facts about deposits. Especially the fact that it was a shock (Chart 9), the amount of deposits has a positive pattern as a stock at the end of period (except the shock wave at withdrawing of licenses).

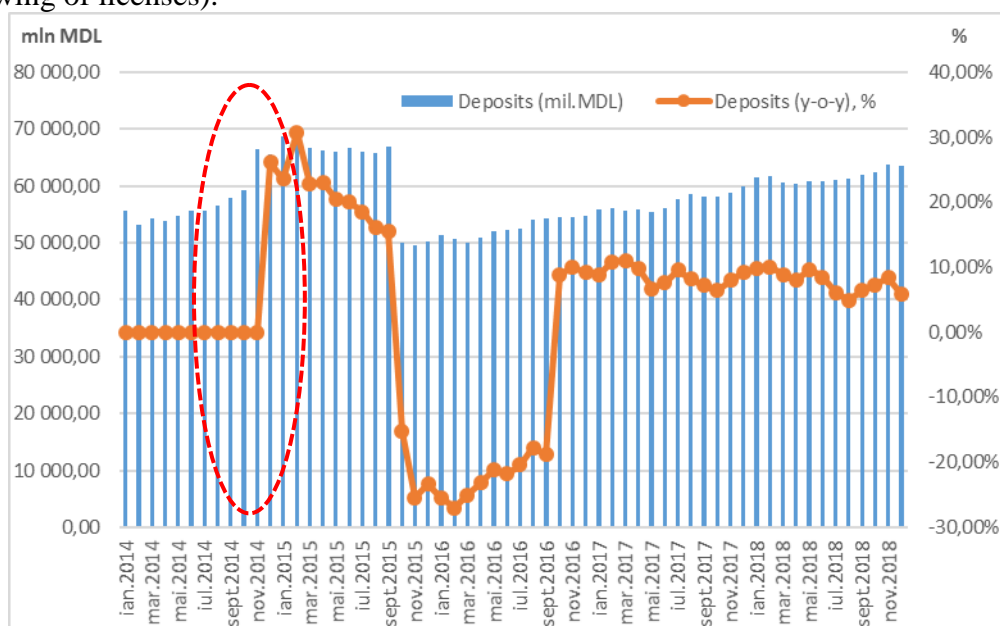


Chart 9. Evolution of deposits portfolio of the banking system

Source: Interactive Database of the NBM – www.bnm.md/bdi

Another identified fact in the behavior of population, is moving a part of deposits from MDL into foreign currency (USD or EUR). We can see clear that during the shock, the share of deposits in MDL in total deposits was at lowest 41.8%, but at the end of 2018 at about 59% (Chart 10). We can assume that a marginal factor was a lent appreciation of national currency.

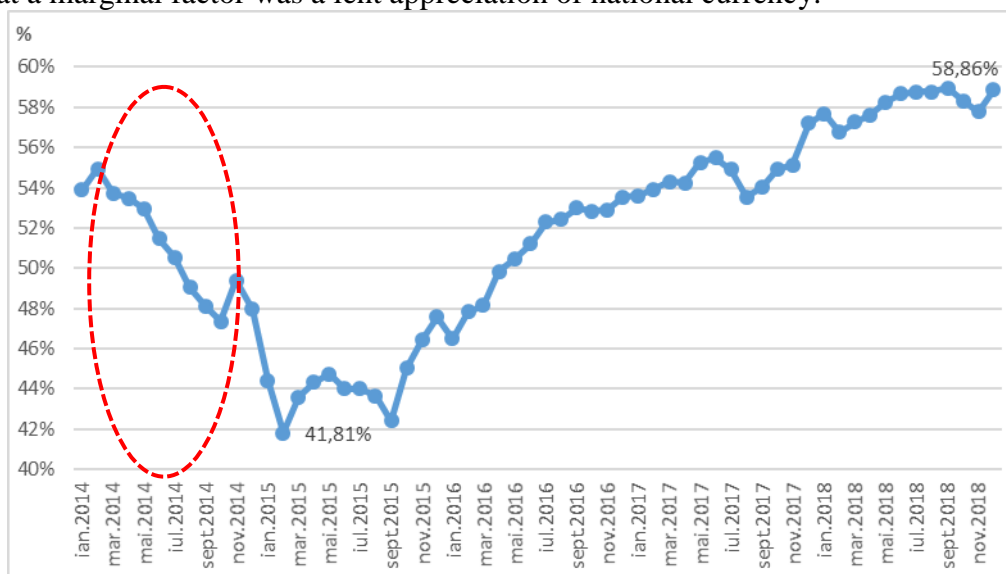


Chart 9. Share of deposits in MDL in total deposits portfolio of the banking system

Source: Interactive Database of the NBM – www.bnm.md/bdi

CONCLUSIONS

I can conclude that recent evolutions in the banking system and in financial sector in general was as a good foundation for the stabile and ascending development of the national financial system. Having last increasing of nonbank financial institutions share in the total financial institutions assets from one hand imply an acerb concurrency with banks for retail customers, and from the other hand – contribute to more dynamic evolution of retailers. These actions being under

control and supervised by competent authorities will lead to stable and robust expansion and diversification of financial services provided by financial institutions to their consumers.

On the regulatory side, the efforts quantified in a new legislation on banking activity and updating (reengineering) of supervision approach in combination with best practices applied in reporting of data in supervision purposes – are all identified as an excellent precondition to qualitative development of banking sector and to accelerate in implementation of new technologies in financial services providing to customers.

I believe that another important factor that need to be taken into account is Tech-evolution in financial world. This is the most unknown area that by its power of expansion can in very short time have an impact on financial and especially banking market. In this regards, we need to be ready to accept the implementation of new services and be able to regulate and supervise the most vulnerable segments of banking sector activities.

Some additional work, that was implemented by national authorities and with support of international organizations is the implementation of Central Security Depository. This action will rebuild the trust in security markets, and will exclude any misinterpretation of unclear and unfair registration of issuing and property transfers of securities. Nowadays the CSD is processing state and NBM's securities, but in short time it will cover all security market of the Republic of Moldova.

It is necessary to mention that not all actions taken by the NBM were under assistance of international organizations, some developments were initiated and successfully finalized by the NBM as a development strategy. And internal drivers for being in line with the best practices of other central banks I hope will continue, and all contributions internally generated will lead to a strong and agile institution that will have to supervise banks whose main interest is providing excellent services to their customers and to be able to cover all assumed risks without affecting their clients.

And finally, as were mentioned before – an analysis of any data, in our case banking system of the Republic of Moldova should be done with all information available, and especially about periods that are treated as exceptional events (in our case the withdrawing of licenses from three banks that accounted a third of banking system total assets).

REFERENCES

1. **International Monetary Fund** *Financial Soundness Indicators Compilation Guide*. Washington: IMF Publication Service, 2006, 302 p.
2. **Interactive database of the National Bank of Moldova** [on-line]. Chișinău: www.bnm.md/bdi.
3. **Statistical and analytical information issued by the National Commission for Financial Markets** [on-line]. Chișinău: <https://www.cnpf.md/ro/organizatii-de-creditare-nebancara-6456.html>.

SECȚIUNEA VII: **Științe juridice. Științe politice și administrative**

ON SOME MODERN SPECIAL INVESTIGATION METHODS AND PREVENTION IN CRIMINAL PROCEEDINGS

PÂNTEA SERGHEI
pantea.serghei@gmail.com
Ministry of Internal Affairs
bd. Ștefan cel Mare și Sfânt, no.75
Republic of Moldova, Chișinău

Abstract: *Contemporary reality shows that a considerable part of offenders make use of modern technologies, are in step with the latest changes in modern tech, which hinders greatly the preventing activities, revealing and fight against offenses. The starting point of the research are legislative intervention proposals on the introduction of two tools, subsequently acquiring certain technologies and softs, and strengthening the cooperation between law enforcement agencies and private sector, to help prosecuting authorities and investigation agencies. These methods take the form of dual nature, of mixed functions methods, and could contribute decisively to prevention and effectively counter certain categories of offenses; strengthen the evidence in criminal proceedings; determine some categories of subjects to abandon (quit) criminal activities initiated and/or already in progress; identifying suspects and others. Thus, the two proposed methods could improve the activity of law enforcement agencies and are useful to us for varying situations such as when, while the suspect is identified, the evidence is insufficient; or there is no certainty that the perpetrator really pursues the satisfaction of the alleged criminal intent; prevent the occurrence of harmful consequences; cases in which the criminal intent is not fully satisfied, as well as other assumptions. The conceptual forms of these methods are: controlled disconnection of certain electronic communications services; obstruction, jamming or controlled interference of electronic communications services. The theoretical and scientific support of the paper is comprehensive, applying the logical, the comparative and the systemic methods of research.*

Key words: *Justice, criminal proceedings, evidence, special investigative methods, prosecution, prevention*

JEL Classification: K14, K24, K38, K42, K49

INTRODUCTION

“In matters of justice and the rule of law, an ounce of prevention is worth significantly more than a pound of cure... Prevention is the first imperative of justice.” [1, p.4]. Contemporary reality shows that a significant rate of offenders make use of modern technologies, are in step with the latest changes in modern tech, which hinders greatly the preventing activities, revealing and fight against offenses. The starting point of the research are legislative intervention proposals on the introduction of two tools, to help prosecuting authorities and investigation agencies, that takes the form of dual nature, of mixed functions, and can, in our opinion, contribute decisively to prevent and effectively counter certain categories of offenses; strengthen the evidence in criminal proceedings; determine some categories of subjects to abandon (*quit*) criminal activities initiated and/or already in progress; identifying suspects and other. Thus, the two proposed methods could improve the activity of law enforcement agencies and are useful to us for varying situations such as when, while the suspect is identified, the evidence is insufficient; or there is no certainty that the perpetrator really pursues the satisfaction of the alleged criminal intent; prevent the occurrence of harmful consequences; cases in which the criminal intent is not fully satisfied, as well as other assumptions. The conceptual forms of these methods are:

1. Controlled disconnection of certain electronic communications services;
2. Obstruction, jamming or controlled interference of electronic communications services.

MATERIALS AND METHODS

While developing the research, national legal framework, the legislation and best practices in other countries, the international resources, were consulted. Also, the specialized literature regarding crime prevention, crime investigation and prosecution, was researched, making the appropriate references and explanations. In this respect, we mention in particular the authors *Al. Monteith, A. Thomson, Th. Chittum, T. Macaulay* whose contribution we consider to be substantial.

The scientific work is supplemented by a comprehensive analysis that allows the argumentation of the necessity to elaborate and implement two methods, of a dual nature, with mixed function, in order to prevent and investigate offences effectively. The theoretical and scientific support of the paper is comprehensive, applying the logical, the comparative and the systemic methods of research. To elucidate the issues of the research, the following objectives must be achieved: a) understanding the extent and content of prevention activities during criminal proceedings; b) determining the basic subjects entitled to prevent and combat crimes; c) identifying the relevant instruments; d) determining the main conceptual forms of the methods and provide arguments.

RESULTS AND DISCUSSIONS

Let's shape some hypothesis inspired by the practice of law enforcement agencies [2]: **(1)** there is some information that a person distributes narcotic drugs, and uses for various purposes modern communication mobile applications (*for example for the purposes of organization, guidance, communication, information sharing, conspiracy, etc.*). Drugs are hidden in publicly accessible areas without interacting directly with the buyer, and again through the application, the suspect claims his offer, shares the location with the hidden drug, whilst the buyer pays for the amount of drug requested through the electronic payment terminals (*such as e-wallets*); **(2)** the alleged or real threat of detonation of a remote explosive device; **(3)** conducting criminal activities from supervised locations with limited access (*such as prisons, temporary detention facilities, etc.*).

Usually, the law enforcement officials lead and concentrate efforts to identify methods of dividing or decrypting application or device systems [3], investigation of money transfers (*in the case of electronic wallets it can be extremely difficult*), carrying out special investigative measures or a set of special measures and procedural activities that would allow gather the evidence. These activities can be supplemented with identification activities, efforts aimed at defusing the explosive (*if identified*), searches, other open or secret investigations.

Considering the fact that modern applications or devices are usually dependent on network access (*including the Internet access, GSM, etc.*), and the interaction is done through telecommunication or electronic communications services, usually being useless without such an access. These may be the cases when, based on authorization (*as the case may be, following the urgent procedures*) those devices could be temporarily disconnected from the network or jammed in a particular sector or on a determined device. Affirmative, if there was such a legal option. It is more than clear that the perpetrator will seek out as appropriate: give up (*quit*); continue with unsecured conversations on the same device or direct interaction (*risking to be the subjected to other special investigations methods, - hereinafter SIM*); continue the crime using another device; etc., which would inevitably lead to impediments in time, resources and conspiracy. Disconnection could take place not only in terms of a particular device or services, but of a complex of devices or services; on a determined area or sector (*including geographically*); on a cumulation of services; in relation to a user or more (*person, apartment, block of flats, houses, etc.*). And if the offender gives up? There are also other assumptions in which the use of the suggested methods (*such as prisons*), can be applied to prevent the use of smuggling mobile phones by detainees [4]; during tactical operations, such as judicial warrants, including searches (*there were even cases when the operation to apprehend the person was broadcasted by television or through social media and the offender had the opportunity to follow it live; that may be also the case when the offender's accomplices or*

other participants in the offense could benefit from this information); cases of hostage-taking; others.

Criminal proceedings cover the entire activity of the criminal investigation agencies, prosecution and law enforcement bodies, and of the courts. It is considered to have started *ex officio* or from the moment of notification about the *preparation* or *commission* of an offences. [a.n.]. From now on, especially the activity of the criminal investigating authorities has the legal purpose, *inter alia*, protecting the individual, the society and the state from offences, whilst the criminal law expressly establishes the purpose of *preventing* the commission of new crimes. Furthermore, the criminal investigation authorities have the obligation to take all necessary measures *to prevent* and *suppress* the offenses. [a.n.]. Thus, from the economy of the provisions of criminal law and criminal procedure law, this dual function of *prevention* and *countering* must be equally accomplished.

Council of Europe, in the European Code of Police Ethics, establishes that among other basic police objectives is crime *prevention*, fight against crime, and the discovery of crimes [5, p.5]. This document confirms that all dimensions of police activity are important.

Ministry of Internal Affairs, mainly through the General Inspectorate of Police and the General Inspectorate of Border Police, exercises *inter alia* the crime prevention function [6] [7], both authorities are competent to investigate and prosecute offenses.

According to some authors, prevention of crimes must be understood as the activity with the purpose of elimination of the generating causes [8, p. 217], as well as stopping (*supressing*, a.n.) of the *already started criminal activity*. Others argue that in the gnoseological content of this notion itself is admitted a formal logical error: it is impossible to prevent something that already exists. We believe that the content of these debates is important in terms of knowledge, rather than the prevention activity itself. Therefore, the prevention of crimes is perceived mainly in the light of the activities carried out outside the criminal proceedings, thus, the preventive function in the criminal process, sometimes with the exception of the notifications made according to art. 216-217 Criminal Procedure Code and incomplete offenses (*preparation, attempt*) [a.n.], remains declarative. Although these activities are very important and not negligible, prevention efforts most often take the form of observation, sessions or campaigns, dissemination of information materials, lectures, other awareness-raising activities, spontaneous or organized and planned, at different levels (*sectoral, national*), as appropriate, involving different entities (*non-governmental, international partners*).

Technologies, prevention and fight against crime. The development of modern communication technologies, various applications (*What's up, Viber, Telegram, online banking, e-wallets, etc.*), the existence of software, accessible telephony and IP platforms, various services, the accelerated evolution and modernization of technologies, the emergence of technology in crime, the inevitable convergence of technology with the crime, hinders the work of criminal investigations and special investigative agencies, prosecution bodies, aimed at effective detecting and *fighting* against offenses.

These, supplemented by a considerable workload of the agents, the complexity of the activities carried out to qualitatively document (*investigate*) a criminal act, the imperfect performance evaluation of the activity of the law enforcement bodies, other aspects, determine the prevalence of the *combating function* in detriment of *prevention*, especially when criminal proceedings are already initiated or checks are being carried out, or considerable efforts have already been made to gather (*obtain*) evidence. At the same time, crime prevention is perceived as the task of authorities and subjects other than criminal prosecution or investigative bodies, including due to the precariousness of the legal instruments. Once criminal proceedings have been initiated, considerable efforts are concentrated in order to identify the suspect, gather evidence, take proper precautionary measures, apply preventive measures (*including safeguards and security measures*), and no time or means are put in place to influence (*determine, or even give a chance*) the person to give up (*to quit*) the offences. Regarding the special investigative measures, we emphasize that according to the Criminal Procedure Code, two substantive conditions for their arrangement and

execution are: the impossibility of achieving the *purpose of the criminal trial (includes prevention, a.n.)*, the existence of the grounds to presume that the evidence management activities can be seriously prejudiced; as well as the existence of reasonable suspicion regarding the *preparation or commission* of a serious, very serious or exceptionally serious crime (*for classification and explanation see article 16 of the Criminal Code, a.n.*). We did not accidentally mention that the two instruments are to be given the form of special investigative methods (*measures*) within the meaning of the Criminal Procedure Code, because we consider that the adoption of another law, to serve legal basis for prevention measures, either qualifying them as prevention measures (*including the meaning given by the CPC*) or any other legal forms, will not allow to exactly achieve the dual function.

Hypothesis that have been modelled *before* and the provided arguments, could explain the purpose, and for this reason, we suggest these measures to be expressed formally as follows:

1. Obstruction, jamming or controlled limited interference of telecommunications or electronic communications services on determined areas (*geographically*);

2. Controlled disconnection of telecommunications or electronic communications services:

a) to a specified device (*IMEI, telephone number, IP, WLAN, IMSI*); or

b) multiple devices belonging to the same user or to a complex of devices; or

c) of a specific service (*internet, mobile, landline telephony*); a) and / or b) and / or c):

- on time intervals; or

- on cells (CSLI) [9, p.82; 10, p. 6]; or

- a certain determined area (*including geographical*).

Obstruction, jamming or controlled interference. The settled standards in the field, *among other things*, state that these actions must not damage devices; does not collect or store data; doesn't interfere with the normal operation of emergency services (*such as 112, other emergency services*); can be manually connected and disconnected by the operator; do not to affect third parties or make them aware of their existence; multiple others.

The ECOSOC Resolution [11, p.300] establishes *inter alia* that governments and civil society, including, where appropriate, the corporate sector, should support the development of crime prevention programs.

The first proposed instrument aims, *among other things*, at reducing the intrusion into the right to privacy, as well as the prevention of crimes. In the second case, in addition to the ones outlined, it focuses on the assumptions in which offenders could influence the victims or witnesses, including from certain places of detention, as well as the cases in which certain criminal activities are carried out (*geographical, time of the day, etc.*) without having the possibility to identify the suspect within or proximate time or to stop (*supress*) the offense, or the assumption of securing a certain geographic perimeter, etc.

Although through the National Center for Radio Frequencies (*NCRF*) Decision no. 2 as of August 2, 2013, it was decided not to allow the use of devices that cause premeditated harmful interference (*intentional jamming devices*) we consider that it cannot refer to the activities of the law enforcement agencies, which must be able to use any legal means, including technical means, to prevent and combat offenses. In this respect, the informative note to the *prenoted decision* reveals that the only exception to the ban could be the placement of jamming devices in the context of national use authorized by the law enforcement and security forces [12]. A similar situation is observed in ECC Recommendation (04) 01 of 2004 [13]. This exception concerns not only the use but also the *placing on the market of such devices*.

So, while jamming prohibition exists in most states, these devices can be used with certain exceptions (*law enforcement authorities and national security*). For instance, it is the Canadian example [14, p.83] which reveals that if the purpose of security, national defense or safety is pursued, being limited to the smallest physical area, the smallest number of frequencies, in order to achieve the objectives of interference or obstruction, the shortest duration, this method is allowed.

It should be mentioned that these special methods must be applied only for certain categories of offenses expressly defined and assigned to the category of serious, very serious or exceptionally serious crimes, in order to avoid criticism about misuse, and secure it from criticism regarding improper use, including different other violations of legislation and limitation of rights, as it is the right to expression [15 p.9,18] (*for example, if mass demonstrations or protests are held, even at the stage of preparation or planning* [4, p.259]).

Argument. The protection of privacy (*in its different forms*) is important, it is only one of a multitude of duties imposed on states (*both negative and positive obligations of states*), including the protection of citizens' lives and property, the prevention of criminal activity, and the protection of national security [16, p. 19]. When a person is disconnected from a service (*ex. Internet access*), he or she has the free will to give up criminal acts or to continue the communication, for example *without using the encrypted application*. After all, keeping secrecy (*in the sense of the right to privacy*) can be finally perceived as an *exercise of will*. Giving up the right to personal secret or the right to private life (*privacy*), where securing such rights is objectively not expected, the assignment or disclosure of part of it, is a discretionary right of the holder (*subject*) of the right. Physical intrusion by disconnection can prevent individuals from acting as they wish, may influence individuals in the behaviour they choose to present, without *interfering with their content* (s.n.a.). Among the findings of confidentiality as autonomy, the ALADDIN Project has revealed that since surveillance activities not only collectively collect information about people, they can serve to influence and modify, even constrain, the behaviour of individuals (s.n.a.). Being aware of the observation, they can change their behaviour in such a way as to avoid the perceived negative consequences or even to act in a coercive manner (...) [16, p.15]. When examining the reasonableness and proportionality test of the intrusion by state agents, the case-law of ECtHR, CJEU and the good practices of foreign courts, such as the Katz case [9, p. 86], will be consulted and considered in each specific or particular case.

CONCLUSIONS:

Recommendations for legislative intervention. In order to improve the situation in this area, we suggest the following main proposals of *lege ferenda*:

1. Amending by completing art. 132² of the Criminal Procedure Code with two points, according to the content specified above:

- e¹) **Controlled disconnection of telecommunications or electronic communications services;**

- e²) **Limited controlled jamming or interference of telecommunications or electronic communications services in specified areas;**

2. Subsequently modify by filling Criminal Procedure Code (*example, with articles 138⁴, 138⁵*) and the Law no. 59 of 29.03.2012 on special investigative activity;

3. Completion of Law no. 241 on electronic communications as of 15.11.2007, at the paragraph (7) article 5, after the words "*electronic communications can be intercepted*" with the phrase "*disconnected or jammed*";

4. We note that amendments to the Contravention Code (*example article 251*) is not necessary as such, because it will constitute a special investigative method authorized in accordance with the law;

5. Although, *de jure*, Government Decision no. 100 of 09.02.2009 does not affect or imply jammers or disconnectors, this decision should be amended in our opinion by including other special means and methods, without narrowing the nomenclature of the decision to the scope of the expressed purpose, as these are the most intrusive means to the rights and freedoms of the person, and in our opinion it should follow a strict legal and regulatory regime.

REFERENCES

- [1]. UNODC, *Crime prevention assessment tool*, New York: United Nations, 2009 //Apud S/2004/616, para. 4, 72 pag.;
- [2]. Press release of General Police Inspectorate: <http://politia.md/ro/content/vindeau-droguri-prin-aplicatii-electronice-de-comuni-care-trei-persoane-retinute>, accessed 22.01.2019;
- [3]. Open sources and communiques: noi.md/md/news_id/208333;slate.com/technology/2018/06/paul-manafort-how-did-fbi-access-whatsappmessages.html; actualmm.ro/big-brother-politia-cere-o-lege-care-sa-i-permita-sa-obtina-parolele-de-acces-pe-internet/; www.bizlaw.md/2017/04/30/proiectul-de-lege-big-brother-analize-si-recomandari; others;
- [4]. Chittum Th., *Can You Hear Me Now? Cell Phone Jamming and the Tenth Amendment*, *Nevada Law Journal*: Vol. 13: Iss.1, 2012, 257-289 pag;
- [5]. *Общественная безопасность и осуществление полицейских функций. Пособие по оценке систем уголовного правосудия*, New York: United Nations, 2010, 110 pag.;
- [6]. Government Decision no. 283 of 24.04.2013 for the approval of the Regulation on the organization and functioning of the General Inspectorate of the Police of the Ministry of Internal Affairs, available: <http://lex.justice.md/md/347675/>, accessed 28.02.2019;
- [7]. Government Decision no. 1145 of 21.11.2018 on the organization and functioning of the General Inspectorate of Border Police, available: <http://lex.justice.md/md/378478/>, accessed 28.02.2019;
- [8]. Bîrgău M., *Aspecte teoretico-aplicative privind prevenirea criminalității la etapa actuală în contextul dezvoltării sistemului național de drept*, *Revista științifico-practică nr.2*, Chișinău: IRIM, 2015, 215-225 pag.;
- [9]. Monteith Al., *Cell site location information: A catalyst for change in fourth amendment jurisprudence*, *The Kansas Journal of Law and Public Policy*, Vol. 27, No. 1., 82-102 pag.;
- [10]. *In same context see Thomson A., Cellular Dragnet: Active Cell Site Simulators and the Fourth Amendment*, New York University School of Law, 2015, 43 pag.;
- [11]. ECOSOC Res.1995/9, *Guidelines for coop. and tech. assistance in the field of urban crime prevention*, 100 pag., available: https://www.unodc.org/pdf/crime/commissions/12_commission/30e.pdf;
- [12]. Informative Note of the National Center for Radio Frequencies of on the prohibition of the import, making available on the market and use of jamming devices, accessible: particip.gov.md/public/documente/141/ro_949_NotainfoHotarireCSFRd_ispozitivebruiiaj28.06.20131.pdf;
- [13]. ECC Rec. (04)01 *with regard to forbidding the placing on the market and use of jammers in the CEPT member countries*, 13 February 2004 with amendments of February 8, 2013;
- [14]. Macaulay T., *A Review of Canadian Radiocommunications Law Around "Jammers"*, *Canadian Journal of Law and Technology*, Vol 4 Nr. 1, 2005, p.83-86;
- [15]. Council of the EU, *EU Human Rights Guidelines on Freedom of Expression Online and Offline, Development of surveillance technology and risk of abuse of economic information*, 2014, 28 pag.;
- [16]. Project ALADDIN, Report D 3.1., *Data protection, Social, Ethical and Legal frameworks*, 2018, 96 pag.;

LEGAL ASPECTS REGARDING THE DEVELOPMENT OF RENEWABLE SOURCES OF ENERGY IN THE REPUBLIC OF MOLDOVA

PhD student IARMENCO MIHAELA,

Doctoral School in Law, Political and Administrative Sciences

ASEM-USPEE, Republic of Moldova

e-mail: iarmencomihaela@gmail.com

Abstract. *Renewable energy and energy efficiency are two of the main objectives underpinning the development of the energy sector in the Republic of Moldova. They aim at capitalizing on renewable energy sources in the current context of energy security, energy market liberalization, demographic expansion and environmental pollution. In the present scientific approach, we intend to investigate the legal instruments that reflect the importance and role of renewable energy sources in the process of refining the most important guidelines of international legal regulations in the field, a time that has been extensively studied in the legal doctrine. Also, studying the legal principles that enhance the role of alternative energy sources in the context of technology development must be necessary, as they characterize the essence of all legislation in the energy sector, the values promoted and protected by it, the finality, the consequences and, not least, determines the directions and strategies for the development of alternative energy sources. The scientific research, which includes the general and special approaches of analysis, was carried out with the following methods: analytical, logical, historical, comparative, deductive and legal. The novelty and originality of the researched theme is to improve the analysis of the use of renewable energy sources in the context of the development of the energy field at national level. The problem of correlating all these key elements has led us to an analysis of the principles of the operation and application of renewable energy sources. It is in itself a process of legalization, a process of discussion, analysis, synthesis, research, and debate.*

Keywords: *renewable sources, legal framework, development, sustainability, efficiency, energy market.*

JEL CLASSIFICATION: P 37(P 48), L 84

Introduction. In the last decades, there have been major changes in the environment, caused by the deterioration of the pedoclimatic conditions and the significant decrease of the natural resources. This has led the scientific community, as well as the decision-makers at national and international level, to look for new solutions to develop the energy sector from a technical and legislative point of view.

The new energy future tends to cope with challenges of major importance. First of all, it resists the continuous growth of electricity consumption, which is generated by the demographic increase, the personal needs of consumers and their dependence on imports of primary energy resources. Taking into account these aspects, the uncontrolled use of excessive exploitation of natural resources is a priority in the process of upgrading and modernizing technological and legislative processes.

Increased electricity consumption, demographic explosion, satisfying the personal needs of the population, which are in close interdependence, determined the reformation and modification of the existing legal framework in the field. These actions are justified by the need to adopt and implement in the conditions of the development of the energy sector, new solutions that will contribute to the improvement of the security of electricity supply. The solutions are also proposed in the context in which environmental pollution has been "abusive" in recent years. This has increased interest in energy storage in order to integrate renewable energy sources in the network and directly meet the needs of consumers.

Under these conditions, renewable energy as an alternative source has emerged as a logical consequence of many global concerns, European as well as national, in terms of energy sector security, environmental protection and the development of viable energy technologies on a commercial scale. The major advantage of using renewable energy sources is that they do not produce polluting emissions and contribute to combating local pollution with the goal of reducing greenhouse gas emissions.

Ensuring the legislative and normative framework in the field of energy efficiency and renewable sources of energy contributes to the development of alternative energy sources, provided that effective implementation of legal norms determines their valorization. Being an inevitable reality, legal provisions need to cope with the ongoing process of developing renewable energy sources. In this regard, taking into account its changing nature, new rules are developed to regulate the competitive relationship between electricity producers on the market. The introduction of such rules that reflect the individual and the renewable energy source allows the liberalization of the energy market and gives renewable energy producers the opportunity to participate, on an equal footing, in a fully competitive market.

The degree of study of the subject investigated. The study on the legal aspects of renewable energy sources in the Republic of Moldova is presented from the doctrinal, jurisprudential and scientific point of view. For this reason, the informational basis of the paper is very important wide. It is formed, first of all, from national and European legal acts, works by foreign and authored authors, publications and magazines, as well as electronic information sources.

In this paper, overrides the legislative nature because it aims to establish the main positive and negative aspects regarding the national capitalization of the renewable energy sources. Firstly, reference was made to the legal provisions stipulated in the Law on the promotion of the use of energy from renewable energy sources, the strategic decisions on the development of energy efficiency as well as the resolutions approving action plans for the development of renewable energy sources. Also, we have also referred to the main legal instruments of the European Union on the energy sector. Particular importance has been given to the Directive on the promotion of the use of energy from renewable sources. We also want to use the European normative framework because the Republic of Moldova follows the European integration course with the signing of the action plan and respectively the entry into force of the Association Agreement between the Republic of Moldova and the Member States of the European Union. The European Union supports our state in the field of development of renewable energy sources, this is also reflected in the Addendum to the Financing Agreement "Supporting the use of biomass for energy purposes between the Republic of Moldova and the European Commission" of 26 November 2010, as well as from various action plans have been implemented in this sector with the support and funding of the Union.

In order to bring a theoretical note in the context of the researches carried out, and to render the uniqueness and originality of the importance of the development of renewable energy sources on the national market, we have referred to the works of several authors from Moldova, Romania and other published sources European.

In this context, we aim to carry out an in-depth study on the needs and availability of renewable energy sources on the market, being carried out in accordance with the financing and implementation strategies linked to the national state policy.

Methodology of scientific research. The purpose of the researches carried out and included in the present paper is to legally base the opportunity of using renewable energy sources both in the production of energy from alternative sources and in energy efficiency solutions, from concrete investment projects through the study of their economic and financial feasibility in the context of national development.

Therefore, in order to elucidate the subject proposed for the investigation, we used the following methods of scientific knowledge, especially: the logical method, which is the application of the methods of analysis and synthesis, the deductive argumentation, the juridical method, administrative - comparative method, the historical method, the quantitative method, the pedagogical and statistical methods, which allowed a rigorous scientific research of the legal regulation issues regarding the implementation of renewable energy sources, the method of research and the method of information processing.

The development of renewable energy resources is at the present stage an issue that is strongly addressed and it is necessary to implement and adopt on the energy market new strategies for reforming and adapting to the ever changing conditions. All of these actions aim to increase

energy security and to mitigate harmful factors that influence climatic conditions. For these and other reasons, the subject addressed is a priority for the energy sector.

Occupying an important place in the political actions of the state, as well as important European and international bodies and meetings, the subject of renewable energy sources becomes the subject of the widest circulation. Because of this, the energy sector has been analyzed under the most diverse angles, given that it is welcomed by all actors involved in the energy market.

As a significant and non-polluting source of energy, the development of renewable energy sources is decisive for the energy sector because it is virtually inexhaustible and its cost of use much lower. Given that the use of renewable energy sources comes to cope with a global crisis that is governing the world over the past few years, it is getting more and more acute, and it also faces the process of rising energy prices for consumers end.

From this point of view, the development of renewable energy sources at national level also contributes to their valorization under the conditions of economic development. Capitalizing on the potential of renewable energy sources provides real prerequisites for achieving strategic objectives to increase energy supply security by diversifying sources and reducing energy imports, respectively, of sustainable development of the energy sector and the environment [17, p. 130] The alternation of renewable energy sources also assures the well-being and superior quality of life for future generations.

Having an important energy potential and offering unlimited availability of resources, it is stated in the literature that the use of renewable energy sources is based on three important attributes, namely accessibility, availability and acceptability. [20, p. 92]

Renewable energy refers to forms of energy produced by the energy transfer of energy from renewable natural processes. Thus, the energy of sunlight, winds, flowing waters, biological processes and geothermal heat can be captured by humans using different processes. Unrenewable energy sources include nuclear energy as well as energy generated by the burning of fossil fuels, such as oil, coal and natural gas. These resources are obviously limited to the existence of these deposits and are generally considered non-renewable. **CERNEI, p. 3**, So, the energy produced from renewable resources, by its intermittent nature, is a renewable energy source, inexhaustible and sustainable, that can emerge in the form of wind energy, hydropower, weather, light and solar heat, earth temperature and biomass. The characters of inexhaustibility and sustainability of renewable sources highlight their importance in the energy market in the context of the liberalization and promotion of policies related to this sector of activity.

However, this transition from green energy can not be achieved without the creation of adequate markets and regulatory frameworks, these being directly achieved by the fulfillment of environmental protection requirements and compliance with European Union regulations.

In light of the above, it is not surprising that the European Union has decided to promote the use of renewable energy. In this respect, the White Paper on Renewable Energy Sources, published in 1997, was adopted. This legal instrument sets out indicative targets for Member States of the European Union in adopting a legislative framework on the use of renewable energy sources. The Charter has determined at European level the adoption of a more comprehensive legislative framework on the energy sector, becoming a binding legal rule for all Member States [9]. Thus, according to art. 194 of the Treaty on the Functioning of the European Union, the Union aims to promote the development of new forms of renewable energy in order to align and integrate climate change objectives in the new energy market organization.

Controlling energy consumption in Europe and increasing the use of energy from renewable sources are the main components of Directive 2009/28 / EC adopted by the European Parliament and the Council of 23 April 2009 on the promotion of the use of energy from renewable sources. This legal instrument aims to amend and repeal the provisions that originally regulated this area, namely Directives 2001/77 / EC and 2003/30 / EC. This legal instrument aims to ensure that Member States develop their existing legal framework for the application, use and deployment of renewable energy sources in order to diminish unbearable consumer electricity consumption

capacity. This is to be taken into account when establishing the objectives of driving renewable energy sources into the energy balance.

In 2014, the European Council adopted a new framework for climate and energy, which sets new targets to be met by 2030. They provide that, until that year, at least 27% of EU energy should come from renewable sources.

For this purpose, the Commission has put forward several legislative proposals, particularly in the framework of the "Clean Energy for All Europeans" Package (also known as the "Winter Package") of 30 November 2016. It included a proposal to revise the directive on renewable energy which proposed eliminating national binding targets for Member States. This proposal for a revision of the Directive is, at present, the subject of the legislative procedure. [13, p. 18]

The training of renewable energy sources in the energy balance has become a priority for all the countries of the world, including for the Republic of Moldova. The importance of the energy aspect has become a pressing issue for our country as being Russian electricity importers, we have to deal with the numerous challenges that focus on energy security, but also on national security. In this situation, the Republic of Moldova aims to use its renewable energy sources in the absence of its own energy resources and a growing dependence on foreign energy sources.

The development of the energy sector and, in particular, of the renewable energy market, is a new development area for the Republic of Moldova. For the promotion of energy efficiency projects and actions, the legal framework has a very important role to play. In the situation where the Republic of Moldova is a country importing energy resources, renewable energy and energy efficiency is the sustainable solution for enhancing energy security and diminishing the economic effects caused by the increase of the imported resources. [17, p. 130]

Starting from the European strategies and directives, the Republic of Moldova has undertaken legislative and administrative measures for the granting of internal legislation and administration to the European principles in the field. The specificity of the national creative factor of legal norms in the field of renewable energy sources consist in the fact that the European legal standards adopted by the European Union have a binding character for our state. However, the question of the application of the rules of European law in the energy sector within the domestic legal system remains at the discretion of the state.

Regardless of this, the process of capitalizing on energy sources in the Republic of Moldova is at an early stage. The goal of state policy in the field of renewable energy sources coincides with European policies on the use of renewable energy sources, enhancing energy security and diminishing the negative effects of the energy sector on the environment. The action plan for the implementation of state policy on renewable energy is carried out in accordance with the state, branch and local programs, being monitored by the authorities to which this task was assigned.

Due to the fact that legislation has the most significant impact on the applicability of renewable energy sources, therefore, at national level, it has to be applied according to European and international standards. In this context, the Republic of Moldova tends to improve its own legislative system for regulating the renewable energy sources by implementing national programs for the development of the energy infrastructure, respecting the climatic objectives. In this direction, our country has taken decisive steps

At this point, we can assert with certainty that the process of reviewing existing energy policy and developing a new legal framework in the field of renewable energy sources and enhancing energy security has grown. This process is dictated by the European political integration of our country. Including current requirements to approximate national legislation to the requirements of EU directives and regulations and the need to implement a single policy that would integrate environmental requirements in the energy sector at national level. [8, p. 3]

In this context, the first was approved the Law no. 160 of 12 July 2007 on renewable energy which was subsequently repealed by the Law on Promotion of the Use of Renewable Energy from February 26, 2016, the Law on Energy Efficiency, the National Action Plan for Renewable Energy for the Years 2013 - 2020, the Guaranteeing Origin Regulation for electricity produced from

renewable energy sources and other legal instruments that contribute to the efficient development of the energy sector and the implementation of the predetermined objectives in this respect.

However, it is important to note that the Law on the promotion of the use of energy from renewable sources has been adopted in order to transpose Directive 2009/28 / EC on the promotion of the use of energy from renewable sources, regulates the principles and objectives of state policy on renewable energy. Also, the law establishes the national action plan and the attributions of the mechanisms responsible for the administration, licensing, authorization, qualification and registration, as well as the marketing of energy produced from renewable sources. Constituting the legal framework for the functioning of the renewable energy sector, this law ensures the quality of energy and the access of consumers to it.

The National Agency for Energy Regulation has approved two normative acts, which are to ensure the implementation of the requirements of the Law on promoting the use of energy from renewable sources. In particular, it is the Regulation on guarantees of origin for electricity produced from renewable energy sources and Methodology for determining fixed tariffs and electricity prices produced by eligible producers from renewable energy sources.

The regulation is intended to ensure compliance with the requirements of the legal framework in the field, in the part of the development and implementation of the system of guarantees of origin. The normative act establishes a set of rules and procedures for the functioning of the system of guarantees of origin, in particular with regard to:

- adjusting and developing the system of guarantees of origin for electricity produced from renewable sources, in accordance with the provisions of the primary legislation in force;
- the establishment and updating of a unique register of guarantees of origin, in electronic form, which will contain information on guarantees of origin issued, transferred, used or canceled;
- ensuring an effective monitoring of the share of energy from renewable sources in total electricity consumption of final consumers;
- implementation of the procedure for recognizing guarantees of origin issued by the EU Member State authorities or by the authorities of the countries that are part of the Energy Community.[21]

At the same time, the Methodology for determining fixed tariffs and electricity prices produced by eligible producers from renewable energy sources sets out the basic principles and how to determine fixed tariffs for electricity from renewable sources. Also, the Energy Strategy of the Republic of Moldova was elaborated by 2030 which aims to transpose the two objectives: the development of renewable energy and energy efficiency in order to contribute to securitization of energy supply, to ensure the sustainability and protection of the environment and to impose common objectives on the energy sector with those pursued by the European Energy Community, to which the Moldova is a party. [22]

The legislative framework mentioned above, and not only, denotes the existence of positive indices at the level of central public authorities with regard to the use of renewable energy sources. Directly, the desire of the authorities to include in the economic circuit their own sources of energy emitted from renewable resources is also observed. These actions are achieved through the adoption of national strategies that set out specific objectives to develop a concrete action plan for the use of renewable energy sources. To this end, appropriate financial resources are allocated to ensure a favorable outcome.

As the sustainable development of the national economy is being pursued, strategic objectives are set in the medium and long term, given various possibilities for them to be achieved, in particular by initiating, conducting and The correlation of political, economic, technical and ecological actions. At the same time, it is important to mention that the national strategy for the implementation of renewable energy sources is as similar as that adopted by the countries of the European Union. Without many declaratory elements but with institutional, scientific and financial support, the principles laid down in various legal instruments on the renewable energy sector tend to

be harmonized between them. In this regard, it is intended to avoid the many factors that prevent or hinder action in this respect. However, the existence of a robust legal framework can lead to stagnation of the energy perspective due to significant costs and existing barriers to the implementation and use of renewable energy sources.

Once national regulations on renewable energy sources go through a stage of evolution, the consumer is in a difficult situation. This is expressed by the fact that he has to accept the requirements imposed on the energy market, being forced to some extent to adapt to the advanced conditions. Being a reference point, the consumer is entitled as a bearer of demand for goods and services, to determine the market mechanism for the supply of energy as it is obtained from different sources of energy. Regardless of this, at present, consumer opportunities are limited even if state policies in the field of renewable energy sources tend to develop the energy market. This situation has been created because the legislative system is vulnerable because of the opportunities and challenges it faces. Accession of the challenges that are recorded is due to the emergence of new technologies through which renewable energy sources become more and more accessible to society, but also due to the reform of the legislative framework.

In order to ensure the legislative and normative framework in the field of energy efficiency and renewable energy sources from the beginning of 2017, the process of elaboration and promotion of normative acts in the field, continued. In this regard, have been taken measures to promote draft laws on the promotion of energy from renewable sources, drafting drafts on regulations on eco-design requirements applicable to energy-related products, elaboration of the draft Government decision regarding the certification of low-capacity renewable energy installations, etc. Also, a number of measures have been adopted to reduce specific energy consumption and to use renewable energy sources.

The liberalized electricity market, under the current conditions of development of the national economy, must guarantee for all the actors involved, obtaining the necessary and necessary profits to cover production costs and to ensure the development of new renewable energy development capacities.

The analysis of the legal base and the organization of the process of evolution of renewable energy sources in the energy sector at national level is carried out in the light of European directives and regulations. This is argued by the fact that the policy of Euro-regional regional development in this sector has been progressively achieved in recent years.

Trying to cope with the European legal regulations in the field, the Republic of Moldova has set its own principles and objectives regarding the use of renewable energy sources. They aim to support, promote and actively implement renewable sources through strategies promoted by our state in the context of security and efficiency energy.

The results obtained (expected to be obtained). Taking into account the above, in order to facilitate the promotion and development of renewable energy sources on the market of the Republic of Moldova, we undertake the following actions:

- improving the legal framework, taking into account the strategic objective that has been set at European level with regard to the development of renewable energy sources;
- creation and improvement of the legal technical framework by elaborating and updating the respective technical regulations, including by incorporating EU directives in national legislation that will ensure the development of an appropriate legislative framework in the area concerned;
- the full harmonization of specific regulations with European and international ones and their implementation at the level of current requirements;
- the elaboration, according to the European and international legal rules, of the requirements that will determine the efficiency of the management process by the specialised authorities, the functioning of the energy sector;
- motivating the need for economic activity on the use of renewable energy sources, and the real possibilities in establishing control over the deviation of the ecological balance, activities that prevent unwanted climatic changes;

- the presentation of legislative measures for the protection and use of natural resources - their sufficiency and effectiveness being ensured by proposed instrumental control methods for assessing energy security and, last but not least, environmental security;
- to stimulate interest in the importance of energy security in the application of renewable energy, and in this regard, to adopt an effective strategy to inform society about the advantages and disadvantages it presents.

CONCLUSIONS.

The Republic of Moldova is going through a transition period in the process of developing renewable energy sources. This period is characterized by the fact that their practical application is one of the greatest challenges of the 21st century. Sustainable energy security is determined and necessary to meet the needs of the present without compromising the ability of future generations to meet their own needs. This situation comes as a response to the many challenges facing contemporary society, namely: worsening climatic conditions, population growth, insecurity in the energy sector, increased risks of dependence on electricity imports, and so on. The risks mentioned are to remind us of the importance of alternative energy sources in the context of non-polluting sources that do not affect the health of the population but ensure their well-being. Under these circumstances, the legislator's concern about the development of renewable energy sources is justified and indispensable.

Thus, the promotion of energy from renewable energy sources is one of the basic concerns for the moldovan energy sector. Our state tends to reflect in its own legal regulatory system, the norms, standards and objectives that are set by the European Union on the development of renewable energy sources. In order to make the implementation of the European legal framework more efficient at the national level, the Republic of Moldova has adopted the policy on renewable energy. State policy in the energy sector contributes to the harmonization of national legislation with the *acquis communautaire*, promoting energy efficiency by reducing the risks of securing energy from alternative energy sources, informing consumers and ensuring the development potential of potential renewable energy producers.

However, the energy potential from renewable sources is not sufficiently exploited on the territory of the Republic of Moldova. Our country faces one of the most important impediments, namely the lack of financial resources, investments and uncertainty in the possibility of developing. For this reason, and not only, it is necessary to actively involve not only the active society, but also the state that through financial, institutional, legislative, and educational support programs come to condition the development of sustainable energy.

BIBLIOGRAPHY:

1. Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and the Republic of Moldova, of the other part of 30.08.2014. *Official Journal of the European Union*. 2014, L 260/4. Ratified by the Decree of the President of the Republic of Moldova: no.1103-VII from 11.04.2014. *Official Monitor of the Republic of Moldova*. 2014, no. 92-98/2014.
2. The European Commission White Paper on a Community Strategy „Energy for the future: renewable sources of energy”, <http://www.infomediueu/en/bioenergie.html>.
3. Directive 2009/28 / EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources, amending and subsequently repealing Directive 2001/77 / EC and Directive 2003/30 / EC. *Official Journal of the European Union*. L 140, 2009.
4. Law of the Republic of Moldova no. 10 of 26.02.2016 on the promotion of the use of renewable sources. *Official Monitor of the Republic of Moldova* 2016, no. 69-77/117 of 25.03.2016.
5. Law of the Republic of Moldova no. 139 of 19.07.2018 on energy efficiency. *Official Monitor of the Republic of Moldova*. 2018, no. 309-320/476.
6. Government Decision of the Republic of Moldova no. 1073 of 27.12. 2013 on the approval of the National Action Plan on Renewable Energy for the years 2013-2020. *Official Monitor of the Republic of Moldova*. 2014, no. 4-8/1.
7. Government Decision of the Republic of Moldova no. 102 of 05.02.2013 on the Energy Strategy of the Republic of Moldova until 2030. *Official Monitor of the Republic of Moldova*. 2013, no. 27-30/146.

8. AVORNIC, G., AȘEVSCI, V., CEPOI, O. *Adapting the legislation and environmental policies of the Republic of Moldova to the international standards of the European Union: issues and perspectives. Scientific journal, education, spirituality and ecological culture*. Chișinău: USPEE „Constantin Stere”, 2014, no. 12, 3p.
9. BACHE, I., STEPHEN, G. *Policy in the European Union*. Chișinău: Epigraf, 2009.
10. BĂLAN, M. *Renewable energies*. Technical University of Cluj Napoca: UT PRES, 2007.
11. BORDIAN, M. The impact of civil society on the protection of electricity consumers for domestic purposes. *Law and life*. 2015, no.3, p. 9.
12. CEBAN, V. *Development of renewable energy in the Republic of Moldova: realities, capacities, options, perspectives*. Chișinău: Association for Foreign Policy.
13. CERNEI, G. We are alert - alternative energy solutions have become a priority. Newsletter-Analytic. Agency for Innovation and Technology Transfer of the Academy of Sciences of Moldova. Chișinău, 2009, 3 p.
14. THE EUROPEAN COURT OF AUDITORS. *Special report. Renewable energy for sustainable rural development: Possible synergies are considerable, but remain largely untapped*. Luxembourg, 2018, 18 p.
15. SOBOR, I., CARAGHEAUR, D., NOSADZE, Ș. *Renewable energy sources. Lecture course*. Chișinău, UTM, 2006.
16. TODOS, P., SOBOR, I., UNGUREANU, D., CHIRINCIUC, A., PLEȘCA, M. *Renewable energy. Feasibility Studio*. Chișinău: Ministry of Ecology, Construction and Development, 2002.
17. SIMONOV, D. *The impact of energy security on the economy of the Republic of Moldova in conditions of global economic instability. Doctor thesis*. Chișinău, 2016, 130 p.
18. STORE, C. Economic rarities. Time and energy resources. *Law and life*. 2010, no.10, p. 27.
19. ȚURCANU, R., KIRIMCI, C. Adjustment of the legal framework for liquid biofuels as required by the *acquis communautaire*. *Law and life*. 2008, no.5, p.11.
20. PĂPĂTULICĂ, M. Current situation and potential for development of renewable energy sources in Romania. Energy in the race competitiveness - global warming. Bucharest: *The Center for Economic Information and Documentation*, 2007, 92 p.
21. <https://www.bizlaw.md/2017/10/02/reglementarea-in-domeniul-energiei-regenerabile-ce-acte-a-aprobat-anre>
22. <https://mei.gov.md/ro/content/eficienta-energetica-si-surse-de-energie-regenerabile>

LEGAL FRAMEWORK OF SUBJECTS ENTITLED TO APPEAL THE CONSTITUTIONAL COURT

Zaporojan Corina
PhD, USM

Abstract. *People's access to constitutional justice is a controversial and very important issue for our country. The legal framework put in place is not as rigid as in other states, as the Constitution does not explicitly provide for the right of referral of subjects. In other words, the purpose of the Constitutional Court can justify the alleged unconstitutionality of the challenged legal act by legitimate, political, moral or circumstantial arguments. In most countries that have implemented the control model of the European Constitution, the constitutional court has opted for the classical constitutional revision of Kelsen, in which the right of referral is granted only to public authorities.*

Keywords: case law, subjects, Constitutional Court, public authorities, referral.

Moldova adopted the European model of control of constitutionality, also called and kelsenian - named after its author - Hans Kelsen, the Austrian constitutionalist, which is the state's basic constitutional court fund in the world - The Constitutional Court of Austria. As Kelsen thought, in this type of control, unlike the American model, the right of referral is only assigned to public authorities. Taking into account the controversy of this issue, we note that the basis of this type of control is the idea that legitimate arguments, political, moral, or circumstantial reasons are necessary for constitutional control. These arguments are most often accessible only to public authorities, which apply the rule of law in their day-to-day work.

The legal framework, which regulates the subjects with right to refer to the Constitutional Court of the Republic of Moldova, differs from that of other states, where the legislator expressly provided for it in the text of the Constitution. However, the identification of subjects with right of referral, according to paragraph (2) of Article 135 of the Constitution, rests with the Law on the Constitutional Court.

For these reasons, the access of persons to constitutional justice is framed by the legislator in such a way that any problem in the circle of subjects to referral to the Constitutional Court may be reassessed by the legislative assembly and not by the constituent assembly. The string of these subjects is not governed by such a rigid law as the Constitution, but by a law, even if it is an organic law.

Thus, at the moment, the Constitutional Court, according to art. 25 of the Law on the Constitutional Court [1] and, in accordance with Art. 38 para. (1) of the Code of Constitutional Jurisdiction [2], exercises constitutional justice upon referral to the following subjects:

- a) the President of the Republic of Moldova;
- b) Government;
- c) the Minister of Justice;
- d) the Supreme Court of Justice;
- f) Prosecutor General;
- g) Member of Parliament;
- h) the parliamentary faction;
- i) Ombudsman;
- i¹) Ombudsman for the Rights of the Child;
- j) the councils of the first or second level administrative-territorial units, the Gagauz People's Assembly (Gagauz-Yeri).

In the following we will analyze these subject matter with referral, referring to the opportunity to include everyone in this circle and their effectiveness on the work done in this capacity.

The President of the Republic of Moldova, as the authority that promulgates the laws, is certainly one of the basic subjects, empowered with the right to refer to the Constitutional Court. Having the duty to promulgate the laws, the President has the opportunity to control the constitutionality of the law before promulgating them and, if necessary, has the opportunity to

notice the unconstitutionality of the law before it enters into force. However, it can be seen from the jurisprudence of the Constitutional Court that in most cases the President of the Republic of Moldova notices the Court for the interpretation of the Constitution and not for the control of the constitutionality of the laws they promulgate.

Another important subject with right of referral is the Government. This issue does not have a large number of complaints to the Constitutional Court, but it is of strategic importance to the other subjects for a possible constitutional dispute between the Parliament and the Government. We consider that the small number of complaints has an objective explanation, because the Government is the initiator and author of most of the laws passed by Parliament. Moreover, with the subordination of competent authorities, through its projects, the Government can liquidate any constitutional gaps in the legal norms already adopted.

The legislator then identifies as the subject of a referral - the Minister of Justice, a matter rarely used in the practice of constitutional jurisprudence to use this legal instrument. Thus, since the beginning of its judicial activity in 1995, the Constitutional Court has been notified only through three complaints filed by the Minister of Justice. The cause of an obvious passivity of the minister stems from the fact that the empowerment granted to the Government as an executive authority encompasses this right of the Minister of Justice. Under such circumstances, we consider that at present the Minister of Justice's right to complain to the Constitutional Court is inappropriate and in practice ineffective, which is why this subject should be excluded from the law of the subjects with right of referral to the Constitutional Court of the Republic of Moldova.

The Supreme Court of Justice is included in the range of public authorities as subject with right to refer to letter d) of art. 25 of the Law on the Constitutional Court. In addition, this subject is also expressly mentioned in the Constitution as a subject with right of referral for cases where the question of the constitutionality of the rule of law reaches the court in order to be applied to a concrete cause. The Supreme Court of Justice is the only authority expressly mentioned by the Constitution as a subject with right of referral but only on exceptions of unconstitutionality. Thus, at the letter g) paragraph (1) art. 135 The Constitution stipulates the attribution of the Constitutional Court by means of which: "it resolves the exceptional cases of unconstitutionality of legal acts, brought before the Supreme Court of Justice". In the case when the "exception of unconstitutionality is a defensive process - defense of rights and liberties" [7], it was necessary to grant this right to any court, which the Constitutional Court subsequently applied in the process of interpreting the Constitution, Supreme Court of Justice.

On February 9, 2016 the Constitutional Court adopted the Decision no. 2 for the interpretation of Article 135 (1) lit. a) and g) of the Constitution of the Republic of Moldova, whereby it has been established that not only the Supreme Court of Justice, but also other courts (the courts of appeal and courts of appeal) have the right to refer the Constitutional Court to the objection of the unconstitutionality of the legal provisions which are or are to be applied to the examination of a pending litigation. The referral for the review of the constitutionality of rules to be applied for the settlement of a case shall be submitted directly to the Constitutional Court by the judges / tribunals of the Supreme Court of Justice, the courts of appeal and the courts of law on which the case is located.

Currently, the Supreme Court of Justice, as a result of this judgment of the Constitutional Court, is identified only as a public authority with a general right of petition, equal to the other, and not as an authority raising the exceptions of unconstitutionality before the Court, as it was before.

Given that the Supreme Law does not expressly entitle citizens to apply to the Constitutional Court, the exception of unconstitutionality is a way of indirect access of individuals to the Constitutional Court, which falls within the range of actions taken to guarantee the right to a trial fair. At the same time, this indirect way offers the Constitutional Court, as a guarantor of the supremacy of the Constitution, the possibility to exercise control over the legislative power regarding the observance of fundamental rights and freedoms [4].

Due to the interpretations of the Constitutional Court and the changes in the legislation after 2016, we believe that it is now rational to exclude the Supreme Court of Justice from among the authorities with a general right of referral, with the right to only refer to exceptions of unconstitutionality. At the same time, in order to protect the status of the judiciary from the abuse of legislative and executive powers, it would be necessary to grant the right of the Superior Council of Magistracy to refer the Constitutional Court.

Starting from its legal nature, the Superior Council of Magistracy is constituted for the organization and functioning of the judiciary, it is the guarantor of the independence of the judicial authority and must have legal instruments to ensure the applicability of the normative and legal provisions related to the administration of the judiciary in accordance with the constitutional regulations. As an example we bring Decision no. 23 of 27.06.2017 on the objection of unconstitutionality of Article 23 (2) of the Law no.947-XIII of 19 July 1996 on the Superior Council of Magistracy (waiver of the judge's immunity), a petition whose author is the Supreme Court of Justice, although according to its statute as a judicial administration, this referral was to be submitted by the Superior Council of Magistracy. In this respect, ensuring compliance between the legislative acts subordinated to the supreme law and its provisions is a desideratum of the rule of law, on the one hand, but also a guarantee of respecting the rights and freedoms of those who fall under these provisions.

The Prosecutor General is another subject, empowered according to letter f) art. 25 of the Law on the Constitutional Court, which we consider to be questionable after the operative amendments by the Decision no. 2 for the interpretation of Article 135 (1) lit. a) and g) of the Constitution of the Republic of Moldova, this decision allows the exercise of this right by the Prosecutor General through all courts at any stage. The Prosecutor General did not abuse the right to refer the matter to the Constitutional Court, addressing only 17 times. However, we do not consider it appropriate for such an authority to address with the Constitutional Court notices on the interpretation of the Constitution, as it did for example in the 1996 request to explain whether the President of the Republic of Moldova has the right to lead Ministry of Defense [8].

Members of the Parliament most often address the Constitutional Court with general notifications, of which over 80% of all notifications (with the exception of exceptions of unconstitutionality) are present. This frequency has a legitimate explanation, and constitutional control is the most effective tool of fighting the majority of the parliamentary minority. Moreover, if in Romania the Constitutional Court can address a number of not fewer than 25 senators or 50 members, one member may refer the case to the Republic of Moldova.

The parliamentary factions, which are made up of deputies, as a subject with right of referral, in the situation where each MP has the right of referral, cannot be considered as a plenipotentiary subject of referral, except in cases of political symbolism. It is for these reasons that the parliamentary factions have submitted only nine complaints to the Constitutional Court.

People's Advocates are another important subject with right to refer to the Constitutional Court of the Republic of Moldova. The importance of these authorities is amplified on the one hand by the impossibility of a citizen to notify the Constitutional Court for the protection of his rights and, on the other hand, by the role of the People's Advocate as a public authority in protecting the fundamental rights and freedoms of man and the citizen. The Ombudsman, in the case of observing violations of human rights by the rule of law, or in the case of a petition addressed to the citizen on the need to notify constitutional jurisdiction, has the constitutional obligation to refer the matter to the Court. Unlike the previous law, the Law on the Ombudsman [9] now no longer restricts this institution to refer the Court only on human rights issues, so they have general referral power, along with the other political authorities.

Local public authorities, opposed to the Ombudsman, even though they have the right to refer to the Constitutional Court in 2016, have limited jurisdiction. Thus, they have the right to only refer to the rules "which do not correspond to Art.109 and Art.111 of the Constitution of the

Republic of Moldova", which would mean only the areas that restrict the right of these authorities resulting from the local autonomy.

The rights and powers of the subjects with the right to refer to the Constitutional Court, however, are limited by the provisions of para. (2) Art. 38 of the Code of Jurisdiction according to their duties. In this way, the subjects referred to in paragraph (1) of art. Article 38 of the Code of Constitutional Court may address complaints in matters pertaining to their jurisdiction, with the exception of referrals:

- a) on the revision of the Constitution, which may be filed by the subjects indicated in the Constitution, art. 141;
- b) ascertaining the circumstances justifying the dissolution of the Parliament, which may be submitted by the President of the Republic of Moldova;
- c) ascertaining the circumstances justifying the suspension of the President of the Republic of Moldova or the interim president of the Republic of Moldova, which may be submitted by a Parliament decision, signed by the President of Parliament;
- d) concerning the constitutionality of a party, which may be filed by the President of the Republic of Moldova, by the President of the Parliament, by the Government, by the Minister of Justice or by the Prosecutor General. The Speaker of the Parliament may file complaints only on the basis of a decision of Parliament, the Prosecutor General - based on a decision of the college of the General Prosecutor's Office, the Minister of Justice - based on a decision of the College of the Ministry of Justice.

At the same time, according to par. (3) art. 38 of the Code, the Court confirms the results of the Republican referendum, the elections to the Parliament and the election of the President of the Republic of Moldova following the examination of the report of the Republican Commission for the Referendum or the Central Electoral Commission. (4), the deputy candidate in Parliament declare on the basis of the materials submitted to the Constitutional Court, accompanied by the decision of the party whose mandate of B3 has become vacant.

It has already been mentioned that some of the provisions of Art. 25 of the Law on the Constitutional Court and art. 38 of the Code of Constitutional Court need to be amended and because they do not comply with the relevant legislation.

The rules of law are adopted by public authorities not for internal use, at their own discretion, but for members of society whose interests they represent. This finding requires that the rules in question be strictly in line with the Constitution - the social contract in which the fundamental rights and freedoms of citizens and other persons and their associations are declared and guaranteed.

IN CONCLUSION, we mention that the Constitution of the Republic of Moldova does not expressly stipulate the competent authorities to refer to the Constitutional Court, as the constitutions of other states like Romania or France state. With the passage of the years, since the establishment of the rule of law of the Republic of Moldova, the circle of subjects with right of referral has been modified and we consider this legislative maneuver an absolutely timely and necessary to be further implemented. Starting from the fact that unconstitutional provisions can substantially affect the rights and freedoms of individuals, we believe that the correct identification of the subjects who must have the right to notify the constitutional justice body to stop the sometimes unfortunate effects of unconstitutional rules is the very essence of the system as a rule hierarchy system.

Bibliography

1. Code of constitutional jurisdiction; Law no. 502-XIII of 16.06.1995. In: M.O., 1995, no. 53-54, art. 597
2. Law on the Constitutional Court; no. 317-XIII of 13 December 1994. In: M.O., 1995, no. 8, art. 86,
3. Judgment of the Constitutional Court no. 2 of 09.02.2016 for the interpretation of Article 135 (1) lit. a) and g) of the Constitution of the Republic of Moldova (exception of unconstitutionality). In: M.O., 2016, no. 55-58, art.9,
4. The report on the exercise of constitutional jurisdiction in 2016,
5. Law on petition; no. 190-XIII of 19 July 1994. In: M.O., 1994, no. 4, art. 47

6. ZAPOROJAN, Veaceslav. Protecția drepturilor fundamentale în justiția constituțională a Republicii Moldova, Teza de doctor. Chișinău, 2007, p.107.
7. ARAMĂ, Elena. Controlul constituționalității legilor: istorie și actualitate. Chișinău: Museum, 2000. 79 p.
8. Judgment of the Constitutional Court no. 15b of 16.12.96 on the interpretation of Article 87 of the Constitution of the Republic of Moldova. In: M.O. of Moldova, 1-2 / 1, 02.01.1997
9. Law on the Ombudsman: No.52 of 03.04.2014. In: M.O. of Moldova, 110-114 / 278, 09.05.2014

II. MASTERANZI

Secțiunea: Dezvoltarea Republicii Moldova în noul context politic, social și economic, în cercetările masteranzilor ASEM

MANAGEMENTUL TIMPULUI CORPORATIV ÎN CADRUL COMPANIILOR DIN REPUBLICA MOLDOVA / CORPORATE TIME MANAGEMENT IN THE REPUBLIC OF MOLDOVA ENTERPRISES

Conducător științific : Solcan Angela
Academia de Studii Economice din Moldova
Str. Bănulescu Bodoni 61, Chișinău, MD-2005
Email: asolcan@gmail.com
Autor: Vrabie Diana

Academia de Studii Economice din Moldova
Str. Bănulescu Bodoni 61, Chișinău, MD-2005
Email: vrabie.diana22@gmail.com

Abstract: Time management has always been a subject of interest for different professionals, as most of them have faced the problem of time deficiency. Usually this is part of personal development; nevertheless nowadays this has become insufficient. In order to achieve desired results, time management shall become part of corporate culture within the organization. The employees shall use the same tools and techniques in this field. The main aim of this article is to study the current situation in the field of time management in the Republic of Moldova. In this regard, an anonymous survey was conducted within an enterprise. The analyzed aspects are as follows: the importance of time management for women and men, the level of knowledge of time management elements, the possession of goals and objectives, the planning of tasks in the journal or agenda, the organizational end of things within the company, the work over the program and the opinion of the employees on the implementation of corporate time management.

Key words: *time management, time, objectives, planning, corporate*

JEL Clasification: Journal of Economic Perspectives

Introducere. Timpul a devenit o resursă mult mai importantă decât banii. Nu putem câștiga mai mult timp anume din acest motiv este necesar ca resursele acordate să fie utilizate la maxim. De obicei pentru realizarea unei sarcini nu ne ajunge o oră, o zi, o săptămână. Time managementul este abordat de obicei ca o parte din dezvoltarea personală. Sunt propuse multe cărți în acest domeniu, organizate multe traininguri. Însă în secolul XXI acest lucru a devenit insuficient. Este necesar ca timpul să devină o parte a culturii corporatiste. Faptul că unii manageri își gestionează eficient timpul nu duce mereu la dezvoltarea companiei. Pentru a obține rezultatele dorite toți angajații trebuie să folosească aceleași instrumente de planificare și organizare și să aibă același scop.

Obiectul acestei cercetări este studierea situației de time management în cadrul unei entități din Republica Moldova. Aspectul de gestionare a timpului va fi abordat în corelația femei/ bărbați și manageri/ subalterni.

Conceptul de management al timpului este abordat de persoane din toate domeniile. Primul care a scris despre încercările de utilizare a timpului a fost Lucius Seneca, un filozof roman din secolul I din era noastră. O contribuție majoră în abordarea gestionării timpului o are Benjamin Franklin. Se spune că el însuși s-a ciocnit cu problema insuficienței de timp și atunci el a elaborat sistemul personal de management al timpului care i-a permis să reușească mult mai mult. Primul care a abordat conceptul de time management corporativ a fost Gleb Arhangheliskii în monograful său: "Gestiunea timpului de la eficiența personală la dezvoltarea organizației" în anul 2003. Din acel moment această temă devine o necesitate pentru un număr mai mare de companii.

Pentru a studia stituația actuală în domeniul gestionării timpului autorul a efectuat un sondaj în cadrul angajaților unei companii ce prestează servicii în orașul Chișinău. În cadrul entității activează 70 persoane iar la sondaj au participat 43%. La sondaj au participat 16 femei și 14 bărbați.

Sondajul fost efectuat în perioada 01-15 martie 2019 și a fost unul anonim. Cercetarea a fost efectuată pe diferite segmente de vîrstă. Aceasta a permis analiza competențelor de time management pentru fiecare vîrstă. Majoritatea participanților 43,3 % au vîrsta de 30-40 ani. 20 % sunt persoane tinere 20-25 ani , intervalului de vîrstă 25-30 ani îi aparțin 23,3 %. Un procent mai mic, 13,3 % îl dețin persoanele cu vîrsta mai mare de 40 ani.

Următorul aspect care a fost analizat opinia respondenților privind importanța managementului. În urma acestei cercetări s-a constatat că pentru femei time managementul este mai important decît pentru bărbați. Foarte important time managementul este pentru 43,75 % din femei, iar pentru bărbați doar 14,28 %. Nici pentru o femeie care a participat la sondaj time managementul nu este mai puțin important, însă pentru 21,43 % din bărbați time managementul a fost clasificat în această categorie. Acei bărbați care au apreciat time managementul mai puțin important nu dețin o poziție managerială în cadrul companiei.

Tabelul 1 Importanța time managementului pentru femei și bărbați

	Foarte important	Important	Mai puțin important	Deloc imoportant	Total
Femei	7	9	0	0	16
Bărbați	2	9	3	0	14
Total	9	18	3	0	30

În urma analizei sondajului s-a depistat că majoritatea persoanelor care dețin o poziție managerială cunosc elementele managementului timpului și le utilizează pentru a planifica ziua. Aproape jumătate din cei care nu dețin o poziție managerială la fel folosesc elementele time managementului pentru planificare. Doar 6 % din numărul total de participanți au ales varianta:” Nu cunosc elementele time managementului și nici nu doresc să le studiez”. Situația care este la moment la acest capitol ne spune despre faptul că time managementul ar putea fi implimentat în cadrul acestei companii la nivel corporativ și acest lucru nu ar fi foarte dificil.

Tabelul 2. Gradul de cunoaștere a elementelor de time management pentru persoanele care dețin o poziție managerială și cele care nu dețin

Elementele time managementului	Persoane care dețin poziție managerială	%	Persoane care nu dețin poziție managerială	%	Total persoane
Le cunosc și le utilizează pentru planificare	7	77,8	10	47,7	17
Le cunosc dar nu le utilizează	1	11,1	4	19,04	5
Nu le cunosc și nici nu doresc să le studieze	0	0	2	9,5	2
Nu le cunosc dar doresc să le studieze	1	11,1	5	23,76	6
Total	9	-	21	-	30

Sursa: Elaborat de autor în baza sondajului

Majoritatea participanților la sondaj au formulate scopuri și obiective personale și profesionale. Doar 11 % dintre cei ce dețin o poziție managerială consideră că lucrurile se petrec de la sine, iar dintre cei ce nu dețin o poziție managerială 19 %. 52 % din cei ce au formulate scopuri și obiective au stabilit și un plan pentru atingerea acestora, celelalte 48 % nu au stabilit un mod pentru atingerea scopurilor.

Tabelul 3 Deținerea scopurilor și obiectivelor, %

Dețin scopuri și obiective	Angajați ce dețin poziție managerială, %	Angajați ce nu dețin poziție managerială, %
Da	88,89	80,95
Nu	11,11	19,05

Sursa: Elaborat de autor în baza sondajului

Un element important al time managementului este planificarea, din acest motiv a fost analizat deținerea agendelor și jurnalelor pentru planifiare. În urma răspunsurilor acordate se observă faptul că nici o persoană ce deține poziție managerială nu a ales răspunsul : “ Nu dețin un jurnal și nici nu planific să îmi întemeez unul”. Doar două persoane din nouă care dețin poziție managerială nu își planifică sarcinile în agendă. Majoritatea managerilor planifică fiecare zi.

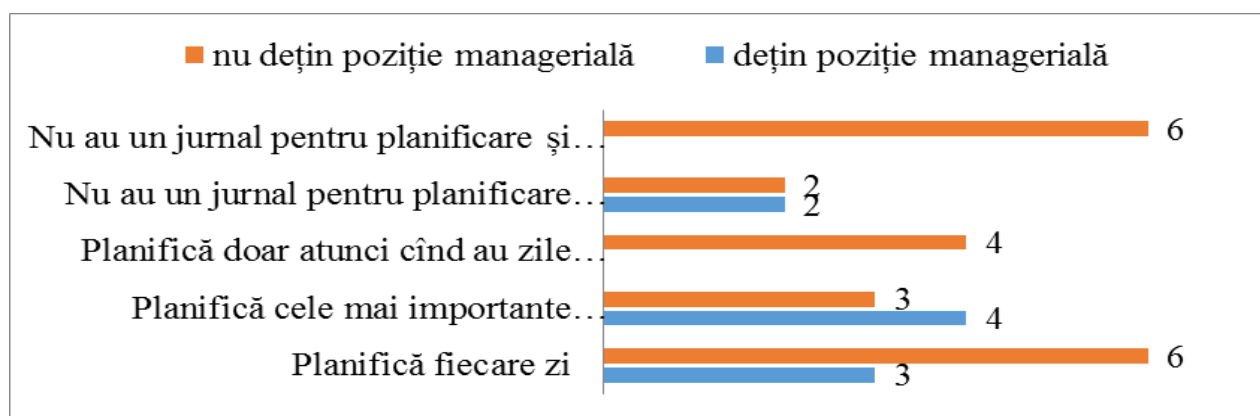


Figura 1. Deținerea unui jurnal/ agendă pentru planificare de către participanții la sondaj

Sursa: Elaborat de autor în baza sondajului

Un aspect important în time management îl are organizarea lucrurilor în cadrul companiei. Căutarea unui document, unei scrisori, unui utilaj necesar pentru activitate poate răpi mult timp din orele totale de lucru. Din acest motiv în cadrul sondajului a fost abordată tema de organizare a lucrurilor. Autorul, în urma cercetării a observat că la acest capitol în cadrul companiei analizate este o situație favorabilă. Majoritatea care au participat la sondaj se conduc după principiul – fiecare obiect își are locul său, drept urmare obiectele și lucrurile importante pentru procesul de muncă deseori pot fi găsite ușor. Trei persoane consideră că acest aspect nu are tangență cu tema sondajului.

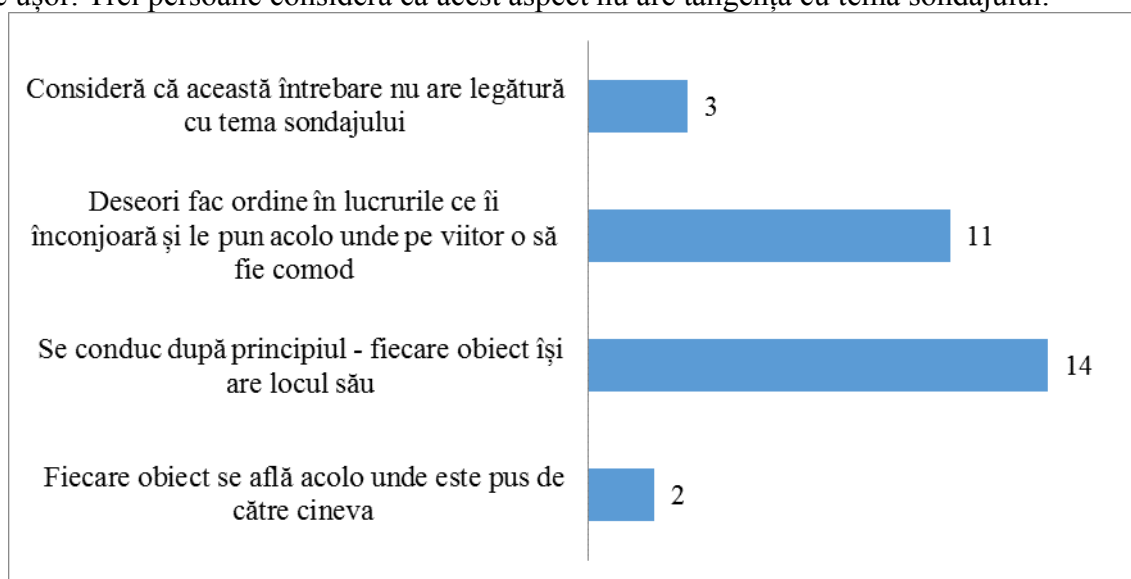


Figura 2 Organizarea lucrurilor în cadrul „Arax-Impex” SRL

Sursa: Elaborat de autor în baza sondajului

Unul dintre cei mai importanți răpitori de timp sunt emailurile și anume verificarea acestora prea des. În urma cercetării autorul a depistat că emailurile se verifică peste 6 ori pe zi cât și de persoanele care dețin o poziție managerială cât și de cele ce nu dețin. În cadrul companiei sunt mai multe poște electronice comune. Managerii pentru a găsi o scrisoare care este important pentru ei este necesar să citească multe emailuri, solicitări pe poșta comună. Prin urmare timpul persoanelor ce dețin o poziție managerială nu este folosit rațional.

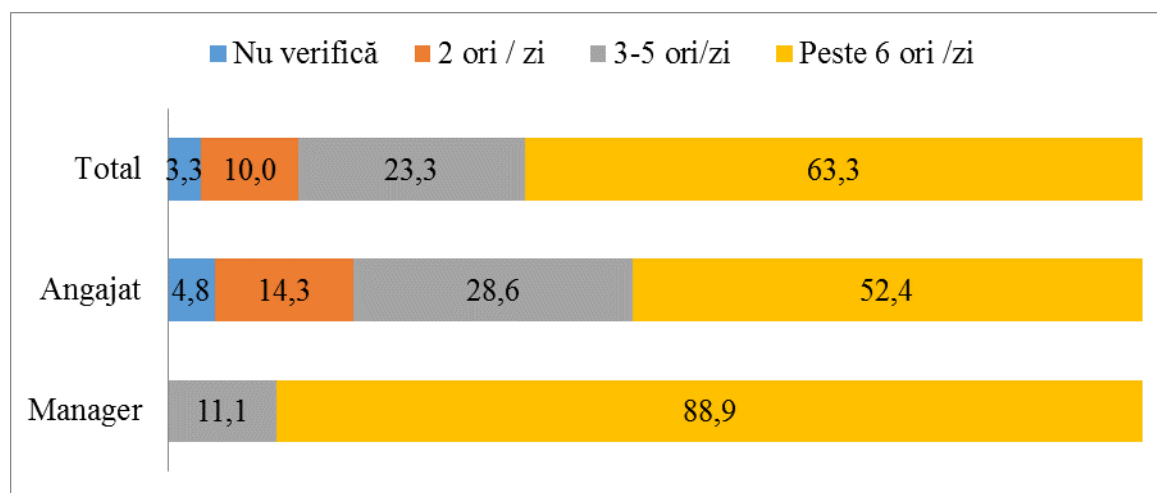


Figura3 Verificarea emailurilor, %

Sursa: Elaborat de autor în baza sondajului

Participanții la sondaj au indicat principalii factori răpitori de timp din cadrul companiei, aceștia sunt:

- Date eronate
- Neorganizarea colectivului la locul de muncă
- Abaterea de la lucruri importante
- Schimbarea planurilor
- Ne cunoașterea de către angajați a proceselor de lucru
- Neatenția
- Telefonul mobil
- Rețele de socializare
- Lipsa de motivare
- Așteptarea deciziei care nu este în competență
- Ședințele
- Defectarea tehnicii
- Vizitatorii nepoftiți
- Faptul că toate departamentele nu sunt într-o clădire
- Citirea emailurilor de pe căsuța poștală comună
- Convorbirile cu colegii
- Bîrfele

Deseori din cauza negestionării corecte a timpului angajații companiei sunt nevoiți să lucreze peste program. În urma cercetării s-a constatat că mai des peste program lucrează femeile. 7 din 16 femei lucrează peste program de 2-3 ori pe săptămână, 4 din 14 bărbați deasemenea se rețin peste programul de muncă de 2-3 ori pe săptămână. Doar un bărbat și o femeie nu se rețin peste program.

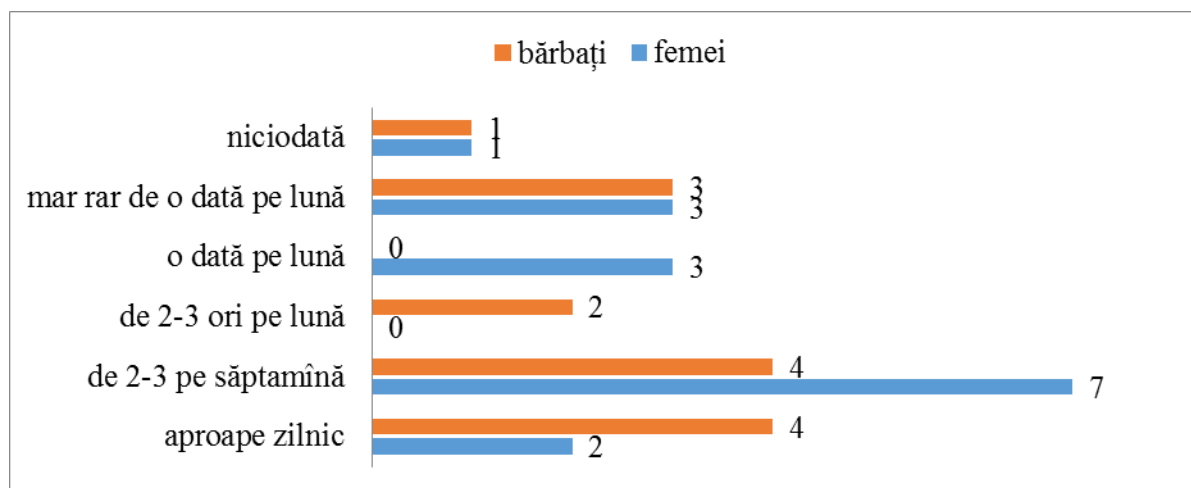


Figura 4 Cît de des angajații lucrează peste program

Sursa: Elaborat de autor în baza sondajului

Chiar dacă angajații lucrează foarte des peste program majoritatea nu sunt de acord cu afirmația: “Un angajat ce muncește program este mai apreciat de către conducere”. 33,3 % din persoanele ce nu dețin o poziție managerială sunt de acord cu această afirmație.

Tabelul 4 Opinia angajaților ca munca peste program este mai apreciat de către conducere, persoane

poziție managerială	sunt de acord	nu sunt de acord	nu pot aprecia	Total
Da	1	6	2	9
Nu	7	8	6	21
Total	8	14	8	30

Persoanele care au participat la sondaj și-au expus opinia în privința time managementului corporativ și anume la capitolul cum ar fi trebuit să fie implementat time managementul la nivel corporativ. Șapte din nouă manageri au spus că în cadrul time managementul corporativ este necesar să fie aplicate reguli scrise pentru fiecare angajat, doi manageri consideră că fiecare angajat trebuie să își planifice timpul desinestător. Din cei ce nu dețin o poziție managerială majoritatea, 13 persoane au spus că fiecare persoană trebuie să își planifice timpul personal, șapte persoane din 21 consideră că timpul nu trebuie planificat și lucrurile decurg de la sine.

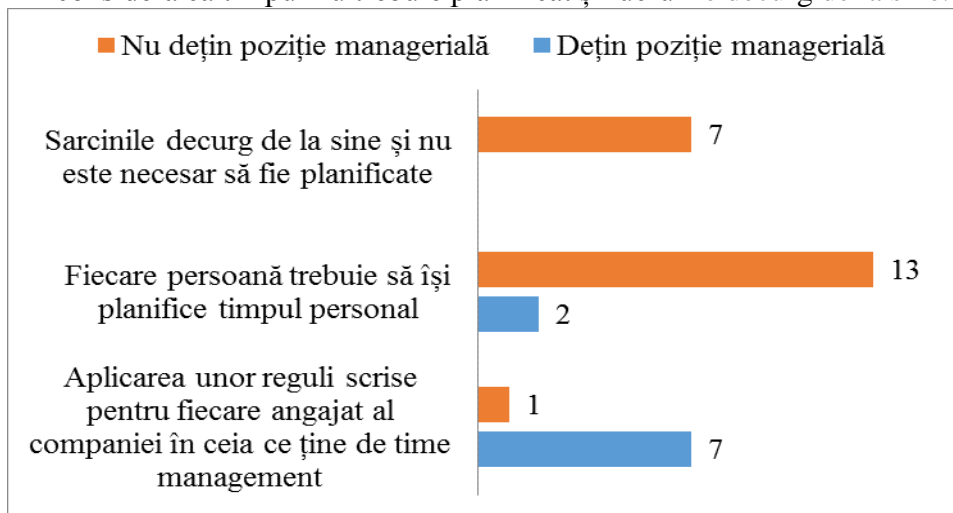


Figura 5 Modalitatea de implementare a time managementului corporativ după părerea angajaților

Sursa: Elaborat de autor în baza sondajului

În urma efectuării sondajului a fost depistat că angajații companiei “ ARAX- IMPEX” SRL își stabilesc scopuri și obiective, își planifică timpul și mulți din ei cunosc elementele time managementului. Însă chiar dacă fiecare în parte își planifică ziua de muncă asta nu duce neapărat la dezvoltarea companiei și la formarea time managementului corporativ. Mulți dintre cei ce dețin o poziție managerială se rețin după programul de muncă deoarece nu știu cum corect să fie delegate sarcinile. În cadrul companiei analizate nu este dezvoltat time managementul corporativ.

CONCLUZIE : În cadrul întreprinderilor din Republica Moldova time managementul corporativ nu este dezvoltat la cel mai înalt nivel chiar dacă o mare parte din angajații care dețin o poziție managerială și din cei ce nu dețin cunosc și folosesc elementele time managementului, își stabilesc scopuri și obiective, își planifică ziua. Pentru a obține rezultatele dorite și a atinge scopurile și obiectivele timpul trebuie să fie gestionat la nivel corporativ. Acest lucru este posibil de implementat doar dacă time managementul va deveni parte a culturii organizaționale, toți angajații vor folosi aceleași instrumente și tehnici, vor avea aceeași atitudine față de timp. Majoritatea managerilor din Republica Moldova nu acordă acestui aspect atenția necesară. În cadrul entităților unde este organizat corect timpul angajați sunt mai motivați, dedicați muncii, crește productivitatea acestora, comunicarea între departamentele companiei devine mai eficientă, angajații devin mai loiali companiei deoarece sunt integrați în dezvoltarea acesteia. Compania obține un factor concurențial de bază prin implementarea time managementului.

REFERINȚE BIBLIOGRAFICE:

1. АРХАНГЕЛЬСКИЙ Г., Корпоративный тайм-менеджмент, энциклопедия решений, Moscova, Альпина бизнес букс, 2008, 160 pagini

COGNITIVE HEALTH. A PUBLIC HEALTH CRISIS IN REPUBLIC OF MOLDOVA

Authors:

Artiom Jucov, PhD

Alexander Foighelman, Academy of Economic Studies of Moldova

Introduction.

According to the World Health Organization (WHO), in 2015, dementia and cognition related diseases, such as Alzheimer, affected 47 million people worldwide, or roughly 5% of the world's elderly population, a figure that is predicted to increase to 75 million in 2030 and 132 million by 2050.⁽¹⁾ For this reason, attempts have been made all across the world to identify individuals who are at increased risk of cognitive decline and impairment and to test interventions that might delay or prevent the progression of prodromal symptoms to full-blown dementia or Alzheimer's. Nearly 60% of people with dementia currently live in low- and middle-income countries and most new cases are expected to occur in those countries.⁽²⁾ The financial and demographic casualties of neglect and inaction are high. Population projections conducted by Demographic Research Center and UNFPA Moldova show that by 2030, every third person would be over 60 years old. With a projected increase of older population, the pressure is on the social and health systems, if the right investments are not made from early adolescents in their health, education and skills.⁽³⁾⁽⁶³⁾

The World Health Organization has acknowledged the growing demographic problems of quality of aging in world by creating a Global Action Plan on the public health response to dementia 2017-2025. Moldova, as WHO member state, and a low-income country, is yet to implement programs regarding cognitive health. The aim of this paper is to introduce and to overview the topic of cognitive health, why it needs to be addressed and what are the current realities, and initiatives in Republic of Moldova and across the world.

1. A demographic imperative in the aging population in Moldova.

The Republic of Moldova is now facing one of the most difficult periods in the 29 years of its independence as a democratic country. The crisis in the financial system that started in 2014 has gradually spread to all other areas of the state, and with a lack of solutions proposed by the government to improve quality of life, there is apathy and indifference among the country's population regarding internal sociopolitical problems. These issues have directly impacted the country's demography, leading to significant changes in the population. In 2014, the proportion of people aged 60 and older was 17.4%, almost equal to the proportion of young people aged 0–14 years, which was 18.2%, which suggests the future does not look good for the work force.⁽⁴⁾ The aging coefficient has substantially increased from 14.0% in 2010 to 17.2% in 2017, meaning that number of persons aged 60 years and over per 100 inhabitants has substantially increased, being more prevalent among women than men with small differences between rural (17.1%) and urban (17.3%).⁽⁵⁾

Older adults from Moldova are the poorest age group in Europe, and their life expectancy is comparable to that in Europe at the beginning of the 1990s. Topics such as active aging, stigmatization, abuse and violence against old people, and older adults' quality of life are slowly integrating into the political agenda but the number of people included in these programs are too small to make an impact. The phenomenon of "ghost villages" is spreading. Soon, Moldova faces the risk of becoming a ghost country of orphan older adults, left behind without support of younger family members who have migrated elsewhere for a better life.

By 2050 the proportion of elderly people in developed countries is projected to nearly double that of the young⁽⁶⁾, while by 2030, half of the world-wide economic impact of disability will be due to brain related disability⁽⁷⁾. Moldova, with its aging population, is clearly no exception to this global

trend due to three factors: (1) low and declining fertility, (2) high net emigration, and (3) low life expectancies⁽⁶³⁾.

As life expectancies rises in the world new health challenges arise, it is important to mention the extension of lifespan does not correlate well with the extension of a healthy lifespan⁽⁸⁾. Advancing age is the major risk factor for the development of neurological and psychiatric brain disorders, with aging being associated with increased prevalence of conditions such as epilepsy, stroke, and major neuropsychiatric or neurodegenerative diseases⁽⁹⁾. Alzheimer's disease is now the 5th leading cause of death and among adults 65–85 years of age in the United States and the leading cause of death in England and Wales.⁽¹⁰⁾⁽²⁴⁾ With the increased pension age in Moldova (up to 63 years of age for both sexes) it is important to treat, prevent and understand adults and their health challenges closer to the age of retirement. It is considered that not only people over 60 are at risk to cognitive decline but those adults over 40 should be considering implementing changes in their lifestyle and think about prevention.⁽¹¹⁾

The realities of Moldova should be taken into account: a relatively low active aging index, high alcohol and tobacco consumptions and low-income population. These and other sociocultural factors should be taken into account when developing new approaches in order to tackle the impending health crisis, which would inevitably occur in case of inaction.

2. What is Cognitive health?

Cognitive health should be defined not just by the absence of disease, but rather as the development and preservation of the multidimensional cognitive structure that allows the older adult to maintain social connectedness, an ongoing sense of purpose, and the abilities to function independently, to permit functional recovery from illness or injury, and to cope with residual functional deficits.⁽¹²⁾ In cognitive health the focus is mostly on prevention versus treatment: preserving memory, thought, ability to carry out tasks, language, judgment, perception, and personal volition.⁽¹³⁾ Alzheimer's disease, one of the leading causes of cognitive health decline, is a degenerative brain disease and the most common cause of dementia. Dementia is a syndrome — a group of symptoms that has a number of causes. The characteristic symptoms of dementia are difficulties with memory, language, problem-solving and other cognitive skills that affect a person's ability to perform everyday activities. These difficulties occur because neurons in parts of the brain involved in cognitive function have been damaged or destroyed. In Alzheimer's disease, neurons in other parts of the brain are eventually damaged or destroyed as well, including those that enable a person to carry out basic bodily functions such as walking and swallowing. People in the final stages of the disease are bed-bound and require around-the-clock care. Alzheimer's disease is ultimately fatal. The ICD has a separate classification for Alzheimer's in the Diseases of the nervous system section, while dementia is classified as a mental disorder due to known physiological conditions. Dementia as a major cause of disability, accounts for 11,9% of the years lived with disability due to a noncommunicable disease.⁽¹⁴⁾

A serious amount of research has been done on Alzheimer and dementia prevention. There are other common age related non-Alzheimer's or dementia issues that could produce a cognitive decline, many of which may be preventable. Some of these cognitive processes decline almost inevitably even in healthy older adults. This process has been attributed to "normal" aging. Cognitive Aging: refers to normal declines in cognition such as processing speed and some aspects of memory, language, visuospatial function, and executive function.⁽¹⁵⁾ Much like physical health, cognitive health can and should be viewed along a continuum from normative functioning to mild cognitive impairment to severe dementia. A health brain aging study by the MacArthur Studies of Successful Aging suggests that "successful" aging should be distinguished from "normal" aging, noting that psychosocial factors are major influences in maintaining cognitive health and suggest appropriate prevention strategies involving lifestyle changes. Implementing such lifestyle changes and reducing the tempo or effects of normal aging is to be considered successful aging⁽¹⁶⁾

Longitudinal studies tracking brain health metrics, such as general cognitive⁽¹⁷⁾ and memory performance⁽¹⁸⁾, suggest three main trajectories of cognitive aging: (1) individuals who exhibit

significant cognitive decline over time; (2) individuals who show cognitive decline yet remain within an age-appropriate range; and (3) individuals who maintain cognitive performance and experience little cognitive decline even at advanced age. Similarly, some individuals show steep decrements of the efficacy of the mechanisms of plasticity over time, whilst others do not⁽¹⁹⁾. The preservation of cognitive and mental health is associated with either the maintenance of brain structure, activity or connectivity patterns with advancing age⁽²¹⁾, and/or with the expression of compensatory responses in the face of pathological changes⁽²²⁻²³⁾. It is now well-accepted that structural and functional brain changes associated with the development of neurodegenerative diseases can begin some 10–20 years prior to the onset of symptoms⁽²⁵⁾. During this “pre-clinical period,” individual differences in brain resilience may delay the appearance of symptoms or act to reduce or eliminate the clinical and behavioral impact of pathologies⁽²¹⁾.

It is important to note that emotional health and cognitive health are often considered separately in research studies, as are psychiatric disorders and dementing disorders. The National Institute on Aging, National Institute of Mental Health and the National Institute of Neurological Disorders and Stroke in unified committee suggest that cognitive health and emotional health be considered as a unity⁽¹²⁾, concluding that the separation of two is impractical and uninformative because emotion is involved in cognitive processes and vice versa. Three biological processes have been identified to explain the interconnection of cognition and emotion: gluco-corticoid secretion and brain derived neurotrophic factor regulation of synaptic activity⁽²⁶⁾, and cerebrovascular disease, which is a risk factor for both cognitive impairment and depressions⁽²⁷⁾.

3. Major risk and protective factors

In the majority of cases of cognitive decline can be attributable to seven modifiable factors (low education, midlife hypertension, midlife obesity, diabetes, physical inactivity, smoking and alcohol consumption, and depression) A two year longitudinal study in Finland explored in a 2 year multi domain intervention of diet, exercise, cognitive training, and vascular risk monitoring proved to be effective in preventing cognitive decline in at-risk elderly people. Among them advancing age is the most popular and obvious risk factor.⁽²⁸⁾ Higher levels of education were almost uniformly reported to be protective for both cognitive and emotional outcomes. One explanation for this finding is that factors such as educational achievement are capable of contributing to or maintaining a cognitive reserve.⁽²⁹⁾ An increasing number of studies throughout the scientific community suggesting that cardiovascular disease as well as diabetes and hypertension can be a risk factor for cognitive health. As per Reis et. al 2013, cardiovascular health in young adulthood and its maintenance to middle-age is associated with better psychomotor speed, executive function, and verbal memory in midlife, and not only in those over 60 years of age.⁽³⁰⁾ Among non modifiable factors certain genetic factors have been proven in the last ten years to have an impact of the occurrence and progression to cognitive health related diseases such as the Apolipoprotein E (APOE) e4 allele and Heterozygous missense mutations in the gene encoding the triggering receptor expressed on myeloid cells 2 (TREM2).⁽³¹⁻³⁴⁾ Multiple studies present, depression symptoms showed significant impact on almost all cognitive performance tests in older adults. Mild anxiety symptoms were associated with better cognitive performance, whereas severe anxiety symptoms were negatively associated with cognitive functioning. In contrast, depressive symptoms showed a linear association with cognition; more depression was associated with worse cognition. The cognitive ability–depression relationship appears early in life, and it is likely that the presence of depressive symptoms leads to lower cognitive ability. Thus, intervening at early signs of depression not only can help alleviate depression, but will likely have an effect of cognitive ability as well. Nevertheless, there is a growing body of literature suggesting that a lifetime history of mood disorder increases one’s risk of developing cognitive decline and future dementia. There is substantial evidence that late-life depression is associated with cerebrovascular changes and other structural abnormalities. Individuals with late-life depression also seem to be at risk for AD.

It has been estimated that several modifiable risk factors, such as physical activity, socialization, weight and blood pressure control, psychological well-being and cognitive activity across the

lifespan could prevent more than 30% of the diagnosed cases of dementia⁽³⁶⁾. Similarly, it has been proposed that specific dietary patterns (e.g., Mediterranean diet)⁽³⁷⁻³⁸⁾ and definition of a clear purpose in life have a positive effect on brain health in aging and may reduce the incidence of brain diseases. Lifestyles have been shown to interact with biomarkers and have the potential to promote mechanisms of brain resilience⁽³⁹⁻⁴¹⁾. Dedicated physical exercise programs have been shown to preserve neural networks associated with cognitive decline⁽⁴²⁾. Consequently, the potential to modify such lifestyle habits associated with brain health exists and may lead to the promotion and modification of brain health across the lifespan^(28,43). Association between exercise and the risk of dementia: results from a nationwide longitudinal study in China.⁽⁵²⁾ Subsequent prospective studies confirmed that not physical activity but rather inactivity is associated with incidence of dementia⁽⁵³⁾. Among other protective factors are higher Socioeconomic status protects cognitive functioning over time⁽⁴⁴⁻⁴⁶⁾, cultural factors⁽⁴⁷⁻⁴⁸⁾, social engagement and/or support⁽⁴⁹⁻⁵⁰⁾, instrumental self-efficacy or believing that one can handle the instrumental aspects of life⁽⁵¹⁾.

4. Current initiatives across the world

During the last 20 years the topic of cognitive health and cognitive decline has become recognized at first by researchers, medical institutions and then by The World Health Organization. In this paper the authors have chosen 5 different initiatives: (1) The Cognitive and Emotional Health Project (CEHP)⁽¹²⁾, (2) The Aging Brain Initiative (TABI)⁽⁵⁵⁾, (3) Barcelona Brain Health Initiative (BBHI)⁽⁵⁶⁾, (4) Active Aging Index⁽⁵⁷⁻⁵⁸⁾, (5) World Health Organization Global Action Plan on the Public Health Response to Dementia 2017-2025⁽⁵⁹⁾

The Cognitive and Emotional Health Project is a pioneer in the field of cognitive health; a joint effort of National Institute of Health in the United States of America teaming up 3 major institutes and the best researchers and professionals in order to combine and review the most important and the most prospective quality science papers in regards to cognitive health and healthy aging in general. Thus setting the global trends and vectors in order to institutionalize, advocate and solidify them treatments and prevention methods of cognitive health related diseases. This Initiative has been the scientific push for innovation the science community needed way back in 2006.

The Healthy Brain Initiative: The Public Health Road Map for State and National Partnerships, 2018–2023, outlines how state and local public health agencies and their partners can promote cognitive functioning, address cognitive impairment for individuals living in the community, and help meet the needs of care partners. Specific actions are addressed in four traditional domains of public health: (1) monitor and evaluate, (2) educate and empower the nation, (3) develop policy and mobilize partnerships, (4) and assure a competent workforce. The initiative started way back in 2007 and is now on their third action plan.

The BBHI is a longitudinal prospective cohort study with the primary aim to examine, characterize and promote the lifestyle factors, biological determinants and their interactions that permit certain individuals to avoid the development or clinical manifestation of major neuropsychiatric and neurodegenerative disorders. The main objectives of the BBHI are (1) to characterize lifestyle, cognitive, behavioral and environmental markers associated with good cognitive and mental functions in middle to old age, (2) to assess the biological determinants predictive of the maintenance of brain health and prevention of neuropsychiatric illnesses over aging, and (3) to evaluate the effect of a controlled multi-dimensional lifestyle intervention on improving brain health.

The Active Aging Index research project has aimed at providing a new tool for policy makers to enable them to devise evidence-informed strategies in dealing with the challenges of population aging and its impacts on society. It is predicated on the insight that, in tackling issues associated with population aging, the successful measures are those which enable and increase older people's participation in the labour market and in social and family activities. By these, and by additional means of access to healthcare, security and lifelong learning, it is commonly agreed that older people are empowered to live independent, healthy and secure lives.

While the first three initiatives are local or country based, the AAI is different from the rest and should be considered something of an outlier due its massive application in Europe. Active Aging Index is calculated upon four factors: (1) employment rate for the age group, (2) participation in society, (3) independent, healthy and secure living, (4) capacity and enabling environment for active and healthy aging. The index is important itself since it is used as a performance metric in the European Union with a set target in mind to be reached. The majority of factors that have weight in calculating the index are either protective factors or have correlation to cognition, which signifies its importance.⁽⁵⁸⁾

The last on the list is the WHO Global action plan on the public health response to dementia for 2017-2025 outlining the 7 major action areas for its member states: (1) Make dementia a public health priority, (2) Raise Dementia Awareness and Friendliness, (3) Reduce Dementia Risk, (4) Dementia diagnosis, treatment and support, (5) Support for dementia carers, (6) Information systems for dementia, (7) Dementia research and innovation. The Roadmap should be considered as a set of directions for countries across the globe.

5. Current situation in Moldova. Challenges and opportunities.

5.1 Aging in Moldova

To address population aging, Republic of Moldova has joined in 2002 the Madrid International Plan of Action on Aging (MIPAA) and the Regional Implementation Strategy, committing to take measures that will respond to the demographic aging challenges and mainstream aging into the national policies. To respond to these challenges, the Government of the Republic of Moldova has approved in December 2017 a new Action Plan on Active Aging for 2018-2021, setting as one of the priorities to “Provide the possibility for labour markets to respond to the social and economic consequences of population aging”.⁽⁶¹⁾

One of the only accessible and precise researches or data on the topic of aging can be found from the Active Aging Index Report conducted by the Centre for Demographic Research that is used for the Action Plan on Active Aging in Moldova which stands lower than any of the EU-28 countries at 27,1 points, massively behind the target of 57,5 points. The biggest concerns are such metrics as lifelong learning, use of Information and Communication Technologies, social connectedness, voluntary activities all of which are well below the targets and can help promote the strengthening of the protective factors for cognitive and emotional health.⁽⁶²⁾ Currently, there are lot of aging concerns in Moldova such as smoking, elderly obesity, excessive alcohol consumption and a lack of exercise.⁽⁶³⁾

5.2 Cognitive and Mental Health in Moldova. Perceptions and realities

The amount of research on the topic of cognition, dementia or any other cognitive health related topic in the region is not too many. For this reason we consider it is important to take a look at and examine the current situation in the mental health department, as numerous study have proven the relationship between the two.

In her 2017 paper, Chihai described the history of mental health in Moldova as one that has been centered on psychiatric institutions.⁽⁵⁹⁾ where current reform goals are centered on the reduction in psychiatric hospital beds, shifting the focus towards outpatient therapy, where community mental health centers have a central role in coordinating recovery and social reintegration. Focusing on moving from a relatively centralized system towards a more community-based approach to psychiatric care and community supports, as well as deinstitutionalization and integration of mental health care with primary care should be the priority. Besides over reliance on institutionalization, the Moldovan mental health care system faces other challenges, including access to care, workforce limitations, and stigma. The MENSANA project has been an active contributor in tackling mental health in Moldova and being the catalyst for passing a myriad of mental health legislation and initiatives, yet there is still a lot of catch up to be done.⁽⁶⁰⁾ Two years later a new study has been done in Moldova examining the 10 year progress done and the current situation of mental health highlighting the need for the following mental health system reforms: (1) reintegration service users in society, community and family, (2) deinstitutionalize and implement Community Based Mental Health Services, (3) improving the accessibility and quality of services, (4) addressing health workforce issues.⁽⁶⁵⁾

Current medical protocols at the Ministry of Health of Moldova include neurological disorders as Multiple Sclerosis and Amyotrophic lateral sclerosis. Yet as of this date there is no medical protocol nor for Dementia nor Alzheimers for professionals to follow or, despite the WHO recommendations. Cognitive health related diseases are treated for the most part as mental health disorders while the population turns to other countries such as Romania, Germany, Israel for professional expertise, treatment and medication.

6. CONCLUSION

We understand that this is only a preview of the topic of cognitive health. At the moment there is a major lack of research in this area and further research needs to be conducted, from a multitudinal approach. Further studies to evaluate the public opinion are required on such topics as: (1) accessibility to treatment of dementia, Alzheimer, and other cognitive health related diseases (2) accessibility of information both for patients and their caregivers, (3) an approximate number of patients, carers, statistics and other quantifiable data on the topic.

With the population of Moldova getting older, a growing need in development both active measures and preventative measures for dealing with cognitive health diseases and impairments exists. Creating medical protocols both for dementia and Alzheimer's can be a good start. Although the current methods of treatment are very limited and the outcomes are mostly negative, the creation of protocols is the first step towards a better legislation and care for people with cognitive health issues and disabilities. Special initiatives, groups and organizations should be created in order to educate the public, monitor and evaluate, assure a competent workforce and of creating partnerships.

REFERENCES

1. WHO. *The epidemiology and impact of dementia: current state and future trends*. Geneva: World Health Organization; 2015
2. Prince M, Wimo A, Guerchet M, Ali GC, Wu Yutzu, Prina M. *World Alzheimer Report 2015. The global impact of dementia: an analysis of prevalence, incidence, cost and trends*. London: Alzheimer's Disease International; 2015.
3. *Population Situation Analysis, Demographic Research Center and UNFPA Moldova*, 2016
4. *Aging in Moldova: A country With Orphan Older Adults*, Cojocari, 2017
5. *National Bureau of Statistics, Ageing factor of population, by Districts/Regions, Years, Area and Sex*,
6. *United Nations report 2017 BY 2050 ELDERLY PEOPLE*
7. *Projections of Global Mortality and Burden of Disease from 2002 to 2030*, Mathers C., Loncar D., 2006
8. *Human longevity: Genetics or Lifestyle? It takes two to tango*, Passarino G. , 2016
9. *Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study*, Barnett K., Mercer S., Norbury M., Watt G., Wyke S., Guthrie B., 2012
10. *Deaths: final data for 2014*, Xu, Kochanek, Sherry, Murphy, Tejada-Vera, 2016
11. *Moldovan Public Pension System*, Art.42 LP65 from 04.03.04, MO53-55/02.04.04 art.304, <http://lex.justice.md/md/313291/>
12. *The NIH Cognitive and Emotional Health Project. Report of the Critical Evaluation Study Committee*, Hendrie HC., 2006
13. *Normal cognitive aging*, Harada CN, 2013
14. Prince M, Albanese E, Guerchet M, Prina M. *World Alzheimer Report 2014. Dementia and risk reduction: an analysis of protective and modifiable risk factors*. London: Alzheimer's Disease International; 2014 <http://www.alz.co.uk/research/WorldAlzheimerReport2014.pdf>
15. *Cognitive health: An emerging public health issue*, Anderson, McConnell, 2007
16. *The relationship between cognitive and physical performance: MacArthur Studies of Successful Aging*, Tabbarah M., Crimmins EM., Seeman TE., 2002
17. *Predictors of maintaining cognitive function in older adults: the Health ABC study*, Yaffe, 2009
18. *Genetic and lifestyle predictors of 15-year longitudinal change in episodic memory.*, Josefsson, 2012
19. *Characterizing brain cortical plasticity and network dynamics across the age-span in health and disease with TMS-EEG and TMS-fMRI*, Pascual-Leone, 2011
20. *Caregivers of Older Adults With Cognitive Impairment*, Anderson, DeFries, Mcguire, Andersen, Brumback, 2009
21. *Memory aging and brain maintenance.*, Nyberg L. , 2012
22. *Cognitive reserve in ageing and Alzheimer's disease*, Stern, 2012
23. *How Does it STAC Up? Revisiting the Scaffolding Theory of Aging and Cognition*, Reuter-Lorenz P., Park D., 2014

24. *Death registered in England and Wales 2017*, <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregisteredinenglandandwalesseriesdr/2017>
25. *Changes in Brain Function Occur Years before the Onset of Cognitive Impairment*, Beason-Held, 2013
26. Heuser I, Lammers CH. *Stress and the brain*. *Neurobiol Aging* 2003;24 (Suppl 1)
27. Alexopoulos GS, Meyers BS, Young RC, Kalayam B, Kakuma T, Gabrielle M. *Executive dysfunction and long-term outcomes of geriatric depression*. *Arch Gen Psychiatry* 2000;
28. Ngandu T, Lethisalo J, Solomon A, Jula A. *A 2 year multidomain intervention of diet, exercise, cognitive training, and vascular risk monitoring versus control to prevent cognitive decline in at-risk elderly people (FINGER): a randomised controlled trial*, 2015.
29. Scarmeas N, Stern Y. *Cognitive reserve: Implications for diagnosis and prevention of Alzheimer's disease*. *Curr Neurol Neurosci Rep* 2004;4(5)
30. Reis J, Loria C, Launer L. *Cardiovascular health through young adulthood and cognitive functioning in midlife*. 2013
31. 3Vemuri P, Resnick TG, Przybelski. *Association of lifetime intellectual enrichment with cognitive decline in the older population*. *JAMA Neurol* 2014 Aug;71(8):1017-24
32. Guerreiro R, Wojtas A, Bras J. *TREM2 Variants in Alzheimer's Disease*. *N Engl J Med* 2013; 368:117-127
33. Jonsson T. *Variant of TREM2 associated with the risk of Alzheimer's disease*. *N Engl J Med*. 2013 Jan 10;368(2):107-16
34. Suarez-Cavlet M. *sTREM2 cerebrospinal fluid levels are a potential biomarker for microglia activity in early-stage Alzheimer's disease and associate with neuronal injury markers*. *EMBO Mol Med*. 2016 May 2;8(5):466-76.
35. Beaujean AA, Parker S, Qiu X. *The relationship between cognitive ability and depression: a longitudinal data analysis*. *Soc Psychiatry Psychiatr Epidemiol*. 2013 Dec;48(12):1983-92
36. Livingston G, Sommerlad A, Ortega V. *Dementia prevention, intervention, and care*. *Lancet*. 2017 Dec 16;390(10113):2673-2734.
37. Guasch-Ferré, M., Salas-Salvadó, J., Ros, E., Estruch, R., Corella, D., Fitó, M., et al. (2017). *The PREDIMED trial, Mediterranean diet and health outcomes: how strong is the evidence?* *Nutr. Metab. Cardiovasc. Dis.* 27, 624–632.
38. Loughrey, D., Lavecchia, S., Brennan, S., Lawlor, B., and Kelly, M. (2017). *The impact of the Mediterranean diet on the cognitive functioning of healthy older adults: a systematic review and meta-analysis*. *Adv. Nutr.* 8, 571–586.
39. Landau, S. M., Marks, S. M., Mormino, E. C., Rabinovici, G. D., Oh, H., O'Neil, J. P., et al. (2012). *Association of lifetime cognitive engagement and low β -amyloid deposition*. *Arch. Neurol.* 69, 623–629.
40. Wirth, M., Villeneuve, S., La Joie, R., Marks, S. M., and Jagust, W. J. (2014). *Gene-environment interactions: lifetime cognitive activity, APOE genotype, and beta-amyloid burden*. *J. Neurosci.* 34, 8612–8617
41. Arenaza-Urquijo, E. M., Wirth, M., and Chételat, G. (2015). *Cognitive reserve and lifestyle: moving towards preclinical Alzheimer's disease*. *Front. Aging Neurosci.* 7:134.
42. Voss, M. W., Weng, T. B., Burzynska, A. Z., Wong, C. N., Cooke, G. E., Clark, R., et al. (2016). *Fitness, but not physical activity, is related to functional integrity of brain networks associated with aging*. *Neuroimage* 131, 113–125.
43. Rosenberg, A., Ngandu, T., Rusanen, M., Antikainen, R., Bäckman, L., Havulinna, S., et al. (2018). *Multidomain lifestyle intervention benefits a large elderly population at risk for cognitive decline and dementia regardless of baseline characteristics: the FINGER trial*. *Alzheimers Dement.* 14, 263–270.
44. Chyou PH, LR White, K Yano, DS Sharp, CM Burchfiel, R Chen, et al. *Pulmonary function measures as predictors and correlates of cognitive functioning in later life*. *Am J Epidemiol* 1996;143(8): 750–6.
45. Lee S, Kawachi I, Berkman LF, Grodstein F. *Education, other socioeconomic indicators, and cognitive function*. *Am J Epidemiol* 2003;157(8):712–20.
46. White L, Katzman R, Losonczy K, Salive M, Wallace R, Berkman L, et al. *Association of education with incidence of cognitive impairment in three established populations for epidemiologic studies of the elderly*. *J Clin Epidemiol* 1994;47(4):363–74. <https://jamanetwork.com/journals/jamaneurology/article-abstract/795025>
47. Chyou PH, LR White, K Yano, DS Sharp, CM Burchfiel, R Chen, et al. *Pulmonary function measures as predictors and correlates of cognitive functioning in later life*. *Am J Epidemiol* 1996;143(8): 750–6.
48. Graves AB, Rajaram L, Bowen JD, McCormick WC, McCurry SM, Larson EB. *Cognitive decline and Japanese culture in a cohort of older Japanese Americans in King County, WA: The Kame Project*. *J Gerontol B Psychol Sci Soc Sci* 1999;54(3):S154–61.
49. Bassuk SS, Glass TA, Berkman LF. *Social disengagement and incident cognitive decline in community-dwelling elderly persons*. *Ann Intern Med* 1999;131(3):165–73.
50. Seeman TE, Lusignolo TM, Albert M, Berkman L. *Social relationships, social support, and patterns of cognitive aging in healthy, high-functioning older adults: MacArthur studies of successful aging*. *Health Psychol* 2001;20(4):243–55.
51. Seeman T, McAvay G, Merrill S, Albert M, Rodin J. *Self-efficacy beliefs and change in cognitive performance: MacArthur Studies of Successful Aging*. *Psychol Aging* 1996;11(3):538–51.

52. *Physical Exercise as a Preventive or Disease-Modifying Treatment of Dementia and Brain Aging*, Eric Ahlskog. *Mayo Clin Proc.* 2011 Sep; 86(9): 876–884.
53. Anderson L., Egge R. *Expanding efforts to address Alzheimer's disease: The Healthy Brain Initiative.* *Alzheimers Dement.* 2014 Oct; 10(5 0): S453–S456.
54. Cattaneo G., Bartes-Faz D. *The Barcelona Brain Health Initiative: A Cohort Study to Define and Promote Determinants of Brain Health.* *Front Aging Neurosci.* 2018; 10: 321.
55. *Madrid 2002 Action Plan*
56. Ziadi A. *Project: 'Active Ageing Index (AAI)' Active Ageing Index 2012 Concept, Methodology and Final Results.* 2013
57. Chihai J. *Mental health in republic of Moldova: The way from in-patient to community-based care services.* *European Psychiatry*, April 2017 Volume 41, Supplement, Page S604
58. Brown M, Petrea I. *Report for Swiss Cooperation Office in Moldova Contract No: 81014838.* 2012.
59. *Government Decision No 406 of 2 June 2014 approving the Program for Mainstreaming Ageing*
<https://bit.ly/2KP8ruv>
60. *UNECE ACTIVE AGING INDEX IN THE REPUBLIC OF MOLDOVA 2016.* <https://bit.ly/2NxlAy2>
61. *World Bank (2017) A Human-Rights based Approach to the Economic Security of the Older People in Moldova.*
<https://bit.ly/2NLTGhZ>
62. *World Health Organization Global Action Plan on the Public Health Response to Dementia 2017-2025.*
https://www.who.int/mental_health/neurology/dementia/action_plan_2017_2025/en/
63. M. Mahon, L. Shields-Zeeman, I. Petrea, N. Klazinga. *Assessing the need for a mental health services reform in Moldova: a situation analysis.* *International Journal of Mental Health Systems*, 2019

METODE SPECIFICE DE PROMOVARE ÎN DOMENIUL EDITORIAL SAU CUM SE FABRICĂ UN BESTSELLER?

SAVCIUC OXANA, *dr.conf. univ.*
Academia de Studii Economice a Moldovei,
Chișinău, str. Mitropolit G. Bănulescu-Bodoni 61;
Tel: +373 22 41 28; e-mail: ox.savciuc@gmail.com

GHENCIU DORINA, *masterandă*
Academia de Studii Economice a Moldovei,
Chișinău, str. Mitropolit G. Bănulescu-Bodoni 61;
e-mail autor: dorinaghenciu@gmail.com

Abstract. The publication of books, journals and other works is an important part of the creative economy. Recent evolutions in technology, reader habits and public policies continue to profoundly change the nature of publishing and transform the face of the global industry. The purpose of this article is to study and understand how publishing marketing and different methods of promotion works in publishing industry, and to emphasize that this methods are unique.

Key words: marketing, promotion, publishing marketing, book advertising, book marketing, creative industries, literature, publishing industry

JEL CLASSIFICATION: M31, M37, M390, Z110

INTRODUCERE

Din cele mai vechi timpuri, cartea a fost considerată un produs special, având adânci implicații în destinul oamenilor și al națiunilor. Astăzi, când suportul informațional abundă, publicându-se în ritmul regulat al unui metronom, inevitabil apare întrebarea, de ce alegem să citim o carte mai curând decât alta? Cui ar trebui să atribuim succesul unei cărți? Doar autorului? Editorului, care știe să vândă bine? Dar, cum s-o vinzi bine dacă trece neobservată? Oare nu publicitatea a devenit instrumentul oricărei ambiții scriitoricești?

În mod paradoxal, succesul unei cărți (aici luându-se în considerație în primul rând: numărul de exemplare vândute, timpul de care a avut nevoie ca să se manifeste și locul manifestării) a păstrat dintotdeauna o mare parte de mister, situându-se la confluența dintre tehnici de marketing și magie, deseori aruncând în aer orice previziune. Iar fascinația ce o trezește acest fenomen e cauzată în mare măsură tocmai de această incertitudine, de caracterul total imprevizibil a ceea ce nu poate fi un produs ca oricare altul.

Scopul urmărit în această lucrare este de a familiariza cititorul cu particularitățile marketingului editorial ca subspecializare distinctă și a-i aduce la cunoștință metodele specifice de promovare în domeniul editorial, care sunt absolut unice.

Metoda principală de cercetare este metoda de cercetare științifică, care a avut ca **rezultat** studierea exhaustivă și scoaterea în evidență a celor mai inedite metode de promovare utilizate în domeniul editorial.

Renumitul profesor de științe ale comunicării Bernard Miège caracterizează modelul editorial drept unul cu un grad mare de concentrare. Produsele editoriale sunt atât de distincte, încât ceea ce poate funcționa pentru unele, ca să se vândă bine, poate să nu funcționeze deloc în cazul altora.²⁶ Nu există o rețetă universală a succesului în această industrie, la fel cum nu există un mod prin care produsul editorial să se vândă singur. Indubitabil, cartea trebuie adusă în atenția distribuitorilor, librărilor și a potențialilor cumpărători/cititori. De aceea, este firesc că marketingul și-a făcut simțită prezența și în această sferă de activitate.

²⁶ MIÈGE Bernard. *Societatea cucerită de comunicare*. Editura Polirom, 2000. pag.46. ISBN: 973-683-465-4

În prezent, putem afirma, că nu se cunoaște nici un domeniu specific unei economii, în care conceptele de marketing să nu-și fi găsit aplicarea corespunzătoare. De la începutul afirmării sale ca știință, marketingul s-a caracterizat printr-o mare flexibilitate și s-a dezvoltat, având la bază acumulările cantitative, dar și salturile calitative ale teoriei economice contemporane. A cunoscut de-a lungul timpului atât o evoluție de tip intensiv - manifestată la nivelul complexității conceptelor și la integrarea acestuia din punct de vedere managerial, cât și o evoluție de tip extensiv – manifestată prin aplicarea principiilor de marketing la noi domenii de activitate umană.

Așadar, figura 1 reprezintă în mod sintetic dezvoltarea ariei de aplicare a principiilor și specializării marketingului, fiind importantă pentru o mai bună înțelegere a cadrului conceptual, determinant pentru geneza marketingului editorial, în sensul particularizării și evoluției graduale, până la a-l putea considera o subspecializare.



Figura 1. Specializările marketingului în funcție de scop și profilul activității

Sursa: Adaptare după Răzvan Zaharia, *Marketing social politic*, Editura Uranus 2002, pag.49

Pentru a contura în mod corespunzător cadrul conceptual al aplicării marketingului în domeniul vizat este necesară o caracterizare, cel puțin sumară a ceea ce presupune *activitatea editorială*. Așadar, aceasta reprezintă totalitatea activităților unei edituri (organizatorice, de creație, economice) și constă în pregătirea pentru tipar, tipărirea și difuzarea diverselor genuri de tipărituri: cărți (în lucrarea de față, referindu-se ca la principalul produs editorial), ziare, reviste, note, calendare, etc., înglobând următoarele etape:

- Prepress – totalitatea procedurilor orientate spre redactarea, traducerea, culegerea, corectarea, redactarea tehnică, ilustrarea și machetarea lucrărilor;
- Tipărire – procesul tehnologic de multiplicare a originalului editorial;
- Difuzare – distribuirea producției prin rețeaua de comerț, biblioteci și pe alte căi.

În mod cert, producția editorială este o adevărată industrie, editura devenind un agent economic ca oricare altul, interesat în desfacerea produselor sale, cu recuperarea cheltuielilor și obținerea unui profit care să-i permită continuarea activității. Altfel spus, *editura* este o societate comercială cu funcții socio-culturale, care are o bună cunoaștere a cererii de pe piață, pe baza căreia investește resurse financiare, își promovează și își vinde produsele, regăsindu-se în modelele industriilor culturale, sau într-un sens mai restrâns și mai recent, cel al industriilor media.

Astfel, cartea trebuie adusă în atenția distribuitorilor, librarilor și a potențialului cumpărător/cititor. Pentru ca un titlu să fie vândut acesta trebuie bine promovat pe piața de carte. Bugetul alocat promovării într-o editură este de obicei unul limitat și de aceea editorul alege cu foarte mare atenție edițiile pe care le vrea „un succes de casă” și cărora le va acorda o importanță deosebită din acest punct de vedere. O particularitate a politicii de promovare în domeniul editorial

este „legea sacrificiului”: anumitor titluri li se va acorda o atenție mai sporită decât altora. Această metodă, reprezintă cârligul ce agață cumpărătorii.²⁷

Este de remarcat, că diferitele tehnici de promovare în domeniul editorial sunt strâns legate de sistemul de distribuție, în funcție de canalele alese, și de particularitățile consumatorului produsului editorial. Așadar, dintre astfel de tehnici se evedențiază:

„*Legea generală a exagerării*” sau „*Grația cifrelor fanteziste*” ce constă în umflarea falsă și intenționată cu anticipație a numărului de exemplare vândute, pentru a conferi un plus de prestigiu cărții, autorului și, în subsidiar editorului. O inflație, adesea îndoielnică, a cifrelor de vânzare proclamate. Etalarea unor cifre mirobolante stimulează dorința publicului, îl incită pe cititor, distribuitori și librari deopotrivă, având ca efect mecanic sporirea vânzărilor.

Inventatorul procedurii este editorul lui Balzac, francezul lui Charles Gosselein, dar nu reușește să-l implementeze în 1832 din cauza că autorul refuză să participe la orice fel de „șarlatenie comercială”. Prin urmare este implementat pentru prima oară pe piața de carte, în 1852 de editorul american John Jewett la cartea „Coliba unchiului Tom”. Acesta publică o serie de anunțuri în presă, demonstrând cititorilor că se află în fața unui eveniment de excepție, la care sunt chemați să ia parte și ei. La doar o săptămână declară că a vândut cinci mii de exemplare, la două săptămâni – zece mii, peste opt săptămâni – cincizeci de mii, iar la un an de la apariție 305 000 de exemplare, cifră atinsă de fapt, abia la șase ani de la apărire. Dar, tot editorul declară că n-ar fi ajuns la aceste cifre niciodată dacă nu utiliza această tehnică. Exploatarea cifrelor de vânzare a romanului a contribuit la crearea unui adevărat fenomen editorial. Toată lumea a vorbit despre ea. De atunci în această industrie cifrele au luat-o razna.

De ce s-ar abține să umfle cifrele dacă asta aduce profit și dacă nimeni nu poate dovedi care sunt false și care adevărate, atâta timp cât editorii nu declară tirajele și nimeni nu le monitorizează? Fascinția cifrelor mari a devenit un argument esențial de marketing, o tehnică chiar destul de agresivă de promovare a vânzărilor – înscrisă și pe banderolele viu colorate, cu caractere mai mari decât titlul sau numele autorului. Dar, nu totdeauna există o discrepanță între cifrele declarate și cele reale, acestea provenind de la surse veridice care nu au nimic de câștigat colportându-le.

Listele de bestselleruri reprezintă o altă metodă revoluționară de promovare. Cuvântul bestseller fiind folosit pentru întâia oară în Statele Unite în 1889, răspândindu-se curând în lumea anglo-saxonă, pătrunzând în 1920 în Franța, apoi în restul lumii îndată după primul război mondial. Acest termen, ce desemnează lucrările de mare tiraj, începe să domine mediul editorial american. O carte e un bestseller sau nu e. Cuvânt magic, care îi face să viseze pe autori și servește drept busolă editurilor. Listele își au originea în mensualul The Bookman, care în 1896, începe să clasifice cărțile, „după vânzarea lor”. Din 1912, listele sunt oficializate și desemnate sub acest nume de „Publishers Weekly”, în timp ce „New York Times” le inaugurează pe ale sale în 1942. Astfel, orice carte ajunsă pe listă, și care rămâne acolo câteva săptămâni este cumpărată imediat de toate librăriile, stârnind interesul publicului. Așadar, unii editori folosesc listele ca mijloc de promoție, într-un mod nu tocmai cinstit, pentru a face cititorii să creadă că o carte este un bestseller, chiar înainte ea să devină unul. Iar expresia magică „cel mai mare bestseller din toate timpurile” ajunge să fie imprimată pe majoritatea copertelor cu litere viu colorate și mari, pentru a atrage atenția marelui public.

Premiile literare sunt un fel de „instanțe”, care le arată potențialilor consumatori ce trebuie să cumpere pentru a fi la modă și au capacitatea de a produce adevărate succese de librărie. Premiile literare scot titlul, autorul și editura din anonimat și are un efect miraculos asupra vânzărilor (pentru că de obicei nu se acordă autorilor deja consacrați). O carte premiată stimulează achiziționarea ei într-un mod incredibil, servind mai apoi ca reper pentru publicitate. Atribuirea premiilor e suficientă pentru a înzeci tirajele și vânzarea, fiind râvnite mai ales de editurile în ascensiune. La etapa actuală reprezintă o tehincă de promovare a vânzărilor în industria de carte, doar că una mai puțin accesibilă pentru toate editurile, depinzând de alți factori, care nu vor fi expuși în acest context.

„*Mariajul cărții cu imaginea*” filmul și cartea, aceste două forme de artă, expresia, imaginea și cuvântul reacționează între ele. Succesul unui film turnat după o carte (mai ales un bestseller) are ca efect mecanic accelerarea sau relansarea vânzării acesteia, în multe cazuri făcând din ea un mega – bestseller.

„*Etichetarea cu superlative*” sau „*Legea coperților hiperbolizate*”, care presupune inserarea pe copertă acelor fraze de excepție, derivate din tehnicile menționate anterior, care comunică în mod clar beneficiul unic atribuit cărții (premiu literar, aflarea în topul listelor de bestselleruri, etc.) creând o impresie pozitivă, oprește, intrigă și oferă o promisiune cititorului.

Târgurile de carte sunt manifestări care adună laolaltă mai multe edituri, având scopul de a oferi consumatorilor posibilitatea de a compara într-un singur loc cât mai multe oferte, pe de altă parte de a-i îndemna să achiziționeze și în același timp servesc ca spații pentru expunere media, publicitate, lansare.

Campaniile de precomandă stimulează vânzările unei cărți înainte ca aceasta să se lanseze și să apară în librării, prin faptul că crează în minte consumatorului exclusivitate – ideea că acesta o va avea printre primii.

Promovarea unui titlu de carte prin intermediul altei cărți se utilizează de obicei în cazul seriilor de autor. Pe coperta unei anumite cărți se menționează titlul altei cărți al aceluiași autor. Tehnica se situează la confluența dintre publicitate editorială și promovarea vânzărilor.

Book trailerul este similar unui film în miniatură, în care se ilustrează în mod succint și intrigant conținutul cărții. Are rolul de a capta atenția și a face curios publicul, comunică emoții și informații. Se utilizează în campaniile de prelansare a cărților. Poate fi plasat atât în mediul online cât și la TV.

Evenimentele speciale reprezintă crearea și organizarea unor manifestări speciale de către editură, a-l căror scop poate fi lansarea, relansarea unei cărți, interacțiunea cu autorul, etc. La etapa actuală lumea editorială adoptă cele mai sofisticate tehnici pentru a organiza un altfel de eveniment și adoptă strategii spectaculoase, implementează idei inedite, demne de cele mai puternice sectoare de producție ca să-și asigure un efect mediativ garantat.

- *Spațiile neconvenționale* pot fi o soluție pentru a crea un boom de imagine. Folosirea însă cu repetiție a acestui model neconformist nu aduce un public fidel. Prima dată publicul va fi curios, a doua oară nu va mai părea interesat. Spațiile neconvenționale sunt avantajoase mai ales pentru publicul care nu participă direct, dar digeră informația din social media, pentru că aceste spații sunt în general foarte fotogenice..
- *Lansările multi – autor* sunt realizate pentru a atrage un public mai numeros, respective fani ai ficăruia autor în parte. De obicei autorilor deja consacrați ai editurii li se alătură tineri autori la debut sau primele cărți.
- *Turneele de promovare* – reprezintă organizarea unor evenimente în lanț în zonele cu mare interes comercial și literar din partea cititorilor.

Emisiunile literare/interviurile se referă la programe, de obicei sub forma videourilor transmise în direct în mediul online, pe rețelele de socializare, radio sau TV, sau în prealabil înregistrate, în vederea atragerii atenției publicului asupra unei cărți a editurii. Acestea pot avea diverse formate: se invită autorul și/sau critici literari, istorici, alți scriitori și se provoacă o dezbatere pe tema respectivei cărți; în alte emisiuni radio, online sunt recenzate titluri de carte în mod constant, cu o anumită periodicitate.

Revista editurii/articole aproape fiecare editură este prezentă în mediul online, având un site propriu, blog, sau o pagină pe rețelele de socializare, care îi permite să împărtășească cu cei cu care interacționează articole pe diverse teme. Fie oferă profesioniștilor din industrie o imagine a celor mai importante publicații, oferă recenzii, interviuri cu autorii editurii, distribuie articolele de pe blogurile personale ale autorilor editurii, anunță programul de publicare pentru următoarea perioadă de timp, etc.

Crearea miturilor, poveștilor și zvonurilor despre autori este o altă tehnică de PR pe larg folosită de edituri ca să atragă atenția publicului, asigură efect mediativ garantat și ulterior servește și ca reper pentru implementarea diverselor tehnici de publicitate.

Crearea unui fenomen se referă la declanșarea unui fenomen la nivel micro și macro structural al cărții. De obicei se crează *buzz* în jurul cărții, prezentând-o ca pe un fenomen în primul rând, cu scopul asigurării unui efect mediativ garantat și pentru boom de imagine.

„*Cărțile ca mobilă*” – este o altă tehnică de PR, unii specialiști considerând că de fapt se referă la promovarea vânzărilor, care la fel constă în crearea unui fenomen, doar că la nivel de percepție. Tehnica se folosește mai mult în cazul cărților științifice, de nișă. Editura crează prin diverse instrumente de PR următoarea percepție în mintea consumatorului: să cumpere o anumită carte pentru a-i servi drept certificat de respectabilitate intelectuală. Îl face să cumpere, nu numai că ca să o citească, dar ca să fie comentată, discutată, recenzată și bineînțeles pentru a fi posedată și a se alătura celor care urmăresc tendințele.²⁸

CONCLUZIE

Dinamismul socio-economic și concurența determină o diversificare din ce în ce mai mare a formelor concrete de desfășurare a promovării în acest domeniu, neexistând limite de aplicabilitate și abordare creativă.

Un lucru însă e cert și anume că ocupă un loc semnificativ în economia globală, confruntându-se cu o serie de provocări, acestea condiționând de la an la an, modificări esențiale în peisajul editorial. Concurența între edituri este acerbă și în continuă creștere, librăriile în format fizic aleg să și desfășoare activitatea tot mai mult în spațiul virtual, numărul de titluri de carte, care se publică zilnic, în special în mediul online, se mărește cu o viteză uluitoare, iar sectorul de self-publishing ocupă o pondere tot mai mare în această industrie. Așadar, pe măsură ce piața editorială evoluează, apar și noi metode de promovare, care urmăresc să facă în această industrie din fiecare carte un bestseller.

Bibliografie:

1. MIÈGE Bernard. *Societatea cucerită de comunicare*. Editura Polirom, 2000, ISBN: 973-683-465-4, 240 p.
2. GÂRDAN Daniel Adrian, Marketing cultural – suport de curs, https://se-b.spiruharet.ro/images/secretariat/2017-2018/programe_licenta/mk/sinteze/an_3_sem_1/mk_mk_cultural_aniii.pdf (pag.8, citat la 12.01.2019)
3. HILL Brian and POWER Dee, *The making of a Bestseller*, Dearborn Trade Publishing, Chicago, 2005, ISBN 0793193087
4. HRIB Bogdan, *Editor de unul singur: Management în industria cărții*, Tritonic 2018, ISBN 978-606-749-368-9, 197 p.
5. ROUVILLOIS Frederic, *O istorie a bestsellerului*, Editura Humanitas, 2013, ISBN 978-973-50-3947-9, 343 p.

²⁸ ROUVILLOIS Frederic, *O istorie a bestsellerului*, Editura Humanitas, 2013, pag. 165, ISBN 978-973-50-3947-9

COMPARATIVE ANALYSIS OF BANKS' RISKS AND PERFORMANCE BETWEEN REPUBLIC OF MOLDOVA AND EUROPEAN UNION COUNTRIES FOR 2014 – 2018 YEARS / ANALIZA COMPARATIVĂ A RISCURILOR ȘI PERFORMANTELOR BANCARE ÎNTRE REPUBLICA MOLDOVA ȘI ȚĂRILE UNIUNII EUROPENE PENTRU ANII 2014 – 2018

Scientific coordinator: Stela CIOBU, PhD, Associate Professor,
AESM, Republic of Moldova, Chișinău, str. Bănulescu-Bodoni 61,
E-mail: stela.ciobu@gmail.com

Authors: Nicoleta TOFAN and Maria NACLADA,
Master's in I-st year of study, Group AFB - 181 M,
AESM, Republic of Moldova, Chișinău, str. Bănulescu-Bodoni 61,
E-mail: nicole.tofan171@gmail.com,
maria.naclada@gmail.com

Abstract: În prezent, băncile joacă un rol vital în toate țările. La moment, analiza riscurilor și performanței bancare a devenit un subiect preferat pentru multe părți interesate, cum ar fi clienții, investitorii și restul publicului. Există o gamă largă de indicatori ai rapoartelor financiare pentru a evalua riscurile și performanța financiară. Cu toate acestea, principiul major de determinare a compatibilității și sănătății unei organizații financiare acționează ca un intermediar în determinarea profitabilității, lichidității și performanței băncilor.

Key words: Analiză, risc de credit, risc de lichiditate, risc de insolvabilitate, performanță bancară, indicator

JEL Classification: G21, G32, P51

INTRODUCTION. The goal of the research is to realize a comparative analysis of 4 banks according to credit risk, liquidity risk and insolvency risk ratios and performance indicators. They were selected 2 banks from Republic of Moldova and 2 from European Union (1 from Spain and 1 from Portugal) in order that the research to be a representative one, and to find out in what country the banks are more profitable and performing.

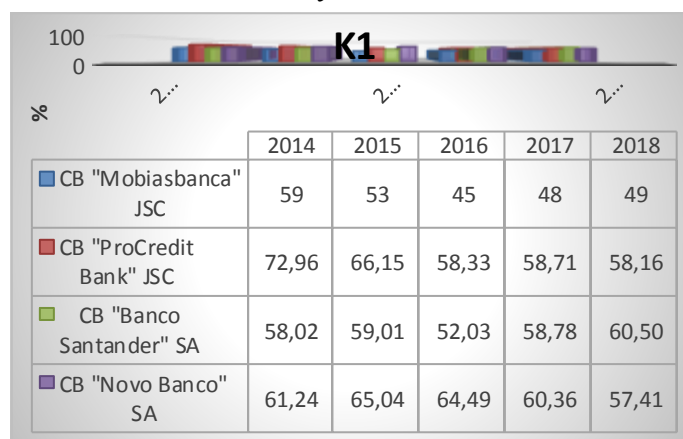
PROPOSED RESEARCH METHODS

The investigation presented in this article was implemented based on such research methods as: logical analysis of theoretical and practical materials, documentary method, quantitative and qualitative data methods, graphical method, methods of synthesis and comparative analysis.

RESEARCH OF EMPIRICAL ASPECTS

Based on the calculations and analysis made, the following results were identified:

1. Credit risk analysis



$$K1 = \frac{\text{Loans}}{\text{Total Assets}} * 100\%$$

K1 indicator shows the share of loans in the total amount of assets. For this indicator, in 2014 – 2018 years the amount of Credits in Total Assets diminished for the banks CB "Mobiasbanca" JSC (59% - 49%), CB "ProCreditBank" JSC (73% - 58%), CB "Novo Banco" SA (61% - 57%), except for CB "Banco Santander" SA, the percentage is rising (58% - 61%) (Figure 1).

Figure 1: K1 Loans to total assets.

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

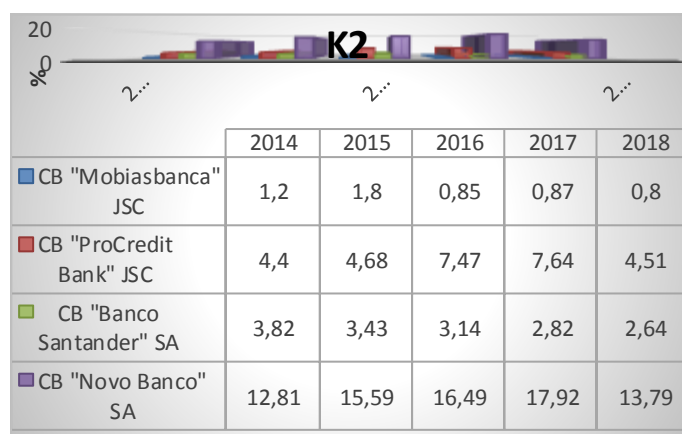


Figure 2: K2 Allowances for loan losses to total loans.

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>



Figure 3: K3 Unfavourable loans to total loans.

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

Recommendations:

The credit risk associated with customer credit exposures is defined as the risk of loss resulting from the non-fulfillment of the contractual payment obligations associated with the credit exposure to the client. Management of the risk of non-fulfillment of the contractual obligations assumed under the credit agreement, associated with the client's credit exposures, must base on observance of the following principles of the bank's lending activity:

- Intensive analysis of customer payment capacity;
- Detailed documentation of the credit risk assessment, which ensures that a third person who has knowledge in the field will understand the analysis performed;
- Rigorous avoidance of over-indebtedness of the bank's clients;
- Establish lasting relationships of trust and maintain contact with customers;
- Systematic monitoring of customer business development;
- Strict management of arrears;
- Enforcement of the pledge in case of default of the loan;
- Investments in well trained and motivated employees;
- Implement carefully elaborated and well-documented processes;
- Compliance with the "four eyes principle".

2. Liquidity risk analysis

$$K2 = \frac{\text{Allowances for Loan Losses}}{\text{Total Loans}} * 100\%$$

K2 indicator shows the amount of total loans that can be covered by the allowances for loan losses. The value of this indicator fluctuates between 2014 and 2018 years, due to the fact that the volume of credits offered and the bank's provisions fluctuate each year depending on the number of clients and the economic and financial situation of the market. In 2018 Allowances for Loan Losses can cover for the banks CB "Mobiasbanca" JSC (0,8%), CB "ProCreditBank" JSC (4,51%), CB "Banco Santander" SA (13,79%), and CB "Novo Banco" SA (2,64%) of Total Loans (Figure 2).

$$K3 = \frac{\text{Unfavourable Loans}}{\text{Total Loans}} * 100\%$$

For K3 indicator, in 2016 – 2018 years we attest a considerable decrease in Unfavourable Loans for all the banks: CB "Mobiasbanca" JSC (2,7% - 1,2%), CB "ProCreditBank" JSC (4,26% - 1%), CB "Banco Santander" SA (4,26% - 0,64%), and CB "Novo Banco" SA (17,59% - 12,33%), which can be interpreted as a good condition for the respective banks. Although, a comparison of the level of unfavourably classified loans over the review period will indicate negative trends in the quality of the loan portfolio and this may result in the need to increase breakdowns for asset write-downs and contingent liability losses (Figure 3).

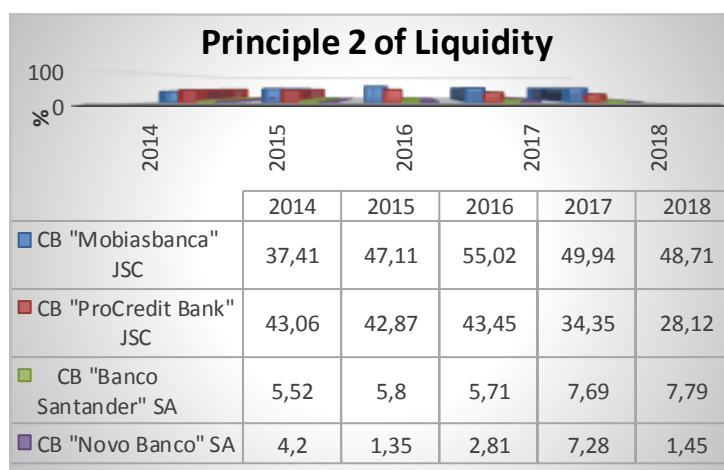


Figure 4: Principle 2 of Liquidity.

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

$$\text{Principle 2 of Liquidity} = \frac{\text{Liquid Assets}}{\text{Total Assets}} * 100\% \geq 20\%$$

For the Principle 2 of Liquidity from 2014 till 2018 is attested an increase for the CB "Mobiasbanca" JSC (37% - 49%) and CB "Banco Santander" SA (6% - 8%), and a decrease for CB "ProCreditBank" JSC (43% - 28%), CB "Novo Banco" SA (4% - 1%). Banks shall reach and maintain the Short-Term Liquidity Ratio at the level of at least 20%.

The low level of this indicator for the banks CB "Banco Santander" SA and CB "Novo Banco" SA is explained by the decrease of Liquid Assets. If these banks will continue to increase the Principle 1 of Liquidity and decrease the Principle 2 of Liquidity, the situation of the bank will become a critical one (Figure 4).

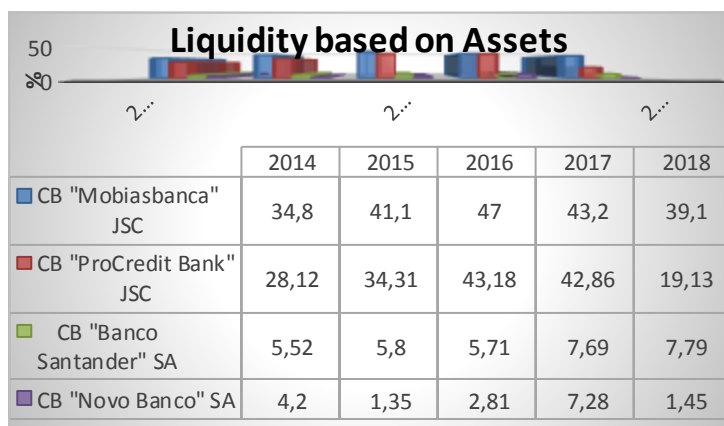


Figure 5: Liquidity based on assets.

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

$$\text{Liquidity based on Assets} = \frac{\text{Cash} + \text{Interbank Accounts} + \text{NBM Account}}{\text{Total Assets}} * 100\%$$

Within the CB "ProCreditBank" JSC (28% - 19%) and CB "Novo Banco" SA (6% - 8%), but for CB "Banco Santander" SA (4% - 1%), the share of monetary position in dynamics registers a low level, which determines a weak liquidity position. But these banks have the opportunity to raise their profitability through investing, offering more credits, etc. The situation of CB "Mobiasbanca" JSC (35% - 39%), is relatively good (Figure 5).

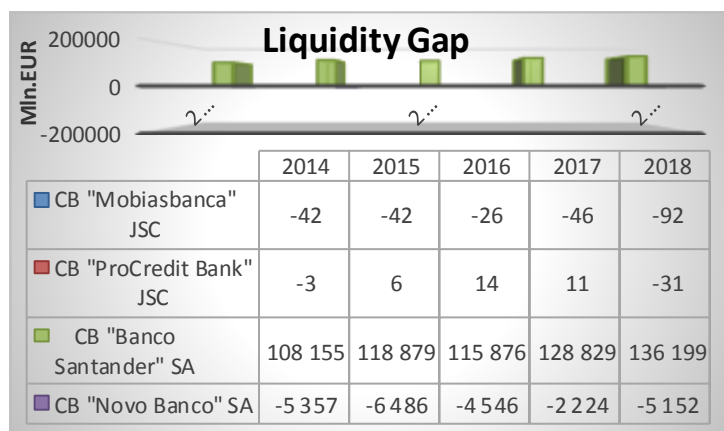


Figure 6: Liquidity gap.

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

$$\text{Liquidity Gap} = \text{STA} - \text{STL}$$

We observe that in 2014-2018 years the Liquidity Gap is negative for the CB "Mobiasbanca" JSC ((-42) - (-92)) and CB "Novo Banco" SA ((-5357) - (-5152)), which represents an unfavourable level of Liquidity Gap because of the increase in the volume of Current Deposits and decrease of Cash Quantity, a part of STL is invested into LTA. For the CB "Banco Santander" SA (108155 - 136199) the situation is a good one (Figure 6).

Recommendations:

Liquidity risk in the narrowest sense is the danger that the Bank will not be able to fully or in time fulfill its current payment obligations.

The key principles / tasks of liquidity risk management are as follows:

- Permanent assurance of an adequate level of liquidity;
- Continuous monitoring of liquidity indicators to ensure that business objectives are met;
- Analysis of future cash inflows and outflows and their impact on liquidity risk;
- Bank should periodically review its efforts to establish and maintain relationships with liquidity holders, to maintain the diversification of liabilities, and aim to ensure its capacity to sell assets;
- To attract more deposits from people;
- To grow the own funds;
- To refine some of its securities included in the bank's portfolio.

3. Insolvency risk analysis

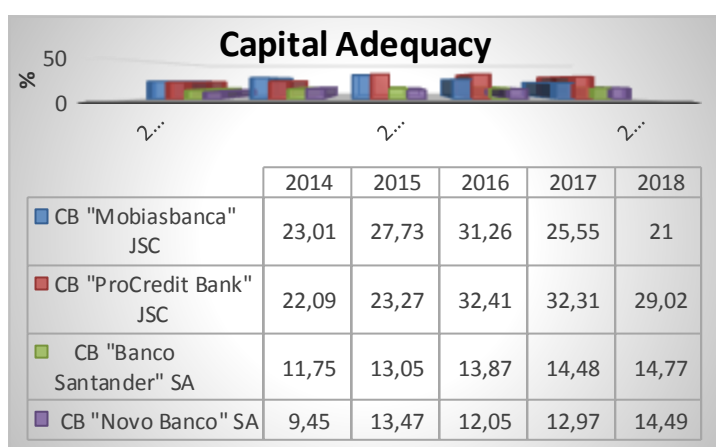


Figure 7: Capital adequacy.

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

$$\text{Capital Adequacy} = \frac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk Weighted Assets}} * 100\%$$

During 2014-2018 the level of Capital Adequacy fluctuates for all the banks. Capital Adequacy ratio reflects how much of Risk Weighted Assets are maintained by the Bank in the form of the basic capital. It should not be less than 8%. The situation of all our banks is positive (Figure 7).

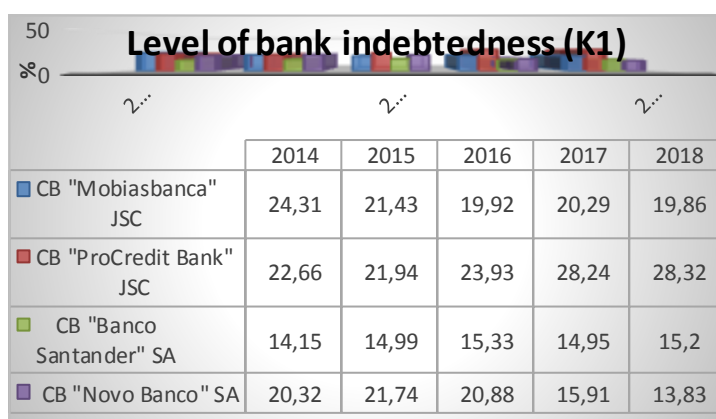


Figure 8: Level of bank indebtedness (K1).

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

$$K1 = \frac{\text{Owner's Equity}}{\text{Total Deposits}} * 100\%$$

The level of bank indebtedness is increasing for the CB "Mobiasbanca" JSC (24% - 20%), CB "Novo Banco" SA (20% - 14%) and is decreasing for CB "ProCreditBank" JSC (23% - 28%) and CB "Banco Santander" SA (14% - 15%).

This coefficient characterises the level of bank debts, the higher it is, the lower is the risk of insolvency (Figure 8).

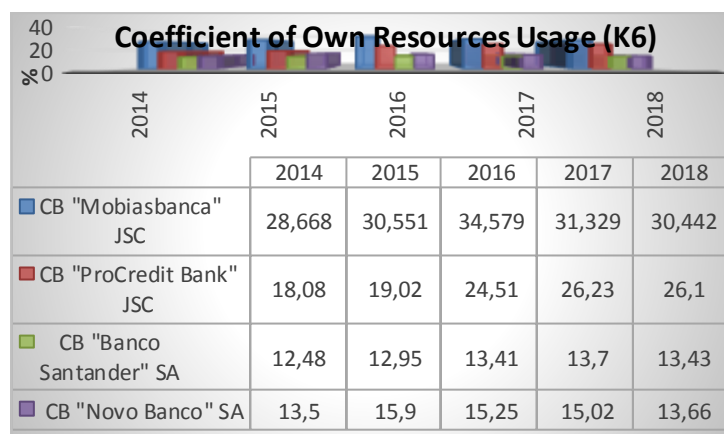


Figure 9: Coefficient of own resources usage (K6).

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

Recommendations:

Insolvency can be defined as the long-term incapacity (more than 30 days) of the bank to meet its payment commitments. The key principles / tasks of insolvency risk management are as follows:

- Permanent assurance of an adequate level of capital;
- Continuous monitoring of liquidity indicators to ensure that business objectives are met;
- A correct and efficient management of liquidity;
- Analysis of future cash inflows and outflows and their impact on liquidity risk;
- To provide credit guarantee.

4. Banks' performance analysis

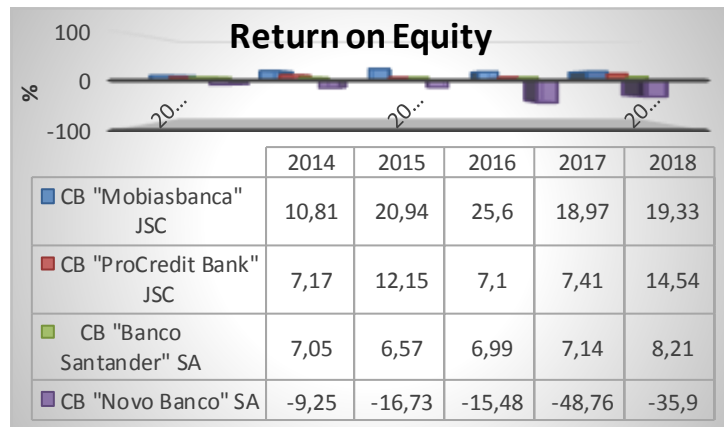


Figure 10: Return on equity.

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

$$K6 = \frac{\text{Owner's Equity}}{\text{Total Loans}} * 100\%$$

This coefficient shows what amount of Owner's Equity is used in credit offering activity, thus in 2018:

For the CB "Mobiasbanca" JSC are used 30.44% of Owner's Equity.

For the CB "ProCreditBank" JSC are used 26.1% of Owner's Equity.

For the CB "Banco Santander" SA are used 13.43% of Owner's Equity.

For the CB "Novo Banco" SA are used 13.66% of Owner's Equity (Figure 9).

$$RoE = \frac{\text{Net Profit}}{\text{Owner's Equity}} * 100\%$$

ROE reflects the owners' efficiency with which the management uses the capital invested in the bank, thus in 2018:

For the CB "Mobiasbanca" JSC which means that 1 unit of Owner's Equity generates 0,1933 m.u. of Net Profit in 2018.

For the CB "ProCreditBank" JSC which means that 1 unit of Owner's Equity generates 0,1454 m.u. of Net Profit in 2018.

For the CB "Banco Santander" SA which means that 1 unit of Owner's Equity generates 0,0821 m.u. of Net Profit in 2018.

For the CB "Novo Banco" SA which means that 1 unit of Owner's Equity generates 0,359 m.u. of Net Loss in 2018 (Figure 10).

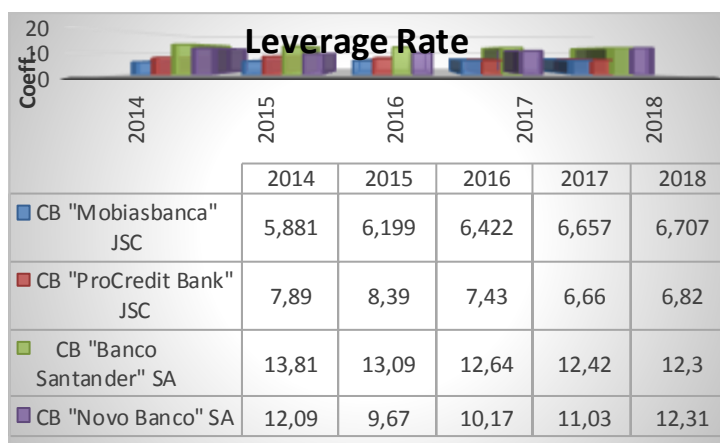


Figure 11: Leverage rate.

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

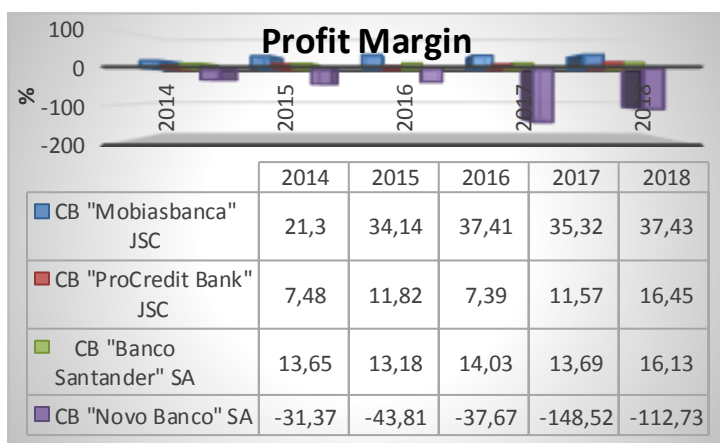


Figure 12: Profit margin.

Source: Elaborated by authors based on the information from <https://www.bnm.md/>, <https://mobiasbanca.md/>, <http://www.procreditbank.md/>, <https://www.santander.com/>, <https://www.novobanco.pt/site/>

Recommendations:

The key principles / tasks of bank performance management are as follows:

- The bank must reinvest its profit;
- Maximizing profitability;
- Implement a systematic control over interest expense by using a "pricing" model whereby the bank can precisely determine the level of interest obligations it can charge for borrowed resources of any kind;
- Minimizing risk exposure;
- Ensuring non-interest income growth by diversifying the portfolio of banking products and services other than credit;
- Compliance with applicable banking regulations.

CONCLUSION

In the respective research were analyzed 4 banks (CB "Mobiasbanca" JSC, CB "ProCreditBank" JSC, CB "Banco Santander" SA, CB "Novo Banco" SA) situation in the field of credit, liquidity and insolvency risks and performance indicators.

The study has brought following results:

- *For credit risk:* Banks have good level of loans in the total amount of assets. Largest amount of loan losses allowances is represented by CB "Novo Banco" SA. CB "Mobiasbanca" JSC in dynamics has the lowest level of unfavourable loans and of credit exposures, which are covered by the total regulatory capital.

$$\text{Leverage Rate} = \frac{\text{Total Assets}}{\text{Owner's Equity}} > 1$$

The leverage rate denotes the Owner's Equity capacity to create Assets, thus in 2018: For the CB "Mobiasbanca" JSC which means that by 1 m.u of Owner's Equity are created 6.7 m.u. of Assets. For the CB "ProCreditBank" JSC which means that by 1 m.u of Owner's Equity are created 6.82 m.u. of Assets. For the CB "Banco Santander" SA which means that by 1 m.u of Owner's Equity are created 12.3 m.u. of Assets. For the CB "Novo Banco" SA which means that by 1 m.u of Owner's Equity are created 12.31 m.u. of Assets (Figure 11).

$$\text{Profit Margin} = \frac{\text{Net Profit}}{\text{Total Revenues}} * 100\%$$

The level of profit margin is increasing for the CB "Mobiasbanca" JSC (21% - 37%), CB "ProCreditBank" JSC (7% - 16%) and CB "Banco Santander" SA (14% - 16%), which means that these banks are profitable. The profit margin of CB "Novo Banco" SA ((-31%) - (-113%)) is negative during 2014 - 2018, which means that this bank doesn't obtain profit.

The higher the margin, the more profitable is the Bank (Figure 12).

- *For liquidity risk:* The level of liquidity in the European banks is generally lower than in the Republic of Moldova.
- *For insolvency risk:* All the analysed banks use their own capital at an adequate level.
- *For performance indicators:* The CB “Mobiasbanca” JSC, CB “ProCreditBank” JSC, CB “Banco Santander” SA have a profitable activity, except the CB “Novo Banco” SA, which has losses determined by its goal of creation - to rescue assets and liabilities of Banco Espírito Santo (BES).

REFERENCES

1. <https://www.bnm.md/>
2. <https://mobiasbanca.md/>
3. <http://www.procreditbank.md/>
4. <https://www.santander.com/>
5. <https://www.novobanco.pt/site/>

THE ROLE OF TECHNOLOGICAL INNOVATIONS IN THE EVOLUTION OF FINANCIAL MARKETS / ROLUL INOVAȚIILOR TEHNOLOGICE ÎN EVOLUȚIA PIEȚELOR FINANCIARE

Scientific coordinator: Svetlana BILOOCAIA, PhD, Assoc. prof.,
AESM, Republic of Moldova, Chișinău, str. Bănulescu-Bodoni 61,

E-mail: bilooaiasvetlana@gmail.com

Authors: Nicoleta TOFAN and Maria NACLADA,

Master's in I-st year of study, Group AFB - 181 M,
AESM, Republic of Moldova, Chișinău, str. Bănulescu-Bodoni 61,

E-mail: nicole.tofan171@gmail.com,
maria.naclada@gmail.com

Abstract: *Trăsătura dominantă a sistemului financiar modern este ritmul înalt de dezvoltare și apariție a inovațiilor, atât din punct de vedere al numărului lor, cât și valoarea acestora. Astfel, este important să analizăm influența acestora asupra sistemului financiar. Scopul acestei cercetări este de a examina tendințele-cheie globale ale tehnologiilor și inovațiilor de pe piețele financiare, pentru a găsi oportunități și strategii care ar putea fi implementate pe piața financiară a Republicii Moldova.*

Key words: *inovații tehnologice, piață financiară, dezvoltare, tendințe, inteligență artificială*

JEL Classification: F21, G1, O33

INTRODUCTION. During last decade, financial institutions continue to face significant challenges in the current operating environment.

These challenges include:

- increasing regulatory requirements;
- ongoing pressure on returns;
- the cost of maintaining complex and legacy technology platforms;
- the emergence of new technologies and offerings;
- evolving client expectations;
- intensifying competition for talent.

The respective challenges are becoming increasingly pronounced as the wider industry becomes more interconnected and digital. They must invest in technological innovations to mitigate these challenges and take advantage of opportunities in this developing environment.

PROPOSED RESEARCH METHODS. The investigation presented in this article was implemented based on such research methods as: logical analysis of theoretical and practical materials, documentary method, quantitative and qualitative data methods, graphical method, methods of synthesis and comparative analysis.

RESEARCH OF THEORETICAL ASPECTS

Financial innovations can be applied in two meanings:

- o *Narrow approach*, the financial innovations are defined as any new developments in financial instruments (entirely new instruments, combination of traditional instruments, modification of traditional instruments, new application of existing instruments, etc.);
- o *Broad approach*, the financial innovations include any new developments in any elements of the financial system (markets, institutions, instruments and regulations).

Financial innovations roles:

- *Risk transfer* - risk reduction or protection against all types of market risk: price risk, exchange risk, interest rate risk or credit risk;
- *Risk pricing* - the risks that are embodied in a financial instrument can be stripped out, priced, held and traded separately from other risks of this instrument;
- *Liquidity enhancement* - increasing liquidity of the assets or instruments;
- *Credit-generation enhancement* - widening the access to the credit markets or increasing the credit capacity both for the borrowers and for the creditors;

- *Equity generation* - increasing the assess to the equity financing together with the higher flexibility of the capital structure;
- *Insurance* - widening the possibilities to insure risk in return for the payment of a premium;
- *Asset and liability management* - widen the scope for managing assets and liabilities;
- *Funding of financial institutions* - widening the sources of financial institutions funding.

Financial innovations functions:

- ✓ *Payment function* (increasing the liquidity of the financial system);
- ✓ *Investment function* (increasing the variety of investment opportunities better adjusted to the risk-return profile of the investor);
- ✓ *Financing function* (increasing the availability to the sources of funds – either equity or debt capital, both for longer and shorter periods);
- ✓ *Pricing function* (improving the process of assets valuation and risk pricing by the elaborated statistical methods);
- ✓ *Risk management function* (increasing the possibilities of transferring risk between system participants).

RESEARCH OF EMPIRICAL ASPECTS. Based on the implemented analysis, following *technological innovations* were identified on the modern financial market:

1. Hybrid Cloud

Hybrid cloud is a cloud computing environment that uses a mix of on-premises, private cloud and third-party, public cloud services with orchestration between the two platforms (Figure 1)

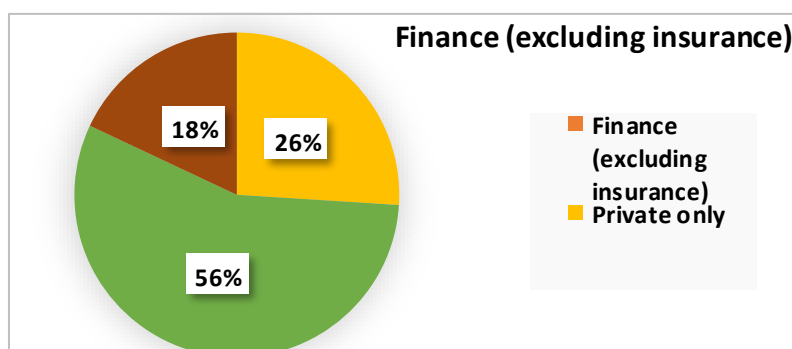


Figure 1: Types of cloud architecture currently used by the organisations worldwide.

Source: Elaborated by authors based on the information from <https://www.cloudworldwideservices.com/en/cloud-adoption-statistics-cloud-future/>

By allowing workloads to move between private and public clouds as computing needs and costs change, hybrid cloud gives businesses greater flexibility and more data deployment options (Figure 2).

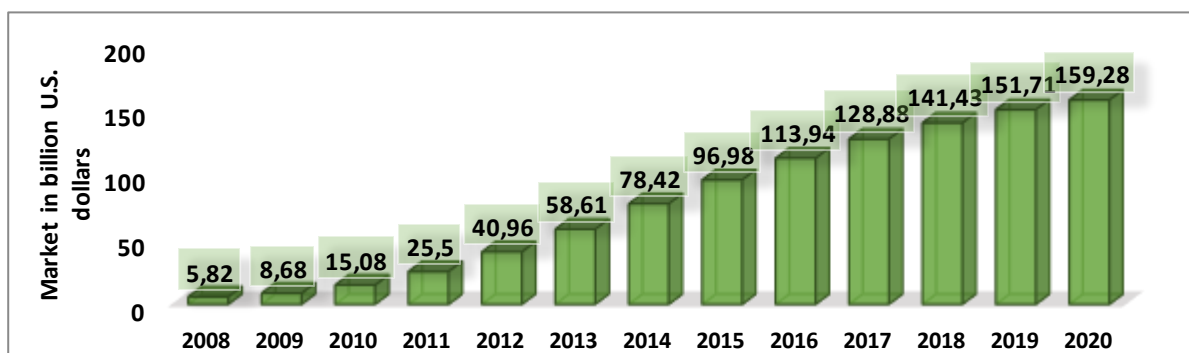


Figure 2: Public cloud computing market in 2008-2020 years.

Source: Elaborated by authors based on the information from <https://www.cloudworldwideservices.com/en/cloud-adoption-statistics-cloud-future/>

2. API Platforms .An *application programming interface*, or *API*, is a "go-between" that enables a software program to interact with other software. In the context of trading, an API often refers to the interface that enables your software to connect with a broker to obtain real-time pricing data or place trades.

Application programming interfaces, or APIs, have become increasingly popular with the rise of automated trading systems. In the past, retail traders were forced to screen for opportunities in one application and separately place trades with their broker. Many retail brokers now provide APIs that enable traders to directly connect their screening software with the brokerage account to share real-time prices and place orders.

3. Robotic Process Automation (RPA)

Across financial services, *robotic process automation (RPA)* has helped financial institutions accelerate growth by executing pre-programmed rules across a range of structured and unstructured data. This intelligent automation gives processes the power to learn from prior decisions and data patterns to make decisions by themselves – reducing the cost of administrative and regulatory processes by at least 50% while improving quality and speed.

Robotic process automation in financial markets also simplifies compliance by keeping detailed logs of automated processes, automatically generating the reports an auditor needs to see, and eliminating human error. Since it's intuitive and easy to re-configure software robots at any time, tweaking processes to fit new or updated regulations is never difficult.

Statistics prove that RPA actually is an accelerating trend:

- 1) RPA as an industry is growing exponentially – forrester predicts it will grow from \$250 million in 2016 to \$2.9 billion in 2021;
- 2) According to Deloitte's third annual RPA survey, a wealth of information on RPA, 53% of survey respondents are beginning their "RPA journey";
- 3) Among respondents who are implementing RPA now, 78% plan to invest even more in the next 3 years;
- 4) Deloitte believes that if this trend continues, RPA will achieve "near universal adoption" in the next 5 years;
- 5) Among those surveyed, RPA meets and exceeds expectations in terms of compliance, quality, accuracy, productivity, and cost reduction.

4. Instant Payments

Technology has changed consumer and business expectations in payments. *Instant payment options* are available in many markets despite the lack of immediate payment infrastructures. In some countries, financial markets offering alternatives to immediate payments actively market apps to their own customers, and in some countries financial markets even partner together to offer an immediate P2P payment experience to a wider customer base.

The availability of an instant payments platform offers financial institutions an enticing opportunity to achieve the transaction speed consumers expect of their experience and increase the customer satisfaction. With instant payments, more transactions will be made digitally instead of in cash, which means that payments will become less expensive and more user friendly. Finally, by expanding and combining instant capabilities with solutions in e- and m-commerce financial institutions could develop an innovative portfolio of new services (Figure 3).

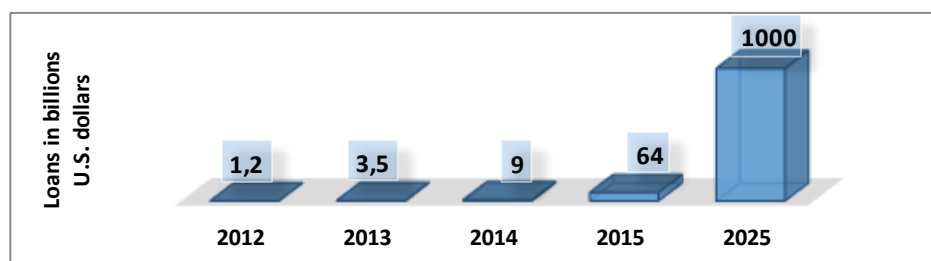


Figure 3: Value of global peer to peer lending from 2012 to 2025 (in billion U.S. dollars).

Source: Elaborated by authors based on the information from <https://www.statista.com/statistics/325902/global-p2p-lending/>

5. Artificial Intelligence (AI)

Heightened interest in *artificial intelligence* has occurred because of both capabilities and business needs. The explosive growth of structured and unstructured data, availability of new technologies such as cloud computing and machine learning algorithms, rising pressures brought by

new competition, increased regulation and heightened consumer expectations have created a ‘perfect storm’ for the expanded use of artificial intelligence in financial services.

The benefits of AI in financial institutions are widespread, reaching back office operations, compliance, customer experience, product delivery, risk management and marketing to name a few. Suddenly, financial organizations can work with large histories of data for every decision made.

Two of the biggest challenges that remain in financial institutions is the absence of people experienced in data collection, analysis and application and the existence of data silos. The good news is that many data firms now have the capability to do a ‘workaround’, collecting data from across the organization (Figure 4).

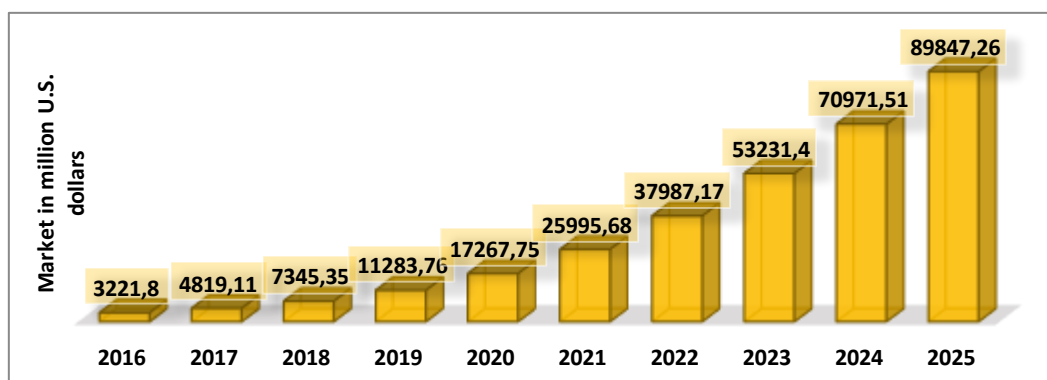


Figure 4: Revenues from the artificial intelligence (AI) market worldwide from 2016 to 2025 (in million U.S. dollars).

Source: Elaborated by authors based on the information from https://www.researchgate.net/figure/Revenues-from-the-artificial-intelligence-AI-market-worldwide-from-2016-to-2025-in_fig1_330937827

6. Blockchain

Blockchain allows for a group of independent entities to share common but sensitive data sources that are automatically and securely reconciled between participants. In a complex system such as capital markets, where transactions involve buyer, seller, broker, clearance, settlement and often additional parties such as liquidity providers and regulators, the potential efficiencies the technology presents are clear.

Some financial institutions have already started testing the use of blockchain for inter-bank transfers, with others testing in the space of payments, fraud reduction, know your customer, and loan processing. Many see tremendous benefits to streamlining and automating processes through smart contracts. In the end, regulators will need to create clear guidelines for banks using blockchain technology.

The key statistics show the growth of the Blockchain’ role on the financial market:

- 90% of European and North American banks were exploring blockchain in 2018;
- the global blockchain technology market is estimated to accumulate 20 billion dollars in revenue by 2024;
- blockchain can reduce 30% of banks’ infrastructure costs;
- financial companies can save up to \$12 billion a year from using blockchain;
- 55% of healthcare applications will have adopted blockchain for commercial deployment by 2025;
- the financial sector has spent a total of \$552M on blockchain in 2018.

7. Augmented and Virtual Reality

Augmented reality and rich data are used to provide historical financial data, price tendencies, current listings, etc. This insight helps individuals make smart sale and purchase decisions.

According to analysts, *augmented reality and virtual reality* could be utilized to give financial institutions customers autonomy in terms of at-home services.

Consumers will step into it without noticing the transition if it uses the smartphone as a platform. Meanwhile, business finance tech users will leverage low-cost interfaces and cloud computing power to grasp and comprehend the data provided by big data and AI (Figure 5).

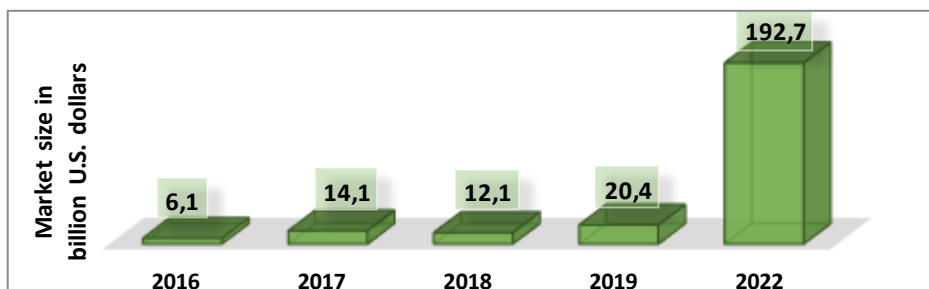


Figure 5: Forecast augmented (AR) and virtual reality (VR) market size worldwide from 2016 to 2022 (in billion U.S. dollars).

Source: Elaborated by authors based on the information from <https://www.newgenapps.com/blog/6-vr-and-ar-statistics-shaping-the-future-of-augmented-reality-with-data>

8. Quantum Computing

According to FedTech, *quantum computing* harnesses the laws of quantum mechanics to carry out complex data operations. While traditional computers use bits (represented as either binary 1s or 0s), quantum computing harnesses quantum bits, known as qubits. These can be read as 1s, 0s, or both, providing exponential computing power over traditional computers by creating shortcuts in the computing process.

Quantum computing represents a major leap forward in computing power, surpassing the potential of the cloud or blockchain. However, it will likely be years before it is widely used in business applications, due to many stability and security concerns (Figure 6).

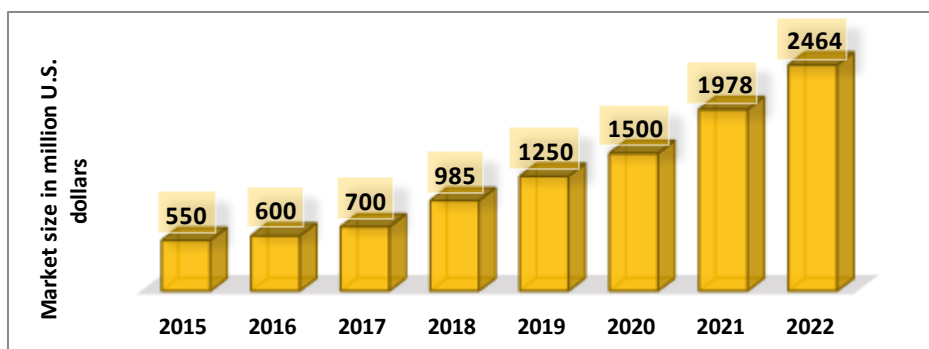


Figure 6: Quantum Computing Market Worth.

Source: Elaborated by authors based on the information from <https://seekingalpha.com/article/4208355-much-quantum-computing-market-worth>

9. Smart Machines

Smart machines are deployed to enhance networked resources and implement distributed intelligence in financial markets. The integration of devices provide more accessibility. Smart machines can be easily connected to a broader network of connected devices, enabling users to share data on numerous devices. This allows users to connect/access their devices from anywhere and anytime.

Smart machines are programmed to make intelligent decisions, in a time efficient manner. They are built to learn from their interactions and their precision increases over time. Hence, new developments in operational intelligence are encouraging companies to adopt systems that are smarter and efficient; thus fueling demand for smart machines across the globe.

10. Crowdfunding

Crowdfunding is the use of small amounts of capital from a large number of individuals to finance a new business venture. Crowdfunding makes use of the easy accessibility of vast networks of people through social media and crowdfunding websites to bring investors and entrepreneurs together, and has the potential to increase entrepreneurship by expanding the pool of investors from whom funds can be raised beyond the traditional circle of owners, relatives and venture capitalists (Figure 7).

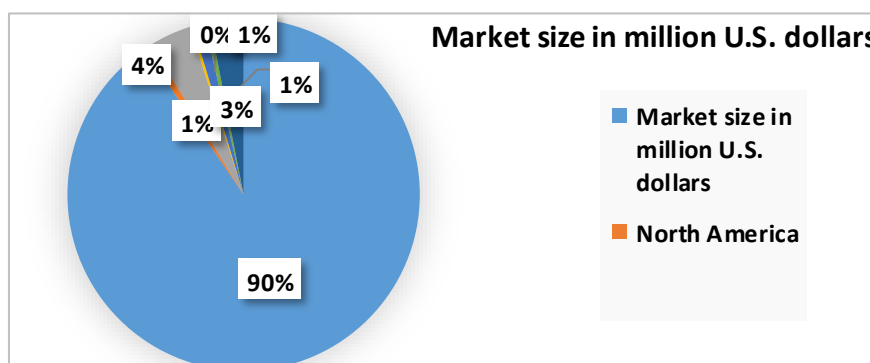


Figure 7: Regional Crowdfunding Revenue for 2017 year.

Source: Elaborated by authors based on the information from <https://blog.fundly.com/crowdfunding-statistics/>

CONCLUSION. The financial market of the Republic of Moldova is underdeveloped, that's why we should draw more attention to its improvement and enhancement. This condition could be obtained through the implementation of international technological innovations, which will help in attracting more international investments in our country. Currently on the financial market of Republic of Moldova are present such technologies as: Internet Banking, ATM, Contactless Payments, Instant Payments, Crowdfunding.

The sustainable financial innovations are required, as they enhance the efficiency of the financial system and by this they can improve the economic growth and increase the social wealth. Thus, the efficient usage of particular financial innovation requires an extensive knowledge about its way of functioning and a thorough analysis of its consequences. We think that it would be appropriate to implement in Republic of Moldova financial markets such techniques as: Robotic Process Automation, Artificial Intelligence, Blockchain, Quantum Computing, Smart Machines.

Financial technologies challenge the traditional business models of financial institutions. However this may play out in a number of different ways, which will have different implications for financial stability:

- allow the financial institutions to improve their service level or efficiency;
- improve the attractiveness of the existing service, e.g. payments 'front-ends' that utilise existing networks and maintain (or increase) existing transaction flows;
- facilitate stronger competition between financial institutions by increasing transparency or making the switching of providers easier.

REFERENCES

- 1) <https://www.afme.eu/globalassets/downloads/publications/afme-technology-and-innovation-in-global-capital-markets.pdf>
- 2) <https://www.econstor.eu/obitstream/10419/66758/1/68882367X.pdf>
- 3) http://www.fsb.org/wp-content/uploads/P140219.pdf?fbclid=IwAR2iAxdaqM1nJLLF9LnqnN78UCoo41P2lHjAnD2AcFzczWbSkou_kjgK8ZQ
- 4) <https://thefinancialbrand.com/77228/technology-trends-disrupting-financial-services-banking-future/>
- 5) <https://www.investopedia.com/terms/a/application-programming-interface.asp>
- 6) <https://www.theglobaltreasurer.com/2018/12/13/blockchain-in-capital-markets-benefits-and-challenges-2/>
- 7) <https://www.quora.com/What-is-a-smart-machine>
- 8) <https://www.cloudworldwideservices.com/en/cloud-adoption-statistics-cloud-future/>
- 9) <https://blog.walkme.com/9-robotic-process-automation-statistics/>

- 10) <https://www.statista.com/statistics/325902/global-p2p-lending/>
- 11) https://www.researchgate.net/figure/Revenues-from-the-artificial-intelligence-AI-market-worldwide-from-2016-to-2025-in_fig1_330937827
- 12) <https://techjury.net/stats-about/blockchain/>
- 13) <https://www.newgenapps.com/blog/6-vr-and-ar-statistics-shaping-the-future-of-augmented-reality-with-data>
- 14) <https://seekingalpha.com/article/4208355-much-quantum-computing-market-worth>

HEADHUNTING / CĂUTAREA EXECUTIVĂ

Conducător științific: GUȘUVATI ALIONA,

ASEM, Republica Moldova, or. Chișinău, str. Bănulescu-Bodoni 61

e-mail: banari.83@mail.ru

Autor: BULAT NICOLETA

ASEM, Republica Moldova, or. Chișinău, str. Bănulescu-Bodoni 61

e-mail: bulat.nicoleta@gmail.com

Abstract. *Headhunting (also known as Executive Search) is the process of recruiting individuals to fill senior positions in organisations. This style of recruiting may be undertaken by an organisation's board of directors, or HR executives, or by external executive recruitment representatives known as headhunters. In this article, we will find out what is the difference between recruiters and headhunters and what are the types of retained headhunting firms. We will see which is better Contingency or Retained Recruitment. For those who want to be hunted by professionals, there are some advises how to be noticed and appreciated by headhunters. The research is actual because of nowadays' circumstances. Everone wants a well-paid job, one that worths the time spend daily. However, the competitiveness sometimes is too rude, that is why is important to now what are the right steps to achieve the job post we want. In the same time, it is good to find out the tools that may help us to show the right image of us, to get an usefull, qualitative feedback from the people already have worked with us. Headhunters have a good commission for their job, and the arguments why this job will never disappear are strong enough to be trusted.*

Key words: *Headhunting, headhunters, job position, promotion, search, negotiating, feedback, social networking.*

Jel CLASSIFICATION: *A22 Economic Education and Teaching of Economics: Undergraduate*

INTRODUCTION

Headhunter is a free-lance type employed by large or small companies to look for the best employees. Most of the time, the headhunter has to "steal" the good employees of some companies and bring them to the companies that contracted them for this.

This is because headhunters are contracted by companies to fill vacancies and for which they do not want to advertise and therefore in many cases not many have access to these jobs if future employees do not seek a headhunter alone. [15]

The process always starts with the employer. The Human Resources Manager writes a description of the type of candidate you are looking for. This usually includes both hard and soft skills, as well as a general description, specifying the type of personality that will fit into their organization.

The headhunter is usually a Human Resources graduate, possibly with a relevant experience in the field, but it is not necessarily necessary. He is employed in exchange for a commission agreed with the contracting firm and can work within a Human Resources agency or work on his own, when he will work as a freelancer.[5]

MATERIALS AND METHODS.

Which is the difference between a recruiter and a headhunters? If hunters approach you, you are in the enviable position to be pre-selected for a particular role. Recruiters work a little differently. Employers recruit posts and are waiting to be contacted by potential candidates or addressing a wide network of potential candidates. Headhunters approach a select number of selected candidates and only those who fit short. Recruiters usually serve both candidates and clients correctly, while a hunting head is only interested in fulfilling the client's mandate. Recruiters actively try to match their existing group of candidates with vacant roles, sometimes regardless of sector or specific talent requirements. Headhunters would rather concentrate first on the role and then look for the right candidate for their client.[7]

In the passenger industry, the specific knowledge of a customer's target market is more important than traditional recruitment. As such, evening hunters are more likely to specialize in a sector or sub-sector of the industry. Both recruiters and heads are able to match job candidates. Employers must choose the best recruitment method based on the desired results.



Figure 7. Headhunting process explained in a drawing.

If an employer has a high-vacancy or the ideal candidate is currently hired by someone else and cannot actively seek a change, hiring a hunting head might be the best option.

Contingency or retained recruitment: Which is better? Typically, a gambling manager is held by a company to fill certain roles. Nevertheless, they can also work independently based on emergencies.

An employer will often choose the type of recruiter that is best suited to the caliber of the candidate they are looking for. Emergency firms may initially appear to be cheaper, but may not have access to high-quality candidates. In the case of recruitment in emergencies, the recruit will not be charged unless he manages to fill a vacancy announced. This would not seem too much for the recruiter, but if you think an emergency recruitment fee may be something between 15-30% of a candidate's salary, it can certainly be a profitable business.

Contingent recruitment, also known as non-exclusive recruitment, can also mean that the hunting head competes with other agencies or even the client himself if they have announced their role. People recruiting work contracts have a reputation for being unspeakable in selecting candidates for examination. That is because the recruiter is under pressure to send candidates faster than their competitors to earn their fee are. [7]

In case of retained recruitment, it is more common for head-to-head professionals to work on a retention basis. Indeed, many emergency firms have begun to receive pensions. Rider-owned companies are paid in advance to start the recruitment process, another part of the half-fee through procedures and the balance when the candidate begins to work in their new role. Headhunters working on retention are paid for their work, not just for the end result they are doing. And because they have time to do things properly, they can access passive networks as well as searching through their active candidate database.

Passive candidates are those who are not currently looking for a job; headhunters often address them directly through social networks. Although they are not actively seeking, they may be able to consider the new role if the hunting head can convince him. This can be hard work, but it can also produce unexpected results. [7]

Types of catching companies. Entrepreneurs can be large, global organizations, but there are also many regional boutique firms. Smaller firms can sometimes act together as a network, thus gaining global coverage and managing to compete with the largest. Some companies specialize in certain industries, such as retail, finance, or IT. Others select and provide candidates only for certain roles and others are a combination of all.

Global Companies - These cover a lot of land geographically. They are also versatile in catering for many sectors, from services to media as well as other industries. As they move into such large circles, they are likely to have access to premium candidates, which means they can find excellent candidates even in sectors. Global contractor companies will have numerous offices around the world, and consultants will usually be experts in some sectors.

Boutique firms - They tend to be more industry-specific and normally seek candidates for leadership positions. Typically, these are roles in corporate banking, corporate finance, and niche markets. These companies tend to have one or more offices in major financial centers around the world.

The headhunter determines how to look for an exact match. I have underlined the phrase "exact match," because it is probably the most important thing to understand about headhunters. They have been hired to make the hiring process more efficient, not to complicate it. Therefore, they are only interested in candidates who fit precisely with the criteria they have been given.



Figure 8 Process of searching the "exact match".

If you do not fit these criteria, you will not receive an appeal, no matter how wonderful the interview was. It is not personal - it is just because the Headhunter needs to find exactly what he or she has been asked to find in order to make money and be contacted by other businesses.

Therefore, you probably will not be contacted back from most of the meetings with a headhunter. You do not have to take this personally. There is no reflection on the candidate's abilities. Simply, it means you do not match the posts for which he was hired to find employees.

Though they do not have tens or hundreds of millions of dollars worth of business, headhunters are known to everyone in the business environment, helping them and persuading top executives to change their job for a better salary, for try to face new challenges or because they need to change things in an organization. [7]

"Everyone in the market has cut rates, but no one wants to admit it. After all, it's natural to leave it at a premium if, for example, a client gives you three terms in one year," Mihaela Damian, Country Manager of Spengler Fox, executive search firm, one of the most experienced headhunters on the local market. In the last year, she had six recruitment projects at the level of general manager, and the highest fee received was 38,000 euros last year. No player has been able to exceed € 1 million since the beginning of the crisis, and because of the lack of customers, most headhunters have begun to make their other services, evaluation, coaching, consulting or outplacement more visible."

On the other hand, the pressure on short-term results has prompted multinationals seeking executive search to ask candidates willing to commit to doing the "miracles" requested by headquarters. This is how the headhunters almost have no way to recruit. [13]

"There is a very small segment of senior managers who are very good in all respects and ready to run divisions, functions or business as complex as they are today." Of this very low segment of candidates, more than half are motivated by companies to which they are also stimulated by personalized retention policies to remain. Of the rest, a considerable part does not fit culturally and therefore the short list becomes the very short or nonexistent list if we only summarize Romanians or Romanians from abroad." says Radu Manolescu, managing partner at the executive search firm KM Trust & Partners. Manolescu's largest fee, which decided to split the executive search business by middle management recruitment into two separate firms (KM Trust and Key2Success), was nearly € 80,000 to recruit a C- a multinational in 2007, and in 2009 recruited a general manager in an average firm for 67,000 euros. In his opinion, 2012 is the time when companies should bring expatriates out with the experience and attitude required, move general managers from smaller companies or executives from other positions in human resources management. [3]

Headhunters say that companies have come to call executive search only when they have no choice but to solve the problem themselves and have decided that they cannot find a solution but by external consultant.

In the headhunter's mind: concretely, how do he recruit by making recommendations.

"When I ask for a recommendation, I already have a base of people contacts that I trust will recommend good people to me. I do not ask for recommendations to anyone and I do not rely 100% on the recommendations I receive, but each time I evaluate the recommendations -were made. There are more people recommending and filtering/select the least. There are people who have certain interests when recommending and then our role as consultants HR is we ensure that the recommendations we receive are of high quality, and especially that they fit the requirements of the job, respectively the customer. In the over eight years of consulting, I created around me a network of people whom, like a headhunter, you know who everyone is in a field or another. Many times, my job is much simplified by them. It's like calling a friend to "Who wants to be a millionaire" ("You want to be a million Do not call any friend, but one who has the knowledge and can help you, do not get tangled, " says Loreda Dragomir - Theodorescu.

How often is recruited by recommendation.

"In each of our projects, we can call for networking or recommendations, as for each of them we can take a look at our contact base, or try to hunt from competition." There is no specific level, specific positions (n. for which we recruit by recommendation), restrictions or rules, unless they determine them from the beginning." says headhunter Loreda Dragomir - Theodorescu.[7]

RESULTS AND DISCUSSIONS.

There are some practical recommendations from human resources specialists that increase the visitor's visibility on headhunting radar both online and off-line:

1. *Do everything you can to get positive results at work - the information is moving quickly, whether positive or negative. So be honest for your success.*



Figure 9 Sketched steps to success.

Being recognized in the field / company in which you work for the results achieved brings with it an image in this sense, ie the structuring of a personal branding. Headhunters will likely ask for recommendations from trusted sources in the field of activity, so building a credible and solid reputation in the field you're actively becomes an extremely important aspect. [5]

Nothing will affect the chances of being "seen" more than being a mediocre employee. Your positioning depends on your achievements, this fact demonstrating your effectiveness.

2. Publicity / social networking

Given that HR specialists frequently use the Internet for documenting / recruiting, the presence of the candidate in this environment must be felt. Thus, work on LinkedIn professional sites, specialized forums and blogs or on less formal networks such as Twitter, Facebook, Pinterest has become necessary. These sites can be recruiting channels and, in conclusion, you need to seriously deal with them.

If we consider the use of the Internet and LinkedIn, a headhunting mission will start with identifying potential market candidates, those with specific skills and professional experience that corresponds to the profile required by the employer. You can think of this as being a "wish list" made up of these keywords. This could include your qualifications, industries where you operated, exposure to different technologies, clients you worked with, etc. [6]



Figure 10. Examples of social networks to self-promote

Thereby, building a detailed and up-to-date profile describing in a clear manner the responsibilities of the occupied positions, the achievements and the developed skills / abilities is extremely important in the context in which headhunters use keyword search. The name of the job / title should be mentioned in a form that conforms to the standard version of your industry.

References (received from influential and respectable people) are also important in building the profile. The more your positioning in keyword searches is the more chance you can find. Regarding online activity, it is recommended that you enroll in specialized groups (niche for your industry or your skills), initiate and participate in discussions by posting pertinent and professional comments at least once a week. Recruiters join groups and carefully follow the discussions and topics posted so that they can see which of the participants have both a mix of knowledge and communication skills, which are the online behaviors, who is the expert in a certain field and last but not least when there are changes related to the interest for a professional movement. All the data presented above can be summed up as a way to initiate and facilitate a first contact with the headhunter.

3. *Participation in events, conferences, workshops.* One of the most effective ways to be recognized and identified as a talent is to actively participate in the industry-specific dialogues you are part of. Thus, participating as a speaker at specific conferences or publishing relevant articles will significantly increase your visibility.

4. *Build a network of knowledge (networking)*. Quality networking requires time and engagement, and must be built as a long term plan and strategy, that helps determine and organize the goals and the way they can be reached. Let us not forget, however, that after establishing an important connection, we must also have a follow-up that is actually maintaining the relationship.

5. *Contact a headhunter*. Perform a search in the marketplace even through the internet to see who the headhunters are doing or have projects in the field of interest to you and contact them to signal that you are interested in making a change. All this does not guarantee 100% that you will be contacted by a headhunter, but can be at least one catalyst for your career. Use your strategies, be genuine and honest, and the results will not be long awaited. [6]

Headhunters say LinkedIn cannot replace their work.

Recently, Business Insider talked to a headhunter, who claimed no less, that LinkedIn had "killed" the recruitment industry. However, Dan Martineau, president of Martineau Recruiting Technology, a company specializing in the recruitment of IT executives for salaries ranging from \$ 85 to \$ 200,000 a year, defends the headhunting industry and says it is more profitable than ever

He said that recruitment is not only launching a job site and looking for people who appear to have recommended the groove is necessary. "If we could find these candidates on the Internet, then what am I doing?" Says Martinez. " That means I'm providing you with something unprecedented."

The senior recruiter says potential candidates for big jobs do not necessarily have online presence and do not want to leave their current jobs. That is why you cannot find them on LinkedIn or another job site. "In the majority - 85% - I recruit people who do not want to give up their current job," says Martineau. We ask for the support, we talk about the job offered and we ask them if I know someone else, just as experienced, to occupy that function. We do not work on the principle: Hey, look for a job on the net!" [11]

Martineau mentions that job sites, such as LinkedIn and social networks, are just technological and social tools whereby recruiters can make their work more efficient, but they are by no means the core of the recruitment process! In fact, it is about exploiting the resources you have. "We are sellers," says Martineau. "At the end of the day, a vendor's job is to understand the customer's needs and align them with the product. I would not have customers if I did not direct them to the right job." "We approach people, open their eyes and ears for new opportunities, a brighter future, and listen carefully to their vision of career." If we do, we choose them for the job, if not, they remain in the database, " explains Martineau.

Martineau's database gets 20,000 contacts. "These people can only be approached through a successful recruitment. Like LinkedIn, they send emails, and the only ones who are worried are those who are looking for work and are interested in certain jobs."

However, those who are interested are not always "the best candidates". Martineau states that every year, he places one person in the workplace because "the best candidate is almost always employed".

"A regular headhunter earns \$ 87,000, while a professional man buys \$200,000 - \$700,000 a year," Martineau said. "The reason companies are giving us a lot of money is related to the resources we have and LinkedIn does not. If you think LinkedIn and Facebook can take our place, you're wrong!" [11]

CONCLUSIONS.

Headhunting today is a broad term. Many companies claim to offer headhunting but in many cases it is synonymous with database searches, advertising or recruitment selection. Headhunters play an important role in the recruitment of professionals into new jobs.

Large companies with many hiring processes per year have built recruitment departments with direct competition from Head Hunting companies. Latter, they are basing on their own databases created after search on LinkedIn or Facebook social networks, hoping to identify the perfect candidate.

Here is the ethics in bidding; there are companies working both with the company looking for the man and with the company that the candidate works for. Actually, they make an offer to take your man, and then they help you, too, find a replacement. We may say that it is fair at first glance, they do their job as Head Hunting, but on the other hand, this practice is not ethical to the client from whom you hire the employee. Yes, you can bid for a candidate from your client if he does not work for that company, but not to call attention to a new job on the "I just informed him" principle.

Concluding, headhunting is one of the most effective methods for sourcing & getting candidates for top positions, who might not necessarily look for a job change. So If you have strong skills and achievements in your industry, be aware that you could be approached. Update your LinkedIn account and make it as tempting as possible. It's also a good idea to prepare some answers to your career questions and have a highly-trained CV. If you hit a headache, it means you trust that you are fit for this role. Make sure you can live up to expectations, but do not forget that you are also in a good position to negotiate a good deal.

REFERENCES

1. <https://www.youtube.com/watch?v=by05eU8qsVg>
2. <https://www.youtube.com/watch?v=8AoF5QecaXs>
3. <https://www.zf.ro/profesii/topul-celor-mai-mari-firme-de-executive-search-cati-bani-castiga-headhunterii-din-plasarea-de-executivi-de-top-7011108>
4. <https://www.zf.ro/profesii/headhunterii-din-companii-o-recomandare-interna-poate-aduce-un-bonus-de-pana-la-1-300-de-euro-16247786>
5. <https://revistacariere.ro/inovatie/companii/5-reguli-pe-care-trebuie-sa-le-urmezi-pentru-a-fi-remarcat-de-headhunteri/>
6. <https://joblist.md/ro/news/cariera/5-reguli-pe-care-trebuie-sa-le-urmezi-pentru-a-fi-remarcat-de-headhunteri>
7. http://www.economica.net/headhunterii--recrutarea-prin-relatii-e-sigura--morala--corecta--si-tot-mai-des-folosita-de-companii_54442.html
8. <https://www.mediafax.ro/economic/afla-cine-sunt-head-hunterii-care-ar-putea-intra-in-cursa-pentru-proiectul-ceo-la-stat-in-mai-putin-de-10-zile-8927929>
9. <http://tbs.ro/?p=9922>
10. <http://riscograma.ro/1212/10-lucruri-pe-care-nu-ti-le-spune-nimeni-la-angajare/>
11. <https://www.manager.ro/articole/resurse-umane-11/analiza-headhunterii-spun-ca-linkedin-nu-poate-inlocui-munca-lor-19192.html>
12. <http://incont.stirileprotv.ro/job-uri/s-au-stabilit-primele-15-companii-de-stat-cu-manageri-privati-vor-reusi-headhunterii-sa-plaseze-cei-mai.html>
13. <https://www.businessmagazin.ro/analize/resurse-umane/cine-le-mai-da-de-lucru-head-hunterilor-9723625>
14. <https://www.wall-street.ro/tag/headhunteri.html>
15. <https://suceavalive.ro/jobul-saptamanii-ce-e-un-headhunter/>
16. <https://www.money.ro/companiile-se-apara-de-headhunteri-prin-clauze-speciale/>
17. <https://a1.ro/news/economic/headhunterul-radu-furnica-sa-ajuns-la-viata-bazata-pe-impostura-tinerii-trebuie-sa-devina-competenti-id307303.html>
18. https://adevarul.ro/sanatate/medicina/de-nevoie--strategie--rezerva-1_50ad34567c42d5a66390b150/index.html
19. http://www.puterea.ro/economie/comisioane_de_un_milion_de_euro_pentru_patru_headhunteri-32403.html
20. <https://www.ziucargo.ro/articole/focus/cum-arata-liderul-de-astazi>
21. <http://www.elady.ro/articole/Cariera/Cum-sa-fii-vanata-de-HeadHunteri.html>
22. <https://www.youtube.com/watch?v=ZVIUwwgOfKw>
23. <https://www.facebook.com/bucsan.rodika>
24. <http://ea.md/te-pregatesti-de-un-interviu-iti-dezvaluim-niste-secrete-care-te-vor-ajuta-sa-l-treci-cu-succes/>
25. <https://hh.md/ro>
26. <http://www.mantis.md/ro/>
27. <https://www.wikijob.co.uk/content/industry/sales-recruitment-consulting/what-headhunting>

În redacția autorilor
Machetare: Condrațchi Liliana

Centrul Editorial-Poligrafic al ASEM
Chișinău-2005, str. Mitropolit Gavriil Bănulescu-Bodoni, 59
tel.: 402-910