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ANALYSIS OF DEPOSITS IN THE BANKING SYSTEM OF THE REPUBLIC OF MOLDOVA

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In this paper is made the analysis of bank deposits from the last two years of the banking system of the Republic of Moldova. There are identified banks that hold the largest market share of bank deposits. Also, the types of deposits of banks that hold substantial proportion in deposits of the banking system of natural persons are analyzed, the information in respect of deposits guaranteed by the deposit guarantee Fund of natural persons from the banking system of the Republic of Moldova is presented. The goal of research is represented by the analysis of deposits from the banking system of the Republic of Moldova and identifying the best type deposit for clients. The methodology of research. In order to obtain the expected results, the author applied the methods and techniques recognized and applied in the economic investigations so as: the comparative method, statistical method and method of logical analysis. The research results allow formulating conclusions and recommendations which aim is oriented to create attractive banking deposits products.

Keywords: *banking system, deposits, savers, guarantee fund, demand deposits, interest rate, guarantee ceiling.*

În prezenta lucrare este efectuată analiza din ultimii doi ani a depozitelor bancare din sistemul bancar al Republicii Moldova. Sunt identificate băncile care deţin cea mai mare cotă din piaţa depozitelor bancare. De asemenea, sunt analizate tipurile de depozite ale băncilor care deţin ponderi substanţiale în depozitele din sistemul bancar ale persoanelor fizice, este prezentată informaţia cu privire la depozitele garantate de către Fondul de garantare a depozitelor persoanelor fizice din sistemul bancar al Republicii Moldova. Scopul cercetării îl reprezintă analiza depozitelor din sistemul bancar al Republicii Moldova, dar şi identificarea produselor tip depozit cele mai avantajoase pentru clienţi. Metodologia cercetării. În scopul obţinerii rezultatelor scontate, autorul a aplicat metode şi tehnici recunoscute şi aplicate în investigaţiile economice ca: metoda comparaţiei, metoda statistică, metoda de analiză logică. Rezultatele cercetării permit formularea concluziilor şi recomandărilor ce au drept scop orientarea spre crearea de produse bancare atractive tip depozit.

Cuvinte-cheie: *sistem bancar, depozite, deponenţi, fond de garantare, conturi la vedere, rată a dobânzii, plafon de garantare.*

В данной работе проведен анализ банковских депозитов за последние два года в банковской системе Республики Молдова. Выявлены банки, которым принадлежит наибольшая доля рынка банковских депозитов. Проанализированы виды банковских депозитов, которым принадлежат значительные доли депозитов физических лиц в банковской системе, представлена информация по депозитам, гарантированным Фондом гарантирования депозитов физических лиц в банковской системе Республики Молдова. Целью исследования является анализ депозитов в банковской системе Республики Молдова, а также выявление наиболее привлекательных банковских продуктов (депозитов) для клиентов. Методология исследования. Для достижения намеченных целей, автор использовал методы и приемы широко применяемые в экономических исследованиях, такие как: сравнительный метод, статистический метод, метод логического анализа. Результаты исследований позволяют сформулировать выводы и рекомендации, направленные на создание привлекательных банковских продуктов.

Ключевые слова: *банковская система, депозиты, депоненты, фонд гарантирования, депозиты до востребования, процентная ставка, предел гарантирования.*

JEL Classification: G21, G34, F31.

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Introduction. In the broad sense, banking institutions are financial intermediaries which accumulate capital from the economy and make them available to applicants in the form of loans. Basically, obtained funding resources are the greatest part of the capital of the banking institutions, and bank deposits represent the largest part of them.

Taking into account the importance of these resources, banks tend to create attractive deposit products, which may be demand or term deposits, with simple or capitalized interest, fixed or floating, in lei or foreign currency. It is important for these products to be more attractive, because of the ability of the Bank to meet the required products of customers, further lending activity depends, at the same time, taking into account the fact that the biggest gains are achieved at the expense of lending activity, we can certainly mention that the profitability of the Bank will be the influenced the same.

Bank deposits involve the payment of interest; practically interest is the most important element of the contract of deposit followed by most of the depositors, and for banking institutions, interests represent expenses. For these reasons, banking institutions must find a point of balance between satisfying its own objectives, as well as the proposal of advantageous interests.

Analyzing the evolution of bank deposits of the banking system of the Republic of Moldova, it is gratifying that every year their volume increases in the whole banking system. This indicates that the population saves and confidence in the banking system contribute to their accumulation in bank accounts.

On 31.12.2014, the portfolio of deposits in lei accepted by commercial banks of the Republic of Moldova amounted to 31,388,601.9 or about 8.5% more than in the previous year (28,705,569.3), deposits in foreign currency – 34 073 911.8 with an increase compared to the previous financial year by about 31.96% (23,184,373.4).

Table 1

Deposits accepted by the banking system of the Republic of Moldova on 31.12.2014

Type of deposit	Total on banking sector	
	accepted in MDL	accepted in foreign currency
Demand deposit without interest:	**5,454,343.4**	**6,787,843.6**
deposits of natural persons	803,395.2	1,428,837.0
deposits of legal persons*, *of which:*	4,650,948.2	5,359,006.6
- deposits of banks	31,780.8	1,091,672.4
Demand deposit with interest:	**4,271,331.1**	**2,926,362.5**
deposits of individuals	2,627,944.9	1,523,695.3
deposits of legal persons*, *of which:*	1,643,386.3	1,402,667.2
- deposits of banks	2,740.4	11,161.8
Term deposits without interest:	**4,729,479.8**	**6,370,639.4**
deposits of individuals	11,677.7	22,701.6
deposits of legal persons*, *of which:*	4,717,802.1	6,347,937.8
- deposits of banks	4,675,994.4	6,165,513.9
Term deposits with interest:	**16,933,447.6**	**17,989,066.3**
deposits of individuals	13,766,982.4	14,405,452.9
deposits of legal persons*, *of which:*	3,166,465.2	3,583,613.3
- deposits of banks	713,660.0	1,042,874.6
Total deposits:	**31,388,601.9**	**34,073,911.8**
deposits of individuals	17,210,000.1	17,380,686.8
deposits of legal persons*, *of which:*	14,178,601.7	16,693,225.0
- deposits of banks	5,424,175.5	8,311,222.6

Source: [2].

According to data of Table 1, we can note that the highest share in total deposits are held by term deposits with interest, constituting, according to data NBM on 31.12.2014, the value of 16,933,447.6 lei and in foreign currency – 17,989,066.3. Natural persons provide the highest share in lei – 13,166,456.2 and foreign currency – 14,405,452.9. Demand deposits without interest represent 5,454,343.4 lei and in foreign currency – 6,787,843.6. Within this category of deposits, the deposits of legal persons have the largest share. Monetary means deposited on demand deposits without interest represent the economic agents, used to discharge the obligations resulting from their transactions with business background.



Fig. 1. Evolution of bank deposits according to the category of depositors

Source: [2].

Taking into account the category of depositors, we note that the largest share of deposits in lei and in foreign currency are held by natural persons; deposits in lei decreased marginally over the year 2014, while the deposits in foreign currency increased by about 15 percent compared to the year 2013 (see Figure 1). The increase of deposits in foreign currency was influenced by the devaluation of the national currency, which was felt in the second half of the year 2014.

Deposits of legal entities increased during the year 2014 both in lei and foreign currency. The same trend was followed by the deposits of commercial banks.

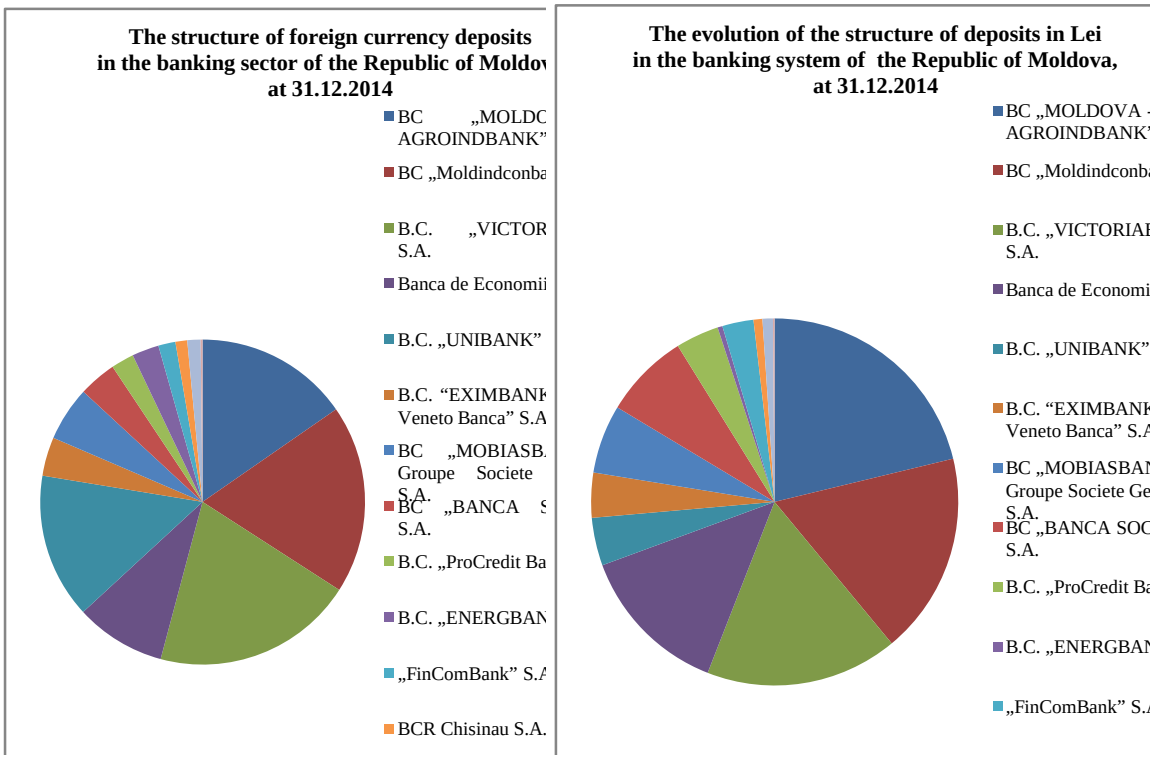


Fig. 2. The structure of deposits in Lei and foreign currency in the banking system of the Republic of Moldova, 31.12.2014

Source: [2].

Analyzing Figure 2, we note several banking institutions which hold together more than half of the deposits registered in the banking system, these are: Commercial Bank ,,Moldova-Agroindbank" S.A., CB ,,Victoriabank" S.A., CB ,,Moldindconbank" S.A., CB ,,Banca Socială" S.A., and CB ,,Unibank" S.A.

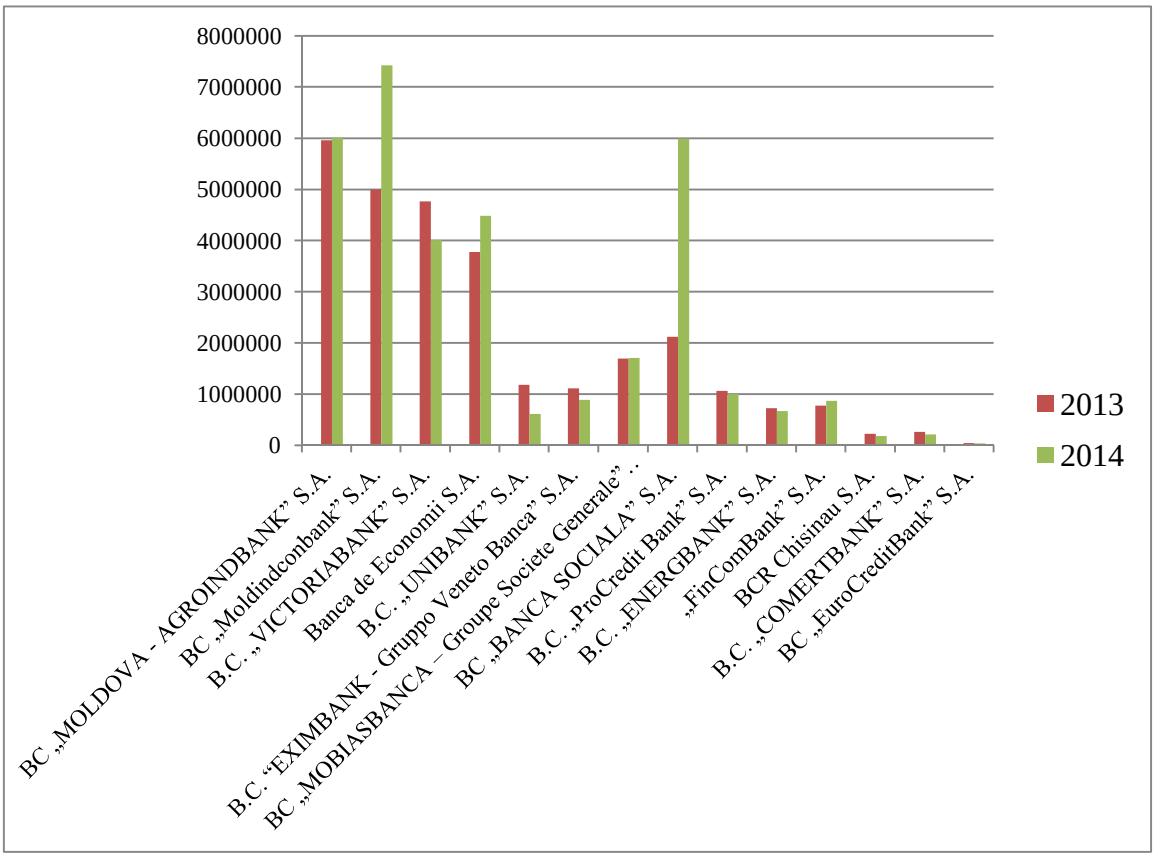


Fig. 3. The evolution of bank deposits in Lei in the banking system of the Republic of Moldova ***Source: [2].***

Figure 3 shows the evolution of deposits at each bank in the past two years. Thus, we note that on 31.12.2014, the deposits collected in lei by CB "Moldindconbank" S.A., from the second position in 2013, was placed on the first position in 2014, the second being owned by CB "Moldova-Agroindbank" S.A., on the third position was CB "Banca Socială" S.A., with a considerable increase in the volume of deposits compared to 2013. The lowest shares of deposit market are registered at the banks CB "EuroCreditBank" S.A., CB "Comertbank" S.A., CB "BCR Chisinau" S.A.

As we noted, some commercial banks have promoted an active policy to collect bank deposits. Analyzing the types of bank deposits provided by CB "Moldindconbank" S.A., we note that the products provided to natural persons are good enough. A good example is the deposit Allegro, which can be opened for a period not exceeding one year, with an interest rate depending on the period, from 14.5 to 15.5% per year, the minimum amount of 1.000 lei, the first two months is allowed funding of account. Other types of deposits are : *Crescendo*, *Pensionar*, *Acord*, *Sonata*, *Tango*, *Jazz*, *De economii*, *Deposit Pentru Copii* [5]. Depending on the needs of each client, there can be selected the most appropriate deposit. Most requested deposits are: Crescendo, which interest can be capitalized, account can be funded during the period of deposit except the last 2 months, and the interest rate in comparison with other types of bank deposits is superior; and Allegro, although the interest cannot be capitalized and the maximum term of deposit is one year, the interest rate is the highest up to 15.5% per year. This type of deposit can be set up only in lei.

Shopping cart "bank deposits for natural persons" of CB "Moldova-Agroindbank" S.A., is equally attractive, thus, the bank offers deposits in lei and foreign currency on demand and term, online savings deposits and saving plans. The types of demand deposits in lei and foreign currency shall be noted: Classic, Classic+, Senior classic. Saving deposits which can be formed on-line are: Multiopţional, Stabil, Profitabil [4]. Deposits within the group "Saving plans" are intended for persons who have not reached retirement age, but who want to collect monetary means until reaching that age: regular savings deposit Capital+, which can be with capitalization and monthly interest payment; as well as Junior Invest deposit-intended for children up to 18 years old.

Taking into account that each banking institution is interested in attracting resources of deposit, they make available to clients a series of deposits. Selecting one or another type of deposit depends on the needs and particularities of each client. Finally the best deposits have been selected, six banks as indicated in Table 2, the criteria for selection being the interest rate, possibility of capitalizing the interest rate, period of deposit and initial payments.

Table 2

Types of deposits for natural persons

No. crt.	Commercial bank	Type of deposit
1.	CB "Moldindconbank"	*Allegro*
		Crescendo
2.	CB "Moldova-Agroindbank"	*Clasic*
3.	CB "Banca Socială"	*Toamna de Aur*
4.	CB "Victoriabank"	*Victoria Maxim*
5.	CB "Mobiasbancă – Groupe Société Générale"	*eProfit*
6.	CB "Banca de Economii"	*Exclusiv*

Source: Created by author.

According to the Law on guaranteeing deposits to natural persons [5], each banking institution is obliged to participate in the formation of reserves to the guarantee Fund of natural persons deposits of the banking system of the Republic of Moldova, thus, quarterly, annually, commercial banks will pay contributions in the amount provided by the aforementioned law. These resources are used by the Fund to pay the deposits becoming unavailable.

The fund guarantees only the deposits of natural persons; guarantee is on depositor, not on deposit. The amount guaranteed at the moment is 6.000 lei, but due to the current situation of the banking system, the Fund has issued a request to be discussed with the NBM, Ministry of Finance and the Association of Moldovan Banks regarding the increase of the guarantee ceiling from 6.000 to 15.000 lei.

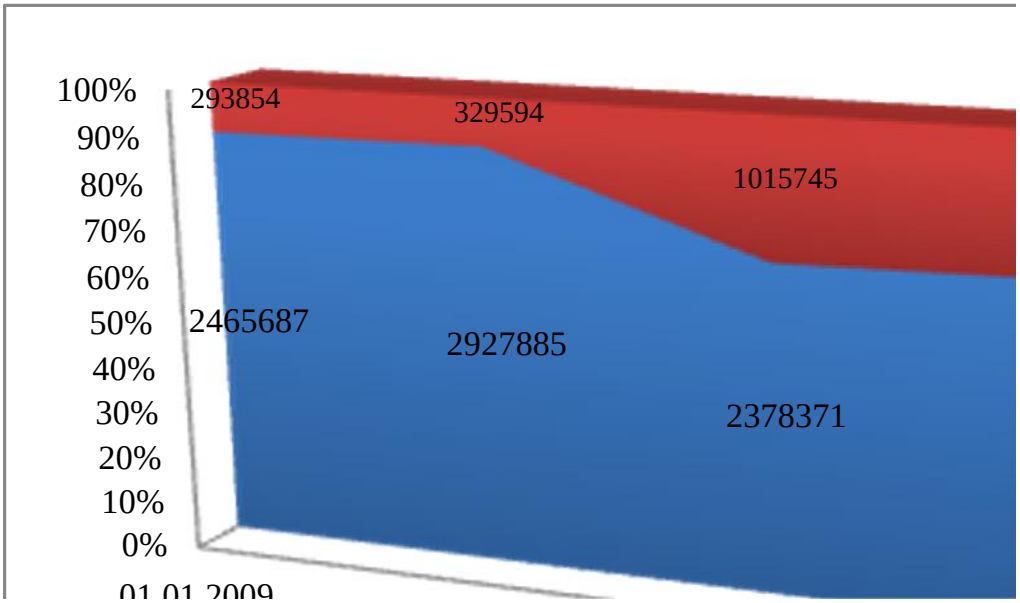


Fig. 4. Structure evolution of the number of natural persons' deponents

Source: [3].

In accordance with data presented by the Fund of guarantying of natural persons' deposits of the banking system of the Republic of Moldova, there are guaranteed the deposits of about 70% of deponents (natural persons) [3].

The part of deposits of natural persons' depositors is not guaranteed and also from the reason that within the same banking institutions are open more deposit accounts by the same depositor.

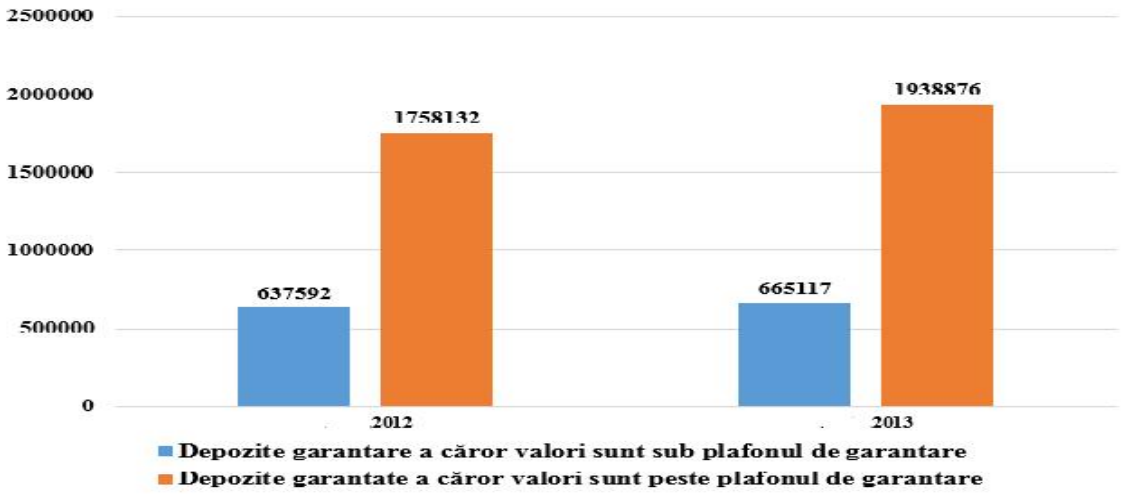


Fig. 5. Guaranteed deposits growth rate in relation to the guarantee ceiling

Source: [3].

According to Figure 5, we note that greatest part of the guaranteed deposits is held by deposits whose value is greater than 6.000 lei; they amounted on 31.12.2013, the sum of 1 938 876 lei, deposits guaranteed, the value of which is less than 6.000 lei, according to the Fund amounted to 665 117 lei.

Taking into account the practice of other countries in the region, guaranteed Fund ceiling is very low. In Romania, the deposit guarantee Fund guarantees deposits of natural and legal persons in the amount of 100 000 euro.

Results and conclusions. Deposit activity represents the core business of commercial banks. Given the fact that the resources accumulated on the account of this activity are used by banks in lending activity-activity that accrues to the Bank the largest portion of income, each banking institution tends to give customers the best deposit conditions, so as to accumulate as many financial resources used to finance the country's economy. The effective and proper organization of the activity of attracting deposits depends on stable and profitable operation of any lending institution.

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MARKET AND GOVERNMENT FAILURES RELATED TO THE INTRODUCTION OF TAX INCENTIVES REGIME

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The paper deals with problem of effectiveness of tax incentive regimes. The main purpose of this paper is to define causes, factors and measures aimed to prevent and neutralize failures of introduction of tax incentives. In order to examine the behavior of economic agents we used game theory tools, notably the "principal-agent" model, similar to the Allingham-Sandmo model. To solve a problem of inefficient interaction, when investors unreasonably pretend on tax incentives and government ignore that by granting them incentives, we proposed to use Nash-equilibrium in pure strategies. Finally we defined factors of improvement of efficiency of tax incentive regimes, particularly mechanisms of their implementation and termination.

***Keywords**: tax incentives, transition economies, economic behavior of investors, "principal-agent" model, Nash-equilibrium, inefficient interaction.*

În prezentul articol este cercetată problema unui eficient regim privind scutirile de taxe. Scopul acestui articol constă în identificarea cauzelor, factorilor şi măsurilor care vizează prevenirea şi neutralizarea eşecul de a introduce stimulente fiscale. Pentru a evalua comportamentul metodelor teoriei jocurilor contribuabililor au fost folosite, cum ar fi: modelul "principal-agent", modelul Allingham-Sandmo. Astfel, se propune utilizarea unui echilibru Nash în strategiile pure pentru a rezolva problema interacțiunii ineficiente în cazul în care investitorii susțin în mod greșit avantajele fiscale, iar guvernul le oferă aceste beneficii, ignorând faptul nefondat. Drept rezultate au fost identificați factorii de îmbunătățire a eficienței modului de oferire a scutirilor fiscale, în special mecanismele de aplicare și de întrerupere.

***Cuvinte-cheie:** scutiri fiscale, economia tranzitivă, comportamentul economic al investitorilor, modelul "principal-agent", echitatea conform Nash, interacțiune ineficientă.*

В статье рассматриваются проблемы эффективности режимов предоставления налоговых льгот. Цель статьи состоит в определении причин, факторов и мероприятий, направленных на предупреждение и нейтрализацию провалов введения налоговых льгот. Для оценки поведения налогоплательщиков были использованы методы теории игр, в частности модель «принципал-агент», подобная модели Allingham-Sandmo. Для решения проблемы неэффективного взаимодействия, когда инвесторы необоснованно претендуют на получение налоговых льгот, а правительство предоставляет им эти льготы, игнорируя факт необоснованности, предложено использовать равновесия по Нэшу в чистых стратегиях. В качестве выводов определены факторы улучшения эффективности режимов предоставления налоговых льгот, в частности механизмы их введения и прекращения.

***Ключевые слова:** налоговые льготы, транзитивные экономики, экономическое поведение инвесторов, модель «принципал-агент», равновесия по Нэшу, неэффективное взаимодействие.*

JEL Classification: C70, E22, H20, H30.

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Introduction. Paper deals with problem of effectiveness of tax incentive regimes. Support of priority industries remains currently important for transition economies. At once, such countries more often than developed ones face the imperfection of tax incentive mechanisms. Notably, such problems are common to Ukrainian and Moldavian economies, where the legislative support or its implementation in the area of preferential taxation of innovative enterprises which contribute essentially to sustainable development is absent.

Tax incentives can be the way of government's attracting investment in favored industries, sectors and areas or restructuring their investment vehicle by providing by state certain economic benefits for companies or corporate groups. So, let's define tax incentives as any deviation from current tax system, which can be applied to certain types of investment aimed to reduce investor's tax liabilities.

There is a popular opinion that financial incentives bust the state budget, wherefore it's not common for governments of developing countries to allow those incentives to foreign investors; instead they tend to use tax incentives, which do not require the preliminary (advance) use of government funds.

Different aspects of tax incentives and problems of their application were investigated by Auerbach & Hines Jr. [2], Easson & Zolt [4], Holland & Vann [5], Klemm [6], Tanzi & Zee [9], te Velde [12] and also by experts of EU [3], UNCTAD [8; 10] and OECD [1; 10].

But the mechanism of response of tax incentive regimes is insufficiently studied; that leads to ambiguity and weak predictability of its results: some countries benefit from increase of investment while others bear losses due to reduced tax revenues or arrival of weak investors.

So, the main purpose of this paper is to define causes, factors and measures in order to prevent and neutralize failures of introduction of tax incentives. To do this we structured paper as follows. Section 2 presents both methodology of analysis and developed game "principal-agent" model with Nash-equilibrium in pure strategies. In Section 3 we discuss the obtained results. Finally, Section 4 presents some concluding remarks.

Methodology and model

The methodology of analysis of subject area except standard methods involves modeling of objects and processes in this area. Specifically, we used optimization models and game models.

Initially we classified types of tax incentive regimes; as a result we obtained the following:

- two targets of tax incentives:
- increase of budget revenue (state is the recipient);
- product market expansion (customers are recipients);
- and also
- two strategies of providing tax incentives:
- broadly-based;
- targeted;
- individual.

General analysis of reasons for decision-making and behavioral factors of investors and government showed that tax incentive regime can lead to non-achievement of targets, which form the basis for its implementation:

- deterioration of general level of efficiency of economic sector;
- partial budget payment due to reduced tax burden;
- baseless provision of tax incentives for investors, who are not able to deliver on government targets;
- baseless non-provision of tax incentives for investors, who are able to deliver on government targets;
- shake out of *a priori* more efficient investors by less efficient ones.

The first evident disadvantage of tax incentive regime is the deterioration of general level of efficiency of economic sector (market, industry, territory), where it is implemented, since investors who can profit under current tax regime are accompanied with less efficient ones, who can make a profit only under tax incentive regime.

Provision of tax incentives aimed only to increase budget revenue can lead to non-compensation of reduced tax burden (as a result of tax incentives) by tax base broadening due to appearance of new investors. So, the implementation of tax incentive regime should be carefully calculated. We should note that unalloyed successful realization of this approach are almost absent in the world, consequently developed countries reject it, and experts caution against it for other countries.

The implementation of tax incentive regime in order to negotiate the market incompleteness is more feasible. But the analysis shows that:

- provision of tax incentives for all agents can lead to free-rider problem, when agents who do not produce required benefit can use tax incentives;
- however, targeted tax incentives can lead to problems both of identification of investors (it is not always possible to define if and how far certain investor satisfies the requirements) and possibility of adverse selection, when due to tax incentives a priori less efficient investors are more productive (compared to more powerful investors, working under current tax regime) and they shake out more efficient ones. Finally, market is not filled by benefits because new investors change (but not add) the present ones; now market is filled with deterioration of general efficiency, since the more powerful investors abandon the market.

Also it can be noted the possible inefficiency of such competition: present investors can allocate their funds in order to create barriers to entry (instead of quality and quantity input); this leads to both averting complementary investment and reducing their own productivity. Consequently product assortment and total output will decrease.

Mentioned elements can be combined into general pattern of tax incentive regimes and their consequences (Fig.1).

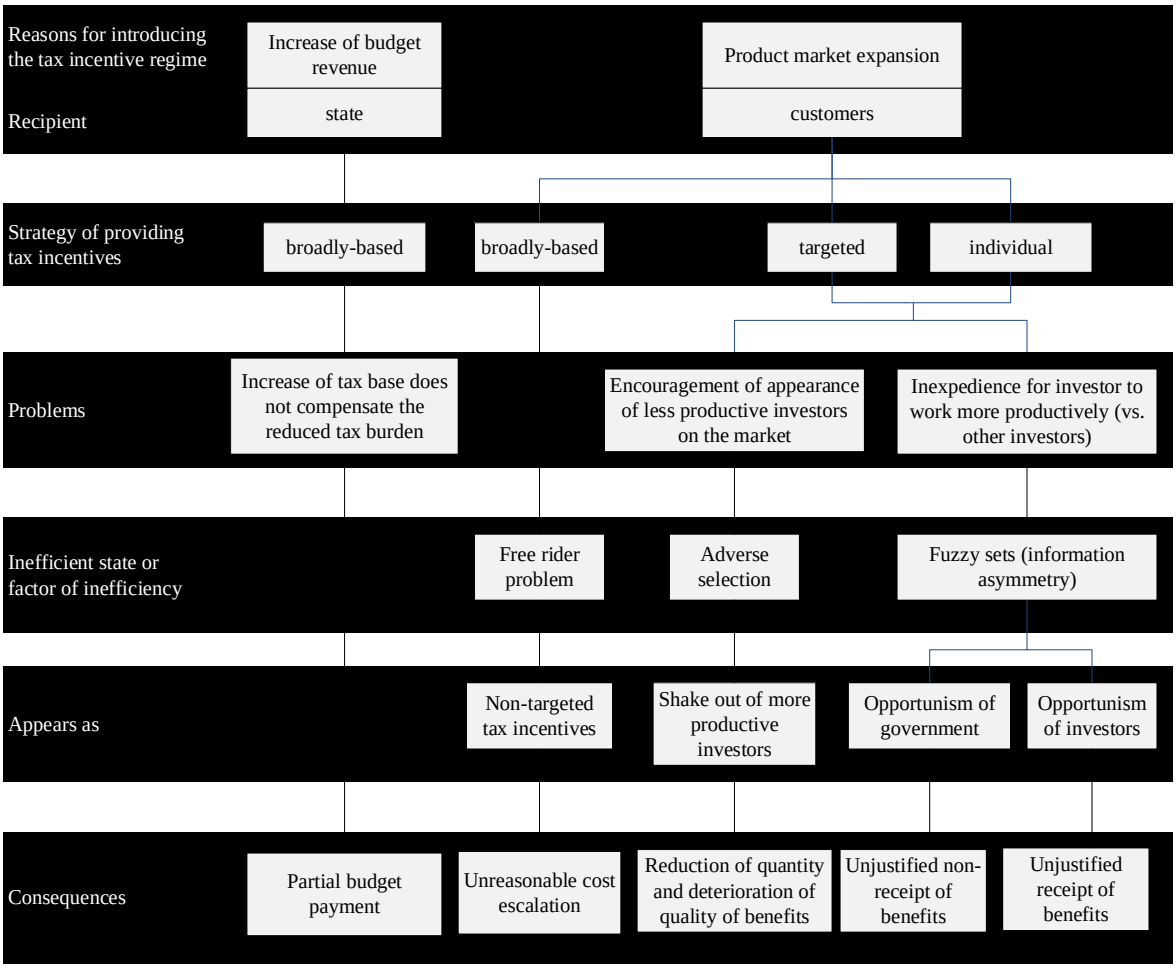


Fig.1. General pattern of providing tax incentives and its consequences

Source: Author's development.

Elements of tax incentive system for which it is expedient to develop economic and mathematical models are the following (Table 1):

– analysis of increase and/or decrease of tax revenues resulting from introduction of tax incentives;

- changes in set of investors resulting from implementation of targeted tax incentives and eventual appearance of new investors; rise of adverse selection;
- "government – investors" relations, arising when investors tend to hoodwink the government in order to obtain preferential treatment;
- analysis of strategy of broadly-based tax incentives; likelihood of free-rider problem;
- principles of allocation of tax incentives as limited resource; economic behavior of investors in this case.

Table 1

Elements of tax incentive system for which it is expedient to develop economic and mathematical models

Purpose	Type of model	Model character
Analysis of tax revenues arising due to variation of tax burden	optimization	analytical
"Government – investors" relations, notably analysis of opportunistic behavior of related parties	game	analytical
Changes in set of investors resulting from implementation of targeted tax incentives; adverse selection	evolutionary, population, genetic	analytical, simulation
Analysis of strategy of broadly-based tax incentives; a rise of free rider problem	set-theoretical	analytical
Principles of allocation of tax incentives as limited resource; economic behavior of investors in this case	set-theoretical; game	analytical

Source: Author's development.

Now we obtained in closed form conditions under which the implementation of tax incentive regime leads to increase or decrease the tax revenues (Fig. 2).

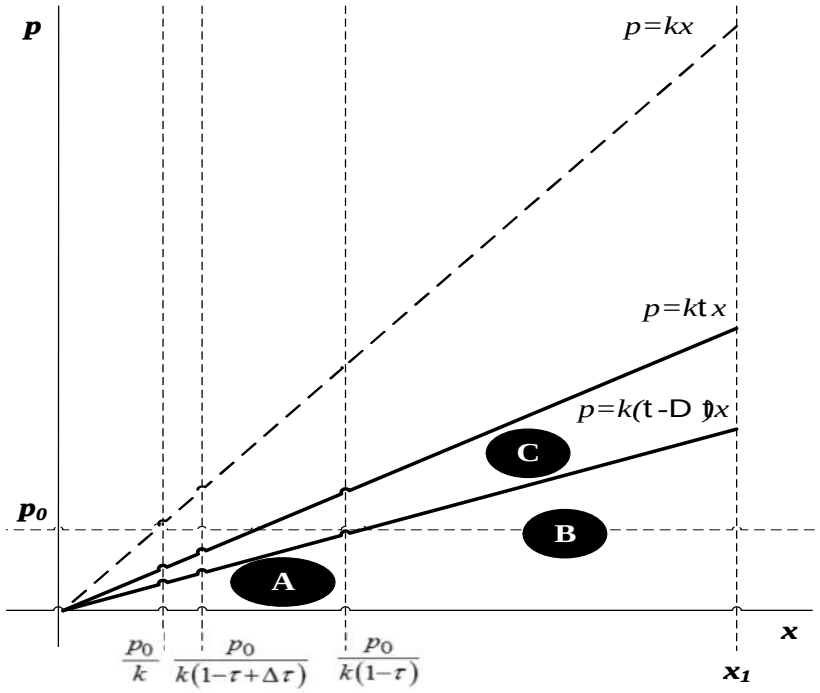


Fig. 2. Tax revenues in cases of standard and reduced tax rate

Source: Author's development.

Based on those calculations we can conclude that providing tax exemptions only for possible increase of budget revenues is doubtful and risky.

Tax revenues under current tax regime:

$$P(²) = ² \int_{p^{-1}\left(\frac{p_0}{1-²}\right)}^{x_1} p(x)dx; \quad (1)$$

tax revenues under tax incentive regime:

$$P(² - \Delta²) = (² - \Delta²) \int_{p^{-1}\left(\frac{p_0}{1-²+\Delta²}\right)}^{x_1} p(x)dx; \quad (2)$$

where, p_0 is the level of replacement;

$p(x)$ is the productivity of investment in economics, ordered according to high values;

x_1 is the maximum level of normalized profitability (in industry or region).

$$P(²) < P(² - \Delta²) \Leftrightarrow \frac{\int_{p^{-1}\left(\frac{p_0}{1-²}\right)}^{x_1} p(x)dx}{\int_{p^{-1}\left(\frac{p_0}{1-²+\Delta²}\right)}^{x_1} p(x)dx} < \frac{² - \Delta²}{²};$$

$$\frac{\Delta²}{²} < 1 - \frac{\int_{p^{-1}\left(\frac{p_0}{1-²}\right)}^{x_1} p(x)dx}{\int_{p^{-1}\left(\frac{p_0}{1-²+\Delta²}\right)}^{x_1} p(x)dx}.$$

Let's consider simple and widely known case $p = kx$:

$$P(²) = ² \int_{p^{-1}\left(\frac{p_0}{1-²}\right)}^{x_1} kxdx = \frac{²k}{2}x^2\Big|_{\frac{p_0}{k(1-²)}}^{x_1} = \frac{²k}{2}\left(x_1^2 - \left(\frac{p_0}{k(1-²)}\right)^2\right) =$$

$$= \frac{²k}{2}x_1^2 - \frac{²k}{2}\left(\frac{p_0}{k(1-²)}\right)^2 = \frac{²}{2k}\left(p_1^2 - p_0^2\frac{1}{(1-²)^2}\right);$$

$$P(² - \Delta²) = \frac{² - \Delta²}{2k}\left(p_1^2 - p_0^2\frac{1}{(1-²+\Delta²)^2}\right),$$

where: $p_1 = kx_1$.

So implementation of tax incentive regime will lead to increase the tax revenue on condition that:

$$P(²) < P(² - \Delta²) \Leftrightarrow \frac{²}{2k}\left(p_1^2 - p_0^2\frac{1}{(1-²)^2}\right) < \frac{² - \Delta²}{2k}\left(p_1^2 - p_0^2\frac{1}{(1-² + \Delta²)^2}\right);$$

$$\frac{1}{2k}\left(²\left(p_1^2 - p_0^2\frac{1}{(1-²)^2}\right) - (² - \Delta²)\left(p_1^2 - p_0^2\frac{1}{(1-² + \Delta²)^2}\right)\right) < 0;$$

$$²\left(p_1^2 - p_0^2\frac{1}{(1-²)^2}\right) - ²\left(p_1^2 - p_0^2\frac{1}{(1-² + \Delta²)^2}\right) + \Delta²\left(p_1^2 - p_0^2\frac{1}{(1-² + \Delta²)^2}\right) < 0;$$

$$p_1^2\Delta² - p_0^2\left(\frac{²}{(1-²)^2} - \frac{² - \Delta²}{(1-² + \Delta²)^2}\right) < 0;$$

$$p_1^2\Delta² - p_0^2\left(\frac{²}{(1-²)^2} - \frac{(² - \Delta²)}{(1-² + \Delta²)^2}\right) < 0;$$

$$p_1^2\Delta² < p_0^2\left(\frac{²}{(1-²)^2} - \frac{(² - \Delta²)}{(1-² + \Delta²)^2}\right);$$

$$\frac{p_1^2}{p_0^2} < \frac{1}{\Delta²}\left(\frac{²}{(1-²)^2} - \frac{(² - \Delta²)}{(1-² + \Delta²)^2}\right);$$

$$\frac{p_1^2}{p_0^2} < \frac{1}{\Delta²}\left(\frac{²(1-² + \Delta²)^2 - (1-²)^2(² - \Delta²)}{(1-²)^2(1-² + \Delta²)^2}\right);$$

$$\frac{p_1^2}{p_0^2} < \frac{² - 2²^2 + 2²\Delta² + ²^3 - 2²^2\Delta² + ²\Delta²^2 - ² + 2²^2 - ²^3 + \Delta² - 2²\Delta² + ²^2\Delta²}{(1-²)^2(1-² + \Delta²)^2\Delta²};$$

$$\frac{p_1^2}{p_0^2} < \frac{-²^2\Delta² + ²\Delta²^2 + \Delta²}{(1-²)^2(1-² + \Delta²)^2\Delta²};$$

$$P(²) < P(² - \Delta²) \Leftrightarrow \frac{p_1^2}{p_0^2} < \frac{1 - ²^2 + ²\Delta²}{(1-²)^2(1-² + \Delta²)^2}; \qquad (3)$$

For other cases models are under development. Thus, for relations between government and investors, which can contain an opportunistic component, we suppose to use the advanced game model "principal – agent" (similar to Allingham-Sandmo model):

$$\Gamma = \left(SA,\ SP,\ (G,H)(SA \times SP)\right);$$

$$(G,H) = \begin{pmatrix} \begin{Bmatrix} 0; \\ p - \neg \end{Bmatrix} & \begin{Bmatrix} ² p; \\ (1-²)p - « \end{Bmatrix} \\ \begin{Bmatrix} q_1(v,®)(1+¥)^2 p - ®; \\ (1 - q_1(v,®)(1+¥)^2)p - \neg \end{Bmatrix} & \begin{Bmatrix} (1 + q_2(«,®)(1+¥))^2 p - ®; \\ (1 - (1 + q_2(«,®)(1+¥))^2)p - « \end{Bmatrix} \end{pmatrix} \qquad (4)$$

where: p is the agent productivity;

τ is the part of income, which is obtained by principal according to contract;

q_1, q_2 are frequencies of detection of real and false non-compliance of contract terms respectively;

π, ν, μ are resources, spending on control of agent activity, concealment of his evasion and maintenance of transparency of agent own activity respectively;

γ is the penalty coefficient for non-compliance of contract terms by contractor (agent).

It can be shown [15] that for group of investors with certain productivity under certain conditions one can pick out the tax burden representing the pattern of interaction between investors and government: investors will unreasonably pretend on tax incentives and government will ignore that by granting them incentives. Such situation certainly can be considered as an inefficient interaction.

We propose to solve this problem by shifting the interaction between state and investors in one of Nash equilibriums in pure strategies (depending on both values of parameters of interaction and investor's individual features). Conditions of the Nash equilibrium in pure strategies for the game (4) are the following:

$$E_{00}: \quad \neg - « < ² p < \frac{®}{q_1(\nu,®)(1+¥)}; \tag{5}$$

$$E_{01}: \quad ² p < \min\left(\neg - «; \ \frac{®}{q_2(«,®)(1+¥)}\right); \tag{6}$$

$$E_{10}: \quad ² p > \max\left(\frac{®}{q_1(\nu,®)(1+¥)}; \ \frac{\neg - «}{1-(q_1(\nu,®)-q_2(«,®))(1+¥)}\right); \tag{7}$$

$$E_{11}: \quad \frac{®}{q_2(«,®)(1+¥)} < ² p < \frac{\neg - «}{1-(q_1(\nu,®)-q_2(«,®))(1+¥)}. \tag{8}$$

In Sokolovsky (2014) it is proved that the sequence of the occurrence of Nash equilibriums at increase of p is: E_{01}, E_{00} або E_{11}, E_{10} [14; 15].

The analysis (5)-(9) by virtue of varying the size of incentives according to the efficiency of investors makes possible the optimization of contractors' behavior in order to reduce corruption. There is a number of different tax incentives, which in turn complicates both their analysis and efficiency and/or expediency of their use. Thus, the development of more consolidated classification of tax incentives, clustered by certain category, notably, by area of application, could be considered as an actual task.

It makes sense to recall the classification of tax incentives.

UNCTAD, the World Bank and economists proposed different classifications of tax incentives which can be summarized as following:

- reduced corporate income tax rates;
- loss carry forwards;
- accelerated depreciation;
- tax holidays;
- investment allowances and credits, grated in addition to the depreciation allowances as a percentage of appropriate investment expenditures;
- favorable deduction rules, super deductions;
- reinvestment incentives;
- investment tax credits (flat investment tax credit and incremental investment tax credit);
- reduced withholding taxes;
- personal income tax, payroll tax and social security reductions;
- sales tax exemptions;
- reduced tariffs (import duties), notably on imported capital equipment and component parts or increased tariffs on finished goods, produced by investor, in order to protect the internal market from imported competitive goods;
- property tax reductions;
- preferential treatment of long-term capital gains;
- deductions for qualifying expenses;

- duty-free zones, allowing both tariff and VAT exemptions, and special economic zones, where investors enjoy special tax incentives, which are not applied on the rest of the recipient country;
- tax reductions/credits for foreign hard currency earnings, which are widespread in the developing countries in order to receive currency earnings [4; 8; 10].

The mentioned classifications, made by the World Bank and the UNCTAD, allowed us to aggregate these tax incentives at eight main categories, according to the area of their application, notably, tax incentives applied to the income/profit, to sales, to the added value (independent categories); applied to the capital investment, to the work force and to other types of expenditures (category related to the expenditures); and also tax incentives applied to both imports and exports (category related to the foreign trade). Table 2. describes different types of tax incentives according to each area of application.

In order to analyze practical application of tax incentives in different countries we made a sample of 32 countries [13]. Analysis revealed that there were used 47 tax incentives of 12 different types. At this, there are 2 types of incentives – tax credits and super tax deductions, which are used more than half the time. I.e., one can observe that many countries replaced tax holidays with accelerated depreciation or tax credits. Besides we should note that the most widespread types of incentives (and a number of others as well) are profit/income-based.

Table 2

Main categories of tax incentives

Area of application	Types of tax incentives
Income/profit	Reduced corporate income tax rates; tax holidays; loss carry forward; tax credit; tax deduction
Sales	Reduced corporate income tax rates depending on the turnover
Added value	Reduced corporate income tax rates for local production; tax credits taking into account the net added value
Capital investment	Accelerated depreciation; investment allowances and credits; reinvestment incentives
Work force	Personal income tax, payroll tax and social security reductions
Other expenditures	Reduced corporate income tax rates with expenditures on training, marketing and promotion on external markets
Imports	Reduced or zero tariff rates
Exports	a) Tax incentives related to the production: zero export tax rates; reduced corporate income tax rates depending whether the activity is related to the currency exchange or export supplies; b) Tax incentives related to the operational expenditures: export tax refund; tax deduction for expenditures abroad; tax allowances for capital goods, purchased for export industries

Source: [13].

Under this logic we can suppose that prevalence of mentioned incentives can be explained by better efficiency (vs. other investors) and their bigger benefits with regard to profitable investment. At the same time Ukraine as well as Moldova use reduced tax rates and tax holidays [7] which are much less widespread in the developed countries: they are applied primarily in transition post-soviet countries and in China.

Thus, an analysis of applying the tax incentives in countries worldwide showed that developed countries prefer to use both over tax deductions and tax credits, while the transitional economies tend to use both reduce tax rates and tax holidays. This is conditioned by, foremost, the simplicity of applying the latters.

Results and discussion

It is difficult to assess numerically the cost of allocation of resources, induced by distortions in economics emerged as a consequence of implementation of inefficient tax incentive regime for the investment, since it refers to the indirect cost. Thus it is more reasonable to model the situation allowing both to find out the fundamental factors and to estimate the evolution of interaction. The implementation

of inefficient tax incentives could be caused by government failures, while the distortions could appear in the form of market inconsistency, notably, of absence of production of required goods, caused, in turn, by an adverse selection problem, by presence of free-riders or another reasons of market failure.

The prevention of market failures could be regarded as the reason for introduction of tax incentive regime for certain industries or regions. But, it is evident, that tax incentives reduce the efficiency of the whole investment in the economy, since the efficient investment is accompanied by investment which is efficient only in the framework of the tax incentive regime. In such situation the economically inefficient states arise.

The reduction of tax rate with simultaneous enlarge of the tax base could not lead to the increase of tax revenue. In this case, if the government decides to enlarge more the tax base by way of granting tax incentives, this will induce further decrease of tax revenue. This, in turn, could lead to the abolition of tax incentive regime and consequently to the increase of tax rates, which will induce the negative response from the part of investors, caused both by unstable government policy and their own losses.

But at the same time the economic situation in certain industry, enjoying the tax incentives, could not be regarded as efficient by the following reasons. First, an additional investment in industry is effected by attracting of relatively inefficient investors, which could not face the higher taxes; this leads to the reduction of average productivity in industry. Second, the less efficient investment shift from other industries, which, on the one side increase the productivity in industries without tax incentives, and on the other side lead to the outflow of investment from these industries causing the risks of shortage. As a result, the investors-satisfizers could decide both do not take risks and do not expand production. And also it should be taken into account that the lower profitability of new investors could be caused by lower quality of their products, accordingly, so it causes problems for consumers – so the situation of market inconsistency arises.

On the other side, it is evident that uncontrolled increase of tax burden is not a reliable option, since it could lead, particularly, to the shifting of investors to the shadow sector. So the requirement for the tax optimization arises. At this, in Sokolovsky (2014) it is shown that the curve, representing the relationship between rates of taxation and the resulting levels of government revenue (the Laffer curve) could have more than one local maximum, which allows to vary the tax rates in order to promote development of certain industries [14; 15].

Consequently, the tax incentive regime cannot be considered as a normal state of economic system, but only as an exception. As mentioned above, tax incentives are by no means always efficient. Therefore, it's important to design measures in order to protect in some way the economy from failures caused by problems with implementation of tax incentives. For that choosing the tax incentives policy government should balance between costs and benefits of their providing. In such case it's feasible to consider the following factors:

- increase of income because of possible increase of investment;
- public goods: increase of number of jobs as a consequence of increase of investment, positive externalities;
- loss of income from investment, which could be realized without tax exemptions;
- indirect costs such as economic distortions, administrative cost, tax base erosion.
- In order to raise efficiency of tax incentive regime it's feasible to enforce the policy, related to reducing cost in the following directions:
- to make decision about type of tax incentive regime: broadly-based or targeted;
- to limit the duration of tax incentive regimes aimed to reduce possible cost of inefficient or not sufficiently planned programs by clearly fixing in the law the special status concerning the termination of tax incentives («sunset» provision);
- to define requirements to potential recipients of tax incentives in order to discover relations between receipt of exemptions and conditions of production;
- to obligate all recipients of benefits to provide information for appropriate investment agencies, and also to make authorities responsible for control and development of tax rules, related to tax incentives;
- to demand from policymakers, charged with providing of tax exemptions, to evaluate costs and benefits of certain tax incentive regime with determination of time-schedule and officials, responsible for evaluation.

Conclusions

In this paper we developed a classification of tax incentives both by area of their application and by tax incentive regimes. Those classifications allowed us to single out and to systematize possible local problems, which may be caused by introduction of tax incentives and also to systematize their mechanisms and consequences of their implementation. We considered also causes and consequences of failures pending implementation of tax incentives.

Methodological background of our research is the systemic approach allowing us to classify and identify links between elements of tax incentive systems. We considered different types of economic and mathematical models aimed to define the behavior of economic agents under various tax incentive regimes. Established regularities, despite of their non-numerical character, can help to decision-makers, since revealed inefficient states and norms define specific risks which should be taken into account in providing of tax incentives.

Consequently, the further research could be conducted to develop the prevention mechanism of inefficient states and norms of agents' behavior, to investigate the specific features of such mechanism in practice, and also to test the proposed models on real statistical data with further econometric analysis.

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EVALUATION OF THE ECONOMIC SITUATION OF THE REPUBLIC OF MOLDOVA IN THE REGIONAL COMPARISON

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The purpose of the research in question is to monitor the evolution of the Moldovan economy at the macroeconomic level during the transition to a market economy and to follow the road of it compared to other emerging countries. Research methodology is to select the top countries published by the UNDP (Human Development Report) and compare the results obtained from countries in transition to a market economy by the indicator of Gross Domestic Product (GDP) at purchasing power parity (PPP constant 2011 international $). The results correspond to the purpose of evaluating throughout our country compared to other developing countries in the period 1990-2012, without reference to the causes for which influenced their evolution.

Keywords: *Gross Domestic Product, purchasing power parity, economic growth, economic reforms, level of development.*

Scopul cercetării în cauză constă în a monitoriza evoluţia economiei Republicii Moldova la nivel macroeconomic în perioada tranziţiei la economia de piaţă şi de a urmări drumul parcurs de ea în comparaţie cu alte state emergente. Metodologia cercetării constă în selectarea din topul ţărilor publicate de către UNDP (Human Development Report) şi compararea rezultatelor obţinute de ţările în tranziţie la economia de piaţă prin intermediul indicatorului Produsul Intern Brut (PIB) la Paritatea Puterii de Cumpărare (PPP constant 2011 international $). Rezultatele obţinute corespund scopului propus de a evalua parcursul ţării noastre în comparaţie cu alte state în curs de dezvoltare în perioada 1990-2012, fără a face referire la cauzele care au influenţat evoluţia acestora.

Cuvinte-cheie: *Produsul Intern Brut, paritatea puterii de cumpărare, creştere economică, reforme economice, nivel de dezvoltare.*

Цель данного исследования состоит в отслеживании пути развития молдавской экономики на уровне макроэкономических показателей в условиях перехода к рыночной экономике в сравнении с другими развивающимися странами. Методология исследования заключается в отборе стран, из доклада о человеческом развитии и сравнения полученных результатов стран с переходной экономикой по показателю валового внутреннего продукта (ВВП) по паритету покупательной способности (PPP constant 2011 international $). Полученные результаты соответствуют поставленной цели в исследовании пути развития нашей страны, по сравнению с другими развивающимися странами в период 1990-2012, без ссылки на причинах, повлиявших на их эволюцию.

Ключевые слова*: Валовый Внутренний Продукт, паритет покупательной силы, рост экономики, экономические реформы, уровень развития.*

JEL Classification: O11, O47, O57.

Introduction. In the early '90s, the Republic of Moldova, gaining independence and forming as a sovereign state, like other states of the former socialist camp started economic reforms; the strategic goal was to create a free and democratic society with a functioning and sustainable market economy. Underlying these reforms were put two documents: Parliament Decision of 25 July 1990 "On the concept of transition to a market economy" and "Program of transition to a market economy in Moldova" (1991). According to these documents, Moldova had to cross the path to a market economy in a period of

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approximate 1-2 years. But reality proved to be different. Inaccurate estimates on real capabilities of the new state and potential of development, did not help to identify clear objectives for development and safe paths of gradually access of Moldova to European structures, on the contrary, they have led to exaggerated expectations illusory economic growth.

Difficult conditions of the reforms at the initial stage, as a result of sudden collapse of the economic system of the former Soviet Union, generated major problems to ensure effective and rapid economic transformations. In result, costs of these transformations proved to be incomparably higher than was assumed.

In order to improve socio-economic situation, Moldova, like other countries in transition, during this period benefited by major financial aid from rich countries. These grants have contributed greatly to adapt Moldova to the new market conditions, development and prosperity.

And yet, during the countries in transition were too different, as the results obtained by them. There were selected 27 developing countries, which in 1989, 1990 started economic reforms (Table 1). They are arranged in order by the level of economic development (GDP per capita after PPP) at that time. This indicator was chosen because it is one of the main components of the HDI (Human Development Indicator) and it, in fact, characterized the economic development of any country.

Table 1

Comparative data regarding GDP per capita by purchasing power parity (PPP) in developing countries

	GDP by purchasing power parity (PPP – 2011, thousands USD)										
	1990		**2000**		**2005**		**2010**		**2012**		2012 as against 1990, (+) advances, (-) falls in the top
	thousands USD	top place	thousands USD	top place	thousands USD	top place	thousands USD	top place	thousands USD	top place	
Russian Federation	19.3	1	13.2	7	18.1	7-8	21.7	5	23.2	6	-5
Czech Republic	18.4	2-3	19.5	2	23.9	2	26.6	2	26.7	2	(0,-1)
Slovenia	18.4	2-3	22.1	1	26.3	1	28.0	1	27.4	1	(+1,+2)
Hungary	17.0	4	17.7	3	22.0	3	22.0	4	22.1	7-8	(-3,-4)
Estonia	15.9	5	14.5	5	20.9	4	21.1	6	24.2	4	+1
Lithuania	15.7	6	11.9	8	18.3	6	20.7	8	23.6	5	+1
Slovakia	15.3	7	15.3	4	19.5	5	24.4	3	25.5	3	+4
Serbia	13.9	8	7.8	15	10.2	15	11.5	16	11.6	18	-10
Latvia	13.6	9	11.5	9	18.1	7-8	18.6	10	21.2	10	-1
Kazakhstan	12.7	10	9.7	11-12	15.6	10	19.6	9	21.5	9	+1
Romania	11.3	11	9.8	10	13.7	11	16.6	11	16.9	12	-1
Ukraine	10.5	12	4.8	20	7.3	19	7.9	21	8.3	21	-9
Macedonia	10.2	13	9.1	14	9.6	16	11.4	17	11.7	17	-4
Poland	9.9	14	14.2	6	16.7	9	21.0	7	22.1	7-8	(+6,+7)
Bulgaria	9.7	15	9.2	13	12.7	12	15.2	14	16.7	13	+2
Azerbaijan	8.5	16	4.5	21	8.1	17	16.0	12	15.9	14	+2
Turkmenistan	8.4	17	5.4	18	6.5	21	10.0	18	12.5	16	+1
Belarus	8.1	18	7.3	16	10.9	14	15.7	13	17.2	11	+7
Georgia	8.0	19	3.3	22	4.7	23	6.0	23	6.7	23	-4
Republic of Moldova	**6.4**	**20**	**2.3**	**25**	**3.3**	**24**	**3.9**	**25**	**4.1**	**25**	**-5**
Albania	4.2	21	5.0	19	6.8	20	8.9	20	9.2	19-20	(+1,+2)
Armenia	3.7	22	2.9	23	5.3	22	6.5	22	7.3	22	(0,0)
Tajikistan	3.6	23	1.2	27	1.7	27	2.1	27	2.3	27	-4
Kyrgyzstan	3.5	24	2.1	26	2.4	26	2.8	26	2.8	26	-2
Uzbekistan	3.0	25	2.5	24	3.0	25	4.2	24	4.7	24	+1
Montenegro	-	-	9.7	11-12	11.1	13	13.7	15	14.0	15	x
Bosnia and Herzegovina	-	-	6.1	17	7.7	18	9.1	19	9.2	19-20	x

Assign degree of development of countries by size of GDP per capita											
Highly developed countries	28.7	X	35.1	X	38.1	X	39.1	X	40.4	X	X
Developed countries	5.7	X	6.8	X	8.8	X	11.8	X	12.9	X	X
Countries with average development level	2.7	X	3.5	X	4.2	X	5.4	X	5.9	X	X
Least developed countries	2.0	X	2.0	X	2.3	X	2.7	X	2.8	X	X

Source: International human development indicators (http://hdrstats.undp.org/en/indicators/62006.html).

As it's shown in the table, it's evident particularly high difference in the level of development of the country from the first (Russian Federation) and last place (Uzbekistan), which was 6.4 times.

If it analyzes the evolution of the countries included in the table it's observed that over the next 25 years, the difference in the level of development of the country from the first (Slovenia with 27.4 thousand USD) and last place (Tajikistan with 2.3 thousand USD) did not decrease, but rather increased by 11.9 times.

Several countries (Ukraine, Georgia, Moldova, Tajikistan and Kyrgyzstan) so far have not reached the initial level of economic development (up to the start of reforms). Mainly these countries are located on the last places in the ranking of the top. We should note that the evolution of Moldova was one of the most unsuccessful of all countries concerned. It gradually slipped from number 20 in 1990 to 24 in 2005 and to 25 in 2012. As a result, the country was further distanced from the level of development of most countries. If in 1990 the GDP per capita was produced in country in amount of 6400 USD or 33% of the level of the developed countries in the top (Russian Federation) and in 2012 occurred only 4100 USD what to Slovenia's GDP (the highest level in the last year of assessment) it is only 15%.

Moldova is not better positioned in comparison with its neighbors. Thus, if in 1990 the correlation between GDP per capita in Moldova was about 57% against Romania and 61% - compared to that of Ukraine, then in 2012 this ratio was only 24% and 49%, respectively. And if in the not so distant past it was established with regret that we are the second lowest in Europe and that only Albania was less developed than us, then now certainly Moldova is on the last place and Albania, a country with a GDP per capita amounted to 9.2 thousand USD is far ahead of us.

About that how the national economy has evolved from 1990 to the present, but also the evolution of the neighboring countries: Romania, Ukraine and Belarus is shown in Figure 1.

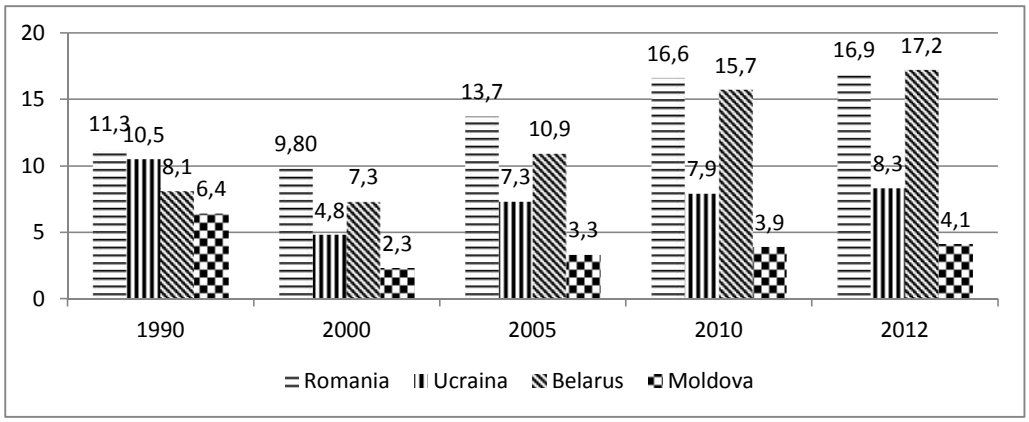


Fig. 1. Evolution of GDP per capita by purchasing power parity (PPP) in Moldova in comparison with other countries in the region (thousands of USD)

Source: Developed by authors based on UNDP data.

Looking at the picture, as a whole (Table 1), we can find that according to the classification of the UNDP selected country does not refer to category ***highly developed*** (with a GDP per capita of over 40.4 thousand USD). In the category of ***developed countries*** (with a GDP per capita from 12.9 thousand USD to 40.4 thousand USD) were included 15 countries (Slovenia, Czech Republic, Slovakia, Estonia, Lithuania, Russia, Hungary, Poland, Kazakhstan, Latvia, Belarus, Romania, Bulgaria, Azerbaijan, Montenegro) among the countries with ***medium level of development*** (with a GDP per capita from 5.9 to 12.9 thousand USD) are 8 countries (Turkmenistan, Macedonia, Serbia, Albania, Bosnia and Herzegovina, Ukraine, Armenia, Georgia) and ***Lesser Develop Countries*** (with a GDP per capita from 2.8 up to 5.9 thousand USD) was included 4 countries (Moldova, Tajikistan, Kyrgyzstan and Uzbekistan).

In the category of countries with the best performance during the covered period part Belarus – ensuring ongoing increase GDP by about 2.4 times and 7 – steps advancement in the top, Poland – increased by 2.2 times (+6,7 steps), Slovakia (+4 steps), Azerbaijan (+2 steps), Bulgaria (+2 steps).

Among the countries that have yielded the most, noted: Serbia (-10 steps), Ukraine (-9 steps), Russia (-5 steps), Moldova (-5 steps), Macedonia (- 4 levels), Hungary (-3, 4 steps).

According to the logic a country with a low level of development usually should develop more accelerated pace than those with a high level of development. The poise of a growth percentage is much higher. But in our case this was not happen. So Moldova lost much of its ability to grow moving last in Europe.

As a result, after a quarter century of reforms, the country's economy according to statistical data produces only about 2/3 of GDP that we have after start reforms (Figure 2) which is identified with GDP by PPP.

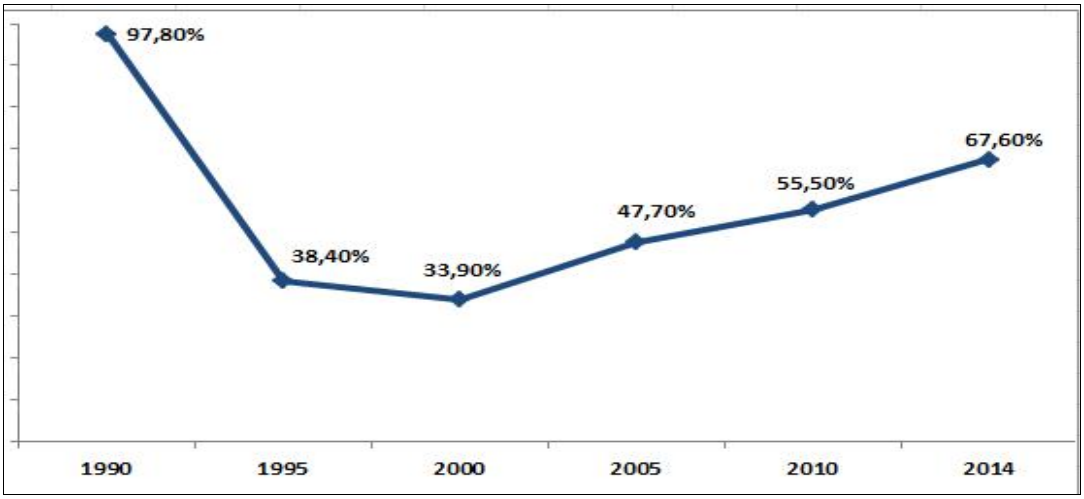


Fig. 2. Evolution of the gross domestic product of the Republic of Moldova during 1990-2014 as a percentage against of 1989

Source: Prepared based on statistical data of those years.

Conclusions. From the analysis the following conclusions can be made:

For Moldova, broadly, it might say that during transition to a market economy, the recession has lasted too long, the damage produced after the changes were too high and growth rates in the period of economic recovery (since 2000) were not sufficient to recover these losses, which occurred mainly in the early years of transition (1989-1994).

It is clear that much of the blame for this situation lies with inefficient governance of the state by the political classes. Given into account the socio-economic situation in the country and instituted perpetuation of the past development model would be a great danger to the economy. The political class is obliged to react promptly to change the situation. It's requires to implement other models of economic development, because this country geographically located in the center of Europe, according to the actual state of development, found itself between two countries that belong to another regions of the world.

Like this, in general, referring to the source "Human Development Report", might qualify current situation in Moldova. Thus, according to the source [1], [2], after the Human Development Index, the Republic of Moldova in the last two years has yielded five positions in 2013 with 0.663 index is placed 116th, between Bolivia and Salvador and from the former Soviet Union below the level of development of Moldova is only Kyrgyzstan (126) and Tajikistan (134).

To leave the group of Lesser Developed Countries and enter in the list of countries with a medium level of development, Moldova must have a GDP per capita higher than the 25-30 percent it currently has (according to preliminary data in 2014 GDP [4] per capita was 4.7 thousand USD); this requires the rapid advancement with annual average pace of 6.5% over the next four years.

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ESTIMATE MEDICAL SERVICES IN THE NETHERLANDS

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One of the many great things about living in the Netherlands is the excellent standard of Dutch healthcare, rated as the best in Europe. The Netherlands tops the list of 34 nations in the 2012 Euro Health Consumer Index (the 'industry standard' of modern healthcare) and spends 11.9 percent of GDP on health, being the second only after the United States. Plus, almost all the doctors speak excellent English, making healthcare in the Netherlands very accessible to expats. The purpose of the research is to investigate the health sector in the Netherlands and to connect it to the European systems and global requirements. Methods. Conducted research was focused on analysis, comparison, deduction or induction methods. Medicine in the Netherlands is taught differently than in Europe, both in terms of the approach to the subject and timeline to qualification. A visitor to the Netherlands faces no special health risks, as the overall health conditions are excellent. No special inoculations are required. Any necessary immunization is available locally. Although Dutch law is strict about commercial processing, cooking, handling, and serving of foods, consumers are advised to show caution when using eggs and preparing poultry, as salmonella bacteria has been found in these products. Tap water is of excellent quality and safe to drink. Dutch medical care is of high quality and is comparable to the medical care one finds throughout Western Europe. Diagnostic laboratories and specialists in all fields of medicine are available. Hospitals are well-equipped, and maternity hospitals and many clinics are available. Most doctors and dentists speak English. Most medicines are available locally. They may not, however, be the same brand names as those used in the United States and prices are generally higher. Tourists should bring a supply of the medicine that they know they will need whilst abroad and provide proper documentation.

Keywords: *health services, prevention, cooperation in medicine, adjusting the standard of living, life expectancy.*

Actualitate. Unul dintre multele lucruri mari despre care se discută în Olanda este standardul excelent al asistenței medicale olandeze, evaluat ca fiind cel mai bun din Europa. Olanda se află în fruntea listei de 34 de națiuni din 2012 după Indicele Euro Health Consumer ("standardul industrial" al asistenței medicale moderne) și cheltuiește 11,9 la sută din PIB pentru sănătate, după SUA. În plus, practic, toți medicii vorbesc engleza excelent, ceea ce face asistența medicală în Olanda foarte accesibilă pentru străini. Scopul cercetării constă în investigarea situației din domeniul sănătății din Olanda și racordarea la sistemele de cerințe europene și mondiale. Metode. În cercetarea efectuată s-a pus accentul pe următoarele metode: analiza, comparația, deducția și inducția. Rezultate. Un vizitator în Olanda nu se confruntă cu riscuri speciale de sănătate, deoarece condițiile generale de sănătate sunt excelente. Orice imunizare necesară este disponibilă pe plan local. Cu toate că legea olandeză este strictă cu privire la prelucrarea comercială, de gătit, de manipulare și servirea alimentelor, consumatorii sunt sfătuiți să prezinte prudență atunci când utilizează ouă și carnea de păsăre, deoarece bacteriile de Salmonella au fost gasite în aceste produse. Apa de la robinet este de o calitate excelentă și în condiții de siguranță pentru a o bea. Îngrijirea medicală olandeză este de înaltă calitate și este comparabilă cu asistența medicală după standarde în toată Europa de Vest: sunt disponibile laboratoare și specialiști de diagnosticare în toate domeniile de medicament. Spitalele sunt bine echipate, cele de maternitate și multe clinici sunt disponibile. Cele mai multe medicamente sunt disponibile pe plan local. Ele nu pot, totuși, să fie aceleași după nume de marcă ca și cele utilizate în Statele Unite ale Americii și prețurile sunt în general mai mari. Turiștii ar trebui să fie aprovizionați cu medicamentul de care ei știu că vor avea nevoie în timpul ședерii în străinătate și să se aprovizioneze cu documentația corespunzătoare.

Cuvinte-cheie: *servicii de sănătate, măsuri de prevenire, cooperare în medicină, ajustare, nivelul de trai, speranța la viață.*

Одной из многих вещей из жизни в Голландии является отличный стандарт голландской медицинской помощи, которая оценивается как лучшая в Европе. Голландия возглавляет список из 34 стран с 2012 года по евро Индексу здоровья потребителей ("стандарты" современного здравоохранения) и тратит 11,9 процента от ВВП на здравоохранение, уступая только США. Кроме того, почти все врачи говорят на превосходном английском языке, что делает здравоохранение в Голландии очень доступным для иностранцев. Цель исследования состоит в изучении состояния области здравоохранения в Голландии и его соответствие европейским и мировым требованиям. Методы. В проводимых исследованиях были использованы метод анализа, сравнения, дедукции и индукции. Любой приезжий в Голландию не столкнется с особыми рисками для здоровья, так как общие условия по показателю здоровья являются превосходными. Никаких специальных прививок не требуется. Любая необходимая вакцинация доступна на местном уровне. Несмотря на то, что голландское законодательство строго относится к промышленной переработке, приготовлению, обработке и хранению продуктов питания, потребителям советуют проявлять осторожность при использовании яиц и приготовлению птицы, так как в этих продуктах были обнаружены бактерии сальмонеллы. Водопроводная вода здесь отличного качества и безопасна для питья. Голландская медицинская помощь высокого качества и сравнима с медицинской помощью во всей Западной Европе. Широкодоступны специалисты во всех областях медицины, диагностические лаборатории и многие клиники. Больницы и роддома хорошо оборудованы. Большинство врачей и стоматологов говорят по-английски. Большинство лекарств являются доступными на местном уровне. Однако, они могут не иметь такие же торговые марки, которые используются в Соединенных Штатах и их цены, как правило, выше. Туристы должны иметь запас лекарств, если они знают, что будут нуждаться в них во время пребывания за границей, а также иметь с собой надлежащую документацию.

Ключевые слова: *услуги в области здравоохранения, профилактика, сотрудничество в области медицины, соответствие уровня жизни, продолжительность жизни.*

JEL Classification: H00, F50, F55, M16

Introduction. The attempts to maintain a sustainable care system often increase costs for beneficiaries of the health services. Collective expenditure burden is transmitted to individuals, and this can affect access to healthcare. For example, in the Netherlands a third of consumers claim that health care cannot afford certain services. Given the rising costs of health care, almost half of the Dutch believe that in the future will no longer seek medical advice. The deep analysis of possible problems that the beneficiaries of medical services might encounter can provide a general idea on the possible undesirable effects, such as inequalities in access to treatment and health services.

Could health systems can be financially sustainable in the future? This question arises frequently in debates on health policy. In recent decades, the expenditures on healthcare increased in the most countries that are part of the Organisation for Economic Cooperation and Development (OECD). Moreover, the estimations show that the amount will continue to grow significantly: by 2060, expenditures for health and medical care in OECD countries will reach 9.5% of the gross domestic product (GDP), even if they are being implemented measures for reducing the costs.

Factors contributing to increased healthcare expenditure include the aging of the population and personal income growth as well as the progress in medical technology. As resources are scarce, finding a balance between growth and cost pressures is one of the main concerns of the authorities in many countries. This is especially relevant in the context of current financial crisis, which began in 2007, which has a significant impact on health systems. In Europe, countries have implemented a wide range of public policies to counter the crisis, including price reductions to pharmaceuticals, restricting coverage of basic health services and the introduction of additional fees for basic health services.

Table 1

Human Development Index for some countries, 2014

Rating	Country	Human Development Index
1	Norway	0,944
2	Australia	0,935
3	Switzerland	0930

Rating	Country	Human Development Index
4	Denmark	0,923
5	**Netherland**	**0,922**
6.	Germany	0916
7.	Ireland	0,916
8.	USA	0,915
9.	Canada	0,913
10.	New Zeeland	0,913
11.	Singapore	0,912
12.	Hong Kong (China)	0,910
13.	Liechtenstein	0,908
14	Sweden	0,907
.....	.....	
107	**R.Moldova**	**0,693**

Source: Human Development Report. New York, 2015, UNDP, p.29

Case study: Netherlands. The Dutch government, like other governments, are trying to keep the financial sustainability of its healthcare system. Compared with other countries, the Netherlands spends heavily on health services, both as a percentage of GDP and per capita. Specifically, in 2010 more than 13% of GDP was spent on health care. Thus, by 2040, estimates show an increase in spending between 19% and 31% of GDP. Moreover, a large part of household income is spent for healthcare services. If this trend of increasing health costs still remains, it is estimated that by 2040 a Dutch family will spend on average almost half of their income (47%) on healthcare. "46% of insured people see increased costs as a real barrier to accessibility to medical services".

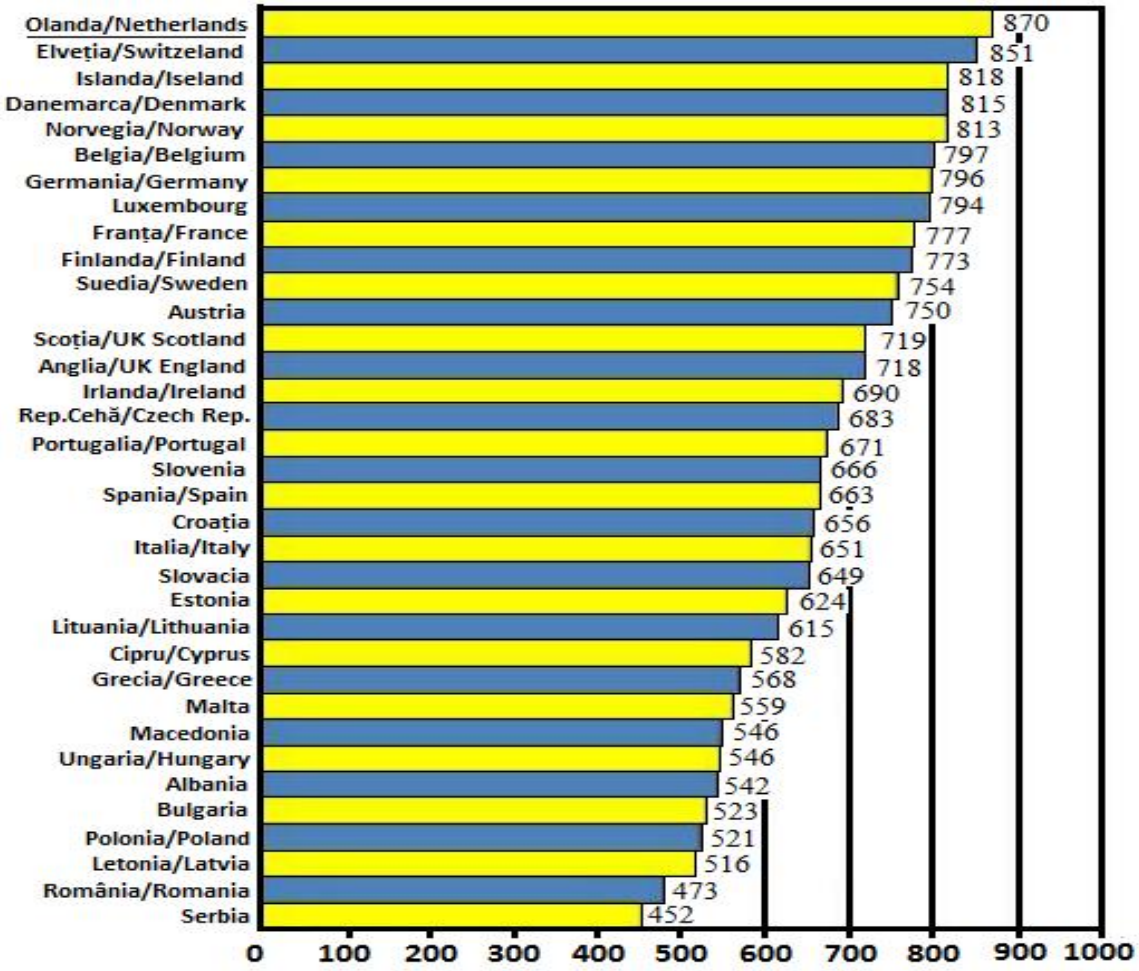


Fig. 1. The performance of the health system in some countries in Europe, 2013
Source: Health Consumer Powerhouse (HCP).

Dutch health system aims to provide affordable health services population. In 2006, it introduced a competitive health insurance system. Under this system there is a high degree of solidarity in terms of both health system financing and accessibility of medical services so that everyone entitled to the same basic services. However, solutions are still needed to maintain the sustainability of the health system. One possible option would be to finance the health care system by changing the allocation of collective expenditure. However, given that 25% of all collective costs are already spent on healthcare, the allocation of a bigger amount for this sector would mean considerable cuts for other sectors.

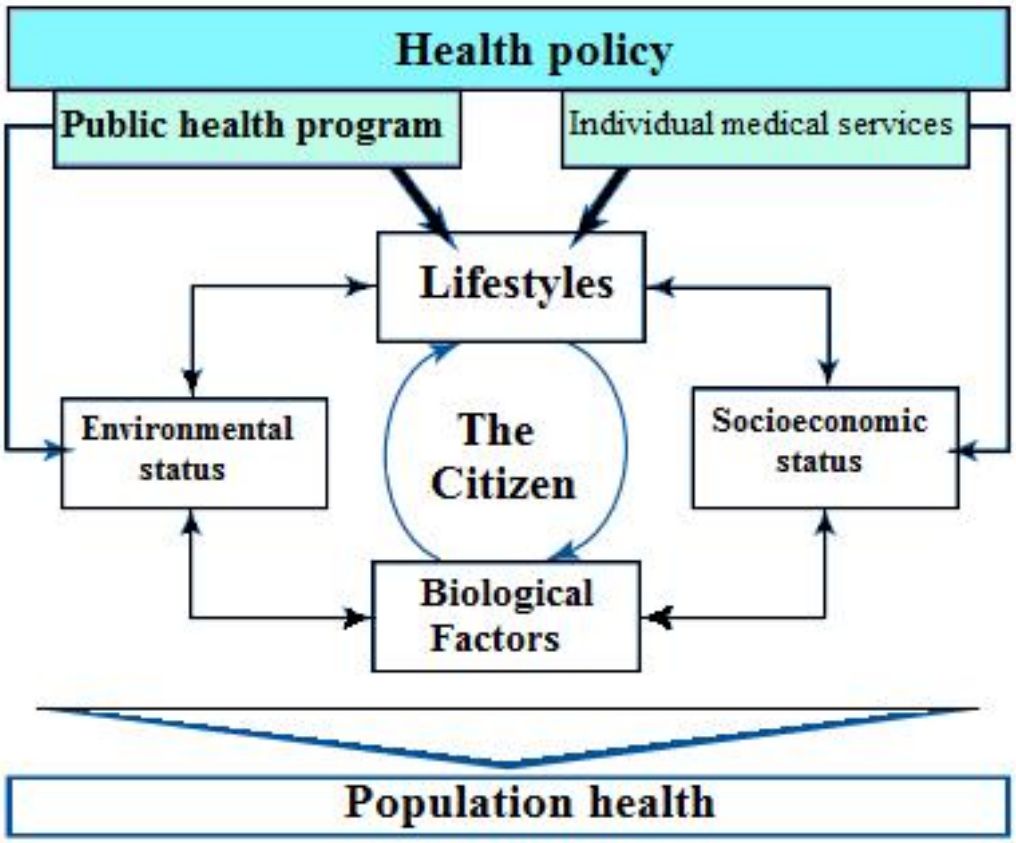


Fig. 2. Factors influencing health

Source: Research authors.

Another option would be to reduce the pressure on collective expenditures, for example by reducing reimbursement of medical services from basic packages by setting a compensation lower for people with low incomes and increased payments of patients for certain medical services. Currently, Netherlands covers a relatively small percentage of health-care co-payment expenses compared to other states. However, an example of increased co-payment is a mandatory insurance policies, more exactly, the amount to be paid out of pocket each patient's insurer, which increased by more than half, from 150 € in 2008 to € 350 in 2013.

Netherlands seek out further opportunities for the introduction of other systems of co-payment. For example, in 2012 it was a charge for services secondary mental health care, but was withdrawn in 2013. There were also suggestions for additional payments for GP visits and visits to the departments of medicine emergency, but none were adopted. These measures would spread the costs of collective individuals, but bringing additional costs and thus reducing access to health services.

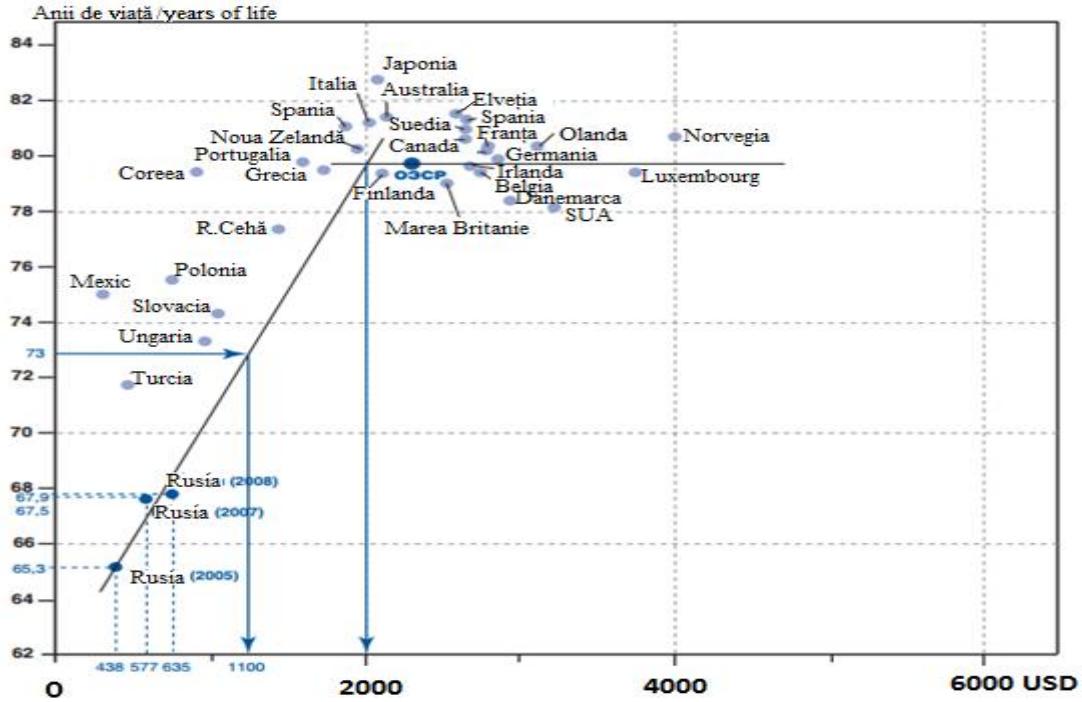


Fig. 3. Life expectancy depending on the state of health expenditure per capita per year, USD (PPC)

Source: Research authors.

How do insured people see medical services? Users of medical services in the Netherlands face additional costs to control overall spending in health. In October 2012, the National Institute for Health Services Research (LEVEL) sent a questionnaire to 1,500 people mixed, Dutch Health Care States Consumer Panel, led by the (www.nivel.nl/ Consumentenpanel-GEZONDHEIDSZORG). This sample was representative of the Dutch population over 18 years. The questionnaire was answered by 845 people (56%) completed the questionnaire received.

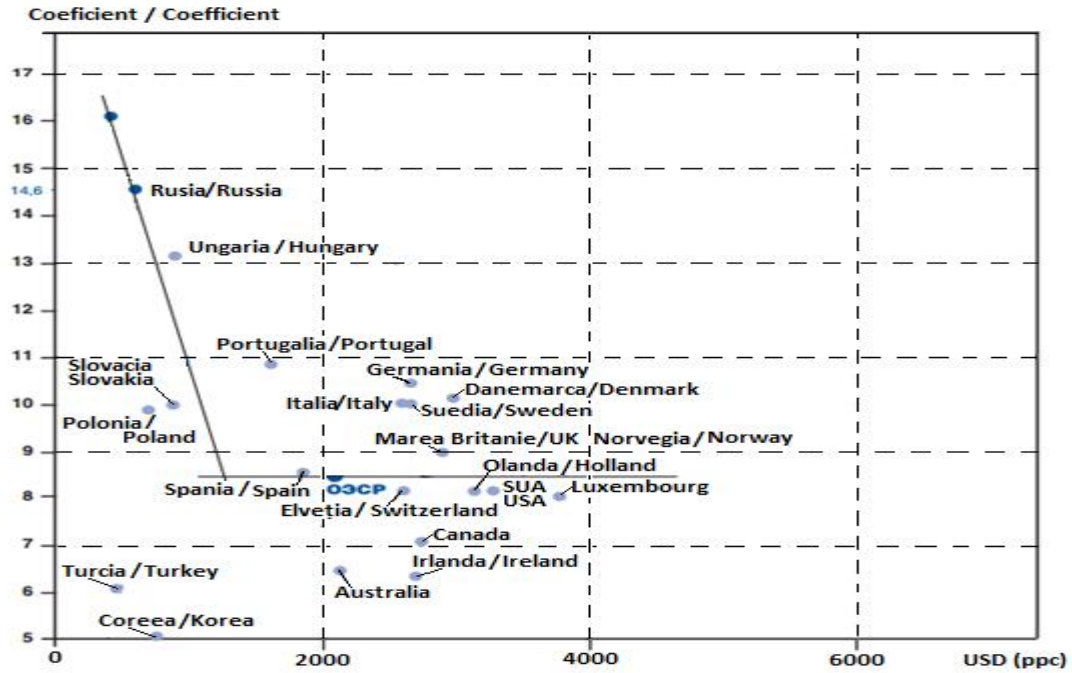


Fig. 4. The coefficient of mortality depending on public expenditure on health per capita per year, USD (PPC)

Source: Research authors.

Firstly, users were asked whether medical services are of the view that health care is affordable. About three from ten (31%) people responded that, currently, health services costs were not available. More than half (52%) of the subjects responded that they had little or very little confidence that health services will become more affordable for them the following year (2013). In addition, about seven in ten (69%) people said they had little or very little confidence that health care will be affordable in the long term.

A proof of inequality in access to healthcare would be if there were groups of policyholders faced especially with financial difficulties and who could suffer more in the future. There are considerable differences between groups of policyholders in terms of accessibility, current as well as future prospects. For example, there is an association between income and affordability: policyholders with lower incomes have more problems of accessibility to health services than insured with middle and high incomes. Moreover, there is an association between the level of accessibility and health: the insured with a correct perception and poor general health on their own tend to believe that health services are not accessible to them. They also have less confidence in increasing their access to healthcare, compared with people who have a very good or excellent health condition.

Does the rising cost is a barrier to consumption of medical services?

An important unintended consequence of attempts to ensure the sustainability of the health system is that, due to the introduction personal payments, people may have difficulties in accessing health services they need. At the moment, it is not the case of the Netherlands. Only a small percentage (7%) of users indicated that have not visited a doctor in 2012 because of cost. A similar proportion (8%) reported that they have made a medical examination or a certain treatment in 2012 because of cost, but this may change. Almost half (46%) of users surveyed believe that health care costs continued growth will be a barrier to access to healthcare. Furthermore, people facing accessibility problems have not visited a doctor nor conducted any medical examination or treatment in 2012. In addition, people have no confidence in change often believe that increasing costs will represent a barrier to health care services at a time.

The importance of continuous monitoring

European countries have implemented a range of policies in an attempt to maintain accessibility to healthcare patients. A health system goals such as equitable access to health services should be taken into account when deciding their implementation. While some policies promote these objectives, others, such as taxes imposed on recipients, risks undermining them.

The international experience is suggesting that the taxes affect in an uneven the population with low level of income and ensured people in general. Moreover, it is unlikely that the expenses related to health assistance will be lowered as a result of decreasing access to health services.

Case study results on Dutch health system support the findings that were presented above. Specifically, the results suggest that equal access to healthcare could become a challenge for the health system in the Netherlands. For example, an unintended consequence of measures to introduce additional fees for users of medical services is that people avoid or delay to seek medical services. This is confirmed by the results of the international survey conducted by the Commonwealth Fund, showed that 22% of the Dutch are facing problems regarding access to health care because of high costs. The percentage is quite high compared with those in other countries where the survey was conducted.

Another study found that 9% of Dutch said they had resorted less to health services in 2012 due to the amounts that had to shell out taxes due to the introduction of compulsory insurance policies. Although they do not include visits to the general practitioner, testified that most people rarely went to the doctor's office general.

Conclusions. The results of several studies suggest that the transfer of collective costs to individuals has serious implications on access to healthcare. It is therefore important that the Dutch authorities continue to observe if policyholders in general or those from disadvantaged groups, in particular, face more problems regarding access to health care because of high costs. This would not be in line with the objectives of the health system, according to which everyone must have access to necessary medical care.

Insurance system in the Netherlands

- Each citizen at the age of 18 is required to pay health insurance (ie., The basic package);
- Health insurance companies are obliged to accept every citizen who wants to purchase the basic package of health services, without making any difference and regardless of risk;

▪ The minimal package of health services is the same for everyone and includes all necessary healthcare. The idea is to have competition between companies, both in terms of prices and in terms of quality of services provided;

▪ The complementary health insurance is also available, but is not mandatory and should not necessarily be acquired by the same insurer as the basic package;

▪ Citizens are free to choose among several insurance companies and can change insurer once a year;

▪ A single premium insurance, costs approximately 1,250 euros (in 2012), plus a contribution of income of each person is initially paid by the employee and then is reimbursed by the employer. Half of the total cost of the insurance premium will be the individual insurance premium, and the rest came from contributions;

▪ People with low incomes are exempt from health insurance;

▪ There are mandatory fees from insurance policies increased from EUR 150 in 2008 to 350 euros in 2013; optional charges available insurance policies, plus mandatory fees (between 100 euros and 500 euros).

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INFORMATION – A VALUABLE ELEMENT IN THE MANAGEMENT SYSTEM OF THE MARKET ECONOMY

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News. The globalization process has been accelerated by the explosion of information technologies entering into the work of social, production and education enterprises. Thus, in terms of systemic approach, the company is not a production of goods or services tailored to market requirements, but is equally an information unit producing knowledge. Purpose. The fundamental feature of these processes is applied once that the primary element of information processing is generated always in the information system, the information processed and interpreted in its final form as a resource of the management system. Methods. The article exposed the theoretical and methodological organization of information system of market relations and the role of information as a valuable element of business processes. Results. In the modern knowledge-based economy, increasing information needs at all levels of economic units that generate the emergence of new information products, enhancement of the productive resource and service information and transporting it by modern computerized channels.Information as a productive resource and service as the raw material for creating an active instrument of scientific management and virtual education in Moldova.

Keywords: *information, valuable resources, organizational memory, services, prices, inputs, outputs, system approach, system information, communication, wiki, knowledge base, experience of the organization.*

Actualitatea. Procesul globalizării a fost accelerat de explozia tehnologiilor informatice care pătrund în activitatea întreprinderilor sociale, de producere şi învăţământ. Astfel, sub aspectul abordării sistemice, întreprinderea nu mai este o unitate de producţie a bunurilor sau serviciilor adaptate cerinţelor pieţii, ci devine, în mod egal, o unitate de producere a informaţiei bazată pe cunoaştere. Scopul. Caracteristica fundamentală a acestor procese aplicate este dată de faptul că elementul primar al prelucrărilor este informaţia, generată întotdeauna în sistemul informaţional, prelucrată în cel informatic şi interpretată în forma sa finală ca resursă în cadrul sistemul de management. Metodele. În articol sunt expuse bazele teoretice şi metodologice ale sistemului informaţional al organizaţiei în relaţiile de piaţă şi rolul informaţiei ca element de valoare a proceselor de business. Rezultate. La etapa contemporană a economiei bazate pe cunoaştere, cerinţele informaţionale sporesc la toate nivelurile unităţilor economice care generează apariţia unor produse informaţionale noi, punerea în valoare a informaţiei ca resursă productivă şi serviciu şi transportarea ei prin canale computerizate moderne. Informaţia ca resursă productivă şi serviciu în calitatea sa de materie primă pentru crearea unui instrument activ al conducerii ştiinţifice şi învăţământul virtual din Republica Moldova.

Cuvinte-cheie: *informaţii, resurse valoroase, memorie organizaţională, servicii, preţ, intrări, ieşiri, abordare de sistem, sistem de informare, comunicare, wiki, baza de cunoştinţe, experienţă a organizaţiei.*

Актуальность. В процессе глобализации усилилась технология информационных систем, которая проникла в деятельность общественных предприятий, производственных и учебных. Таким образом, под системным подходом, предприятие стало не только производственной единицей материальных благ и услуг, но и источником систематизированной и обработанной информации основанной на знаниях. Цель. Дать основательную характеристику внедрённых информационных систем, поскольку информация является первичным элементом, генерируемой и обработанной технологическими процессами с целью получения прибавочной стоимости в

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системе менеджмента. Методы исследования. Изложены теоретические и методологические основы информационной системы организации в рыночной экономике, а также роль информации как стоимостного элемента бизнес процесса. Результаты исследования. На современном этапе развития экономики, основанной на знаниях, требования к информационным системам возрастают на всех управленческих уровнях принятия решения. Таким образом, установлено, что информация является производственным ресурсом и услугой как первичный элемент в процессе создания добавочной стоимости системы менеджмента.

Ключевые слова: *информация, ценная ресурсов, организационной памяти, сервис, цена, входы, выходы, системный подход, информационная система, коммуникации, вики, базы знаний, опыта организации.*

JEL Classification: C73, M51, H30, H70, H72.

Introduction. The globalization process has been accelerated by the explosion of information technologies entering into the activity of social, production and education enterprises. Thus, in terms of systemic approach, the company is not a unit of production of goods or services tailored to the market requirements, but are equally becoming a unit of production of the knowledge-based information.

The fundamental feature of these applied processes is once that the primary element of information processing is generated always in the information system, being processed in the information system and interpreted in its final form as a resource in the management system.

Contemporary knowledge-based economy requires the use of computerized machine with the means of communication and transfer of information collections, being a crucial tool for the implementation of an efficient management.

Based on theoretical and methodological aspects of building economic relations, the principles of organization, creation and information management as a value-adding resource in the management system, there is required a research on the issues raised by the aspect of the modernization of the information management.

The importance of information in the management system of the market economy. So, the basic concept is that the information is a raw material which society consumes in enormous quantities and within the market economy it is requested in an increasingly demand. Within the presented expression, information as a valuable resource is designed in a new, original form that reflects essentially the economic and managerial content.

Information and communication processes specific to the organization's internal and external environment are characterized by a wide variety of information in terms of content, forms of expression, area of activity, quality and quantity.

Theory and practice of the systems reveal the modern concept developed by Ludwig von Bertalanffy [1, p. 18], whose fundamental aim was to issue a series of explanatory principles, which consider the reality formed from a variety of systems, with which it can be modeled and interpreted.

According to J. W. Forrester [4, p. 53] information and theory systems extended over the enterprise information issues, while considering the company as a cyber-based information system as a productive source.

Based on the information theoretical aspect we can say that the cybernetic system founded by Nobert Wiener represents the general knowledge of systems control [2, p. 29, 33].

Cyber systems approach is based on a global analysis of items, mainly in terms of interaction, where the whole system of organization is characterized as complex, dynamic and nonlinear.

Viewed in this aspect, cybernetic system is a meeting of elements characterized by the presence of interactions and exchanges of information, energy and materials so as to ensure a period of self-regulation process of the whole system.

According to the concept developed by Vasile Leontiev [3, p. 48] any system consists of entries that turn into outputs. So, just the enterprise's subsystems can only be determined in terms of the types of activities thereof, namely: production activities (natural or technological) information activities, leadership activities. In economic units there can be targeted three types of systems that act closely linked: the system of decision, execution or operational system and the information that provides the connection between the other two elements of management systems. The information systems having regarded the management process is performed on the following levels: operational, tactical and strategic.

At the present level of the economy, through the information there is increasingly active opening all the fields of human activity and management according to European standards. A special share lies in the distance education information, using the virtual method via Internet etc.

The evolution of information systems and extension of their areas of coverage have created informational risk categories whose long term effects are not yet fully evaluated.

In competitive economy, application of the information into economic activities, using it only as an element of manufacturer of values, but also as an object of transaction and information market expansion activities paved the appearance of marketing information.

Development of the management information system is represented by the activities of the organization in order to produce new ideas and their materialization in practice [5, p. 57]. The complexity of this function is present in all fields, including higher education and resides in the permanent organizations needed to adapt to new technologies and in their efforts to engage in various investment modernization projects.

We should note that in the market economy there is a shift from the concept of assisted informatics in the organization of economic and public institutions, to a computer oriented towards facilitating the exercise of managerial processes attributes [4, p. 28].

Also for contemporary businesses and organizations has become more acute the knowledge of probable evolution of driven processes, anticipating market events, the desire to be able to adapt economic strategies and policies to requirements. Naturally, such a goal cannot be satisfied besides by including information products dedicated to management of organizations.

These considerations require completion of a new profile of modern management situated on new information technologies.

The management system includes production elements that are internal systems among which there are established material and informational links. The informational existing report between internal systems is reflected in a series of information such as: what the finished product should be obtained, the raw material to be used, what technology is applied to transform raw materials into a finished product or performance of services.

We believe, however, that the production system can reach its objective of getting a certain type of products and/or services, unless it is permanently linked in terms of information with a number of other systems in the enterprise: trade, human resources and technical systems.

Moldova's integration into the international network of the European countries has changed the situation by the increase of demand for information products and services from newly formed companies; the demand for economic information has also increased, as well as the one for circumstances and financial offered by traditional and modern computerized channels; price for production and information services as a productive source have also increased [6, p. 52].

The operation of the management system in the market economy is required to be based on a set of principles predestined to ensure the fulfillment of functions of specific information with maximum efficiency. Any service or information product must be launched on market first by value, which is created through a cover customer needs, helping it to solve an economic problem, to achieve a goal, giving him a benefit. Therefore, for the subordination of the creation and operation of the management information system to the requirements of the market economy, it is necessary that its specific requirements and objectives to reflect the fundamental derived, specific and individual objectives of the respective companies. In this context, a particular attention is paid to the problem of correlation of the information management system with decision-making system and the structural organization of the social-economic units. These represent a practical information of interest to local entrepreneurs.

A great value for the information management system has the assessment of the economic effects of the use of information as a productive source of this system. That is why in the free-market conditions of the information production, the price formation is of interest that serves as an instrument of competition, since the successful implementation of one or another informational product largely depends on its price. The optimal information production price is differentiated on account of two requirements: providing a potential competition and of the income from production selling.

In determining the price it is necessary to consider the strain on information production, the possibility of payment of potential consumers. For the Republic of Moldova, the most appropriate is the information cost estimation procedure based on the forecast of the increase of the company's revenue, which may be obtained from the use of that information.

On the international level, in the information flow there is observed the need to create tools that will

enable knowledge resource management, their dissemination and exploitation. This led to the promotion of a new concept, the organizational memory [5, p. 310]. Formation and administration of enterprise's memory is subordinated to the systemic approach that focuses mainly on human and informational aspects.

Therefore, the organization memory brings together in a system design the data set and individual and collective knowledge generated by internal and external environment of the enterprise or organization. Thus, this is reflected through the use of information and communication for negotiation.

The materialization of the enterprise memory in the modern organization of the XXI century is turning to generalize methods of knowledge archiving. This creates prerequisites for the development of an infrastructure capable of ensuring the use of electronic document management systems, such as document management and workflow [6, p. 48-49].

Study of the theoretical and methodological issues allow the development of a theoretical and technological rationale for implementing the information as a productive resource and service in the development of the economic and managerial relations under the functioning of the informational flow.

Conclusions

In the modern knowledge-based economy, information needs increase at all levels of economic units that generate the emergence of new information products, enhancement of the information as a productive resource and service and its transporting by modern computerized channels.

Information is a productive resource and service, the raw material for creating an active instrument of scientific management and virtual education in the Republic of Moldova.

The subordination of the creation and operation of management information system and expanding its coverage areas gave rise to a category of information risks, whose long-term effects are not yet fully evaluated.

Application of the information into economic activities allows its use not only as a component or element of manufacturer values, but also as a consumer appreciating the price.

A close attention returns to the matching problem of the management information system with decision-making system and the structural organization of economic and social units.

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MIGRATION ISSUES AND THEIR ECONOMIC IMPACT

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The most important and avidly debated effects of undocumented immigration involve the UE' economy and labor force. It is estimated that there are 12 million undocumented immigrants in the UE today, and their impact on the economy can be perceived as positive as well as negative. The overall effect is unclear, and this page aims to present both sides of the debate. The main argument supporting the undocumented immigration is that migrant workers do jobs that UE do not want to do. Given that most of the EU labor force does not compete with undocumented workers for jobs, there has not been a significant shift in the wage rate. Who is then hurt by these immigrants doing jobs that "we will not do"? For instance, those without high school diplomas are the ones who are most affected. It is estimated that undocumented immigrants have lower wages by approximately 3 to 8 percent for low-skill jobs. Furthermore, Americans who compete with immigrants for these jobs stand to make an additional $25 a week if undocumented immigration were to be severely cut down. This modeling demonstrates how migration has varied economic impacts across economics. While mining GDP is boosted by migration, in percentage terms this boost falls well short of the boost to population. This is because mining is dependent on a fixed natural resource. Thus mining GDP is substantially lower on a per capita basis. On a per capita basis, the boost to the Government services industry is modest. This reflects the falls in general government final demand per capita. The boost to Agriculture on a per capita basis is also modest. This is because Agriculture is dependent on the supply of agricultural land, limiting its ability to expand with a higher population. Both the manufacturing industry and the other services industry achieve large gains from migration, as these industries do not face the same natural constraints as mining and agriculture. They both benefit from their exposure to the strong gain in household consumption per capita, and the more plentiful supply of high-skilled workers. Manufacturing also benefits from the very strong gain in investment demand per capita.

Keywords: *migration, economics, economic growth, productivity, benefits, economic acceleration.*

Cele mai importante şi intens analizate efecte ale imigraţiei fără acte sunt legate de economie şi forţa de muncă în UE. În prezent, se estimează că există 12 milioane de imigranţi fără acte în UE, iar impactul acestora asupra economiei poate fi perceput ca fiind atât pozitiv, cât şi negativ. Efectul general este neclar, iar această cercetare îşi propune să prezinte ambele părţi ale dezbaterii. Principalul argument în susţinerea imigraţiei fără acte este că lucrătorii migranţi acceptă munci, pe care membrii UE nu doresc să le execute. Dat fiind faptul că majoritatea forţei de muncă din UE nu concurează cu lucrătorii fără acte de identitate pentru locuri de muncă, nu a existat nici o schimbare semnificativă în rata salariului. Cine a suferit pe seama acestor migranţi, dacă localnicii "nu vor să le facă"? De exemplu, cei care nu au diplome de liceu sunt cei mai afectaţi. Se estimează salarii mai mici la imigranţii fără acte", cu aproximativ 3 până la 8 la suta pentru locurile de muncă necalificate. Mai mult decât atât, americanii concurează cu imigranţii pentru aceste locuri de muncă pentru a face 25 $ pe săptămână, în cazul în care imigraţia fără acte urma să fie redusă sever. Acest lucru demonstrează modul în care migraţia de modelare a variat impactul economic în întreaga economie. În timp ce PIB-ul minier este stimulat de migraţie, în procente acest impuls scade mult impulsul populaţiei. Acest lucru se datorează faptului că bunăstarea este dependentă de o resursă naturală fixă. Astfel, PIB-ul creşte substanţial, dar la o rată mai mică ca numărul populaţiei, ceea ce reflectă scăderile cererii finale generale pe cap de locuitor înregistrate în guvern. Impulsul pentru agricultură pe cap de locuitor este, de asemenea, modest, cee ce se datorează faptului că agricultura depinde de livrarea de terenuri agricole, limitând capacitatea sa de a se extinde cu o populaţie mai mare. Atât industria prelucrătoare, cât şi industria serviciilor beneficiază de pe seama migraţiei, deoarece aceste industrii nu se confruntă cu aceleaşi constrângeri naturale ca şi agricultura. Ambii beneficiază în rezultatul câştigului puternic în consumul casnic pe cap

de locuitor, iar oferta mai abundentă de lucrători este de înaltă calificare. Producerea beneficiază din creșterea cererii investiționale pe cap de locuitor.

Cuvinte-cheie: *migrație, economie, creștere economică, productivitate, beneficii, accelerare economică.*

Наиболее важными и широко обсуждавшиеся эффекты незарегистрированной иммиграции связаны с экономикой и рабочей силы в ЕС. По оценкам, в настоящее время в ЕС насчитывается 12 миллионов нелегальных иммигрантов, и их влияние на экономику может быть воспринято как положительно, так и отрицательно. Общий эффект неясен, и эти исследования имеет целью представить обе стороны. Основной аргумент в поддержку незарегистрированной иммиграции является то, что трудовые-мигранты соглашаются на работы, на которые рабочие из ЕС не соглашаются. Учитывая, что большая часть рабочей силы ЕС не конкурирует с работниками-мигрантами на рабочие места, не было зарегистрировано сдвигов в размере заработной платы. Кто же тогда пострадал от этих иммигрантов при выполнении работ, если местные "не желают их выполнять"? Например, те, без школьных дипломов, в наибольшей степени страдают. По оценкам эти работники получат более низкую заработную плату, что примерно на 3-8% из-за квалификации. Кроме того, американцы, конкурируют с иммигрантами на эти рабочие места стоят, чтобы получить дополнительные 25 USD/неделю. Это моделирование показывает, как миграция варьирует экономические последствия всей экономики. В то время как ВВП повышается за счет мигрантов, в процентном выражении этот прирост значительно отстает от роста населения. Это происходит потому, что благосостояние зависит от фиксированного природного ресурса. Таким образом, ВВП значительно ниже на душу населения. Влияние некоторых отраслей скромны, как то: сфере услуг, сельское хозяйство (расширение сельскохозяйственных земель ограничено), ограничивая его способность расширяться пропорционально росту численности населения. И в обрабатывающей промышленности и сфере услуг возможны выгоды от миграции, поскольку эти отрасли не сталкиваются с теми же естественными ограничениями, как в сельском хозяйстве. В обеих случаях идёт сильный прирост потребления домашних хозяйств на душу населения, и поставки высококвалифицированных работников. Производство также извлекает выгоду из очень сильного прироста инвестиционного спроса на душу населения.

Ключевые слова: *миграция, экономика, экономический рост, продуктивность, выгоды, экономическое ускорение.*

JEL Classification: F22, F29, F15,

Introduction. Experts have established that all over the world in 2014, there were 232 million migrant workers. In total for the year, they sent remittances amounting to 511 billion dollars, which is comparable to the annual GDP of countries such as Poland or Sweden.

Research goal: is to research modern migration geography and estimates the economic effect of the process.

Research and analysis. The most popular places for migration over the past decades are the US and EU countries. According to the European University Institute (European University Institute), in the EU are up to 43 million migrants. Of these, 20 million are Europeans living in a State in which we were born, and the rest moved to the EU from countries not members of the alliance. By the number of immigrants, in the European Union is not much inferior to the absolute world leader – the United States. The United States opted for resettlement of 46 million people [2].

According to researchers and experts [1] in the near future after a better life will come to Western countries a large number of refugees and immigrants in waves less favorable economic regions. Each year increases only the number of migrants to Europe. In 2014, the citizens of these countries came to the European continent by 45% more than in 2013. Only in the European Union an application for refugee status filed 866,000 Syrians and Iraqis. Among the countries where most willingly sent migrants palm belongs to Germany. Among the European countries in the top ten also included Sweden, Italy, France, Britain, Austria and the Netherlands. Apart from Europe, the United States and Turkey are also popular among migrants. However, some of these countries have become a refugee "transit point", and only some of them gets to the intended location. In European countries, refugees penetrate mainly from southern and eastern regions of the world. "Europe – a continent of refugees [3]. But the problem is that the system

working with migrants practically does not work. The policy of the EU countries on this issue is very heterogeneous. If the countries of Southern Europe refugee camps over reminiscent of concentration camps, then, for example, in Sweden, the conditions of displaced persons are much more comfortable.

Fears of invasion of migrants in Europe, seems to be completely unnecessary – at least from an economic point of view. But there are problems in terms of social, cultural, terrorism and national security. A number of studies shows that even refugees as a result of the state shelters bring more profits than losses. From January of this year in Europe came 362 thousand illigal immigrants, estimated the International Organization for Migration. It is estimated that 80% of refugees fleeing the violence in their country. According to European laws, which were developed in the 90s, Europe should grant them asylum in the first country of their arrival. This led to the fact that many migrants began to settle in Greece, Italy and Hungary. In 2004, European countries were allowed to decide the issue of migration, and how to let someone. Budget Breakdown Britain from migrants from Eastern Europe is 1.21 times as much as for her expenses.

This year, the flow of refugees into Europe has increased dramatically. EU officials have even begun to discuss the options for deportation of refugees who have arrived from certain countries. Now EU governments are thinking of how to resettle refugees from Greece and Italy, throughout Europe. First we talked about 32 thousand refugees, but want to discuss the increase of the ceiling to 160 thousand. As one of the reasons why countries are afraid of an influx of refugees, indicate concerns that migrants will become an economic burden. However, many studies have shown that this fear is unfounded. In this regard, are revealing two different approaches to the problem – German and British. Germany, apparently, is well aware that migrants are not a synonym burden. Therefore, quite comfortable with the refugees and their possible legally employed on its territory. The authorities have stated that in the next few years will be able to receive annually about half a million refugees. This year, the country is ready to accept 800 thousand workers. They will have to spend 10 billion euro, estimated the German media. That's four times more than last year, when in Germany came to live about 200 thousand foreigners. On the content for each migrant goes 12-13 thousand euro per year. The expenditures included food, accommodation, medical care, as well as funds for spending and learning the German language.

However, the authorities recognize that benefit from this flow of migrants. Firstly, it solves the demographic problem. Only in 2012 the death rate over the birth rate in the country has exceeded 200 thousand man. In addition, the German government said last week that every euro spent on training workers, means investments in order to avoid shortages of skilled labor. Otherwise, they argue, they would have to spend more than that on the benefits to the unemployed.

However, the United Kingdom under the pressure of the public does not want to take the intruders. Britain can receive only 20 thousand Syrian refugees until 2020 [4].

Meanwhile, many studies show that migrants solve not just the problem of the aging of Europe's population, but "in most countries, they are paying more taxes and social contributions than they receive" from the state. Such a conclusion is made in the recent report of the World Bank, the International Labour Organization of the United Nations and the OECD.

"There are more than a dozen of good research at the moment, which refers to the net positive effect of immigrants on the economy" [Ian Goldin, director of the Oxford Martin School, Professor of the Department of globalization and the development of the University of Oxford].

For example, those who came to the UK in the years 2000-2011, contributed to the payment of taxes to 5 billion pounds, according to a London study. Professor of Migration at Oxford University Carlos Vargas-Silva found that the influx is 260 thousand. In a year immigrants could help the UK to halve the public debt for 50 years [5].

Previously, different models of studies have shown that revenues from visiting the UK from Eastern Europe at least 1.21 times more than their cost. According to some other models of the gap is even greater – 1.4 times. One reason for the "profitability" of migrants is that they receive less benefits than natives. Plus usually migrants – young people do not receive a pension and rarely get sick. This fact outweigh the fact that the newcomers get less and therefore pay less tax. And, in this respect, the UK is even more lucky, since English has more people than, for example, Swedish. So Britain gets the most benefits.

The only thing that a number of studies showing that European workers and "strangers" gives a different economic effect. For example, the Swedish economist from the University of Gothenburg Yokim Ruyst believes that the Syrians, Yemenis and Egyptians – are not the cheapest workers. Migrants from Eastern Europe, especially the Russian, Poles and Lithuanians, have a more positive effect on the

economies of rich countries as they work long hours and do not require benefits. Ruyst investigated the influence of immigrants from Eastern Europe GDP native Sweden. The biggest buzz in the media led the study at University College London (University College London) and the Centre for Migration Studies (Center for Research and Analysis of Migration), presented in November 2013. The authors concluded that in the years 2001-2011 migrants from European countries brought to the treasury of the United Kingdom 34 percent more money than the state spent on them. Net income from the UK guest workers reached 22.1 billion pounds. In contrast, migrants from non-European countries have added to the treasury only 2.9 billion pounds, which is only two percent higher than the amount spent on these funds. Thus, a total of ten years the United Kingdom has received visitors from 25 billion pounds. In addition, it was found that migrants tend to rely less on social benefits – the likelihood that the organs of state support in the event of a 21 per cent lower than in the case of local residents (subject to the same qualifications and age). His analysis also proved that state revenues outweigh its costs. The average contribution of migrants to the state budget in the year amounted to about 12 thousand crowns, or about 1,300 euro. And the long-term effect is also positive. Even taking into account the fact that the visitors are old in Sweden and will receive a pension from the state budget, their contribution will still be more than the costs incurred by the state.

However, Alexander Betts, director of the Center for Refugee Studies at Oxford University, notes that there is a positive economic impact, regardless of who is a migrant. While agree that the effect is higher when migrants are well educated, like most Syrians, he says. That's only in contrast to immigrants, refugees do not choose. But potential refugees differ from them only slightly. It is what they are likely to choose to return home if the opportunity arises, and if not – then they adapt, like other migrants, says Betts. In some cases, may result in an influx of refugees to the local negative impact on jobs, but not necessarily, he adds. There are studies which show that workers do not take jobs away from locals. "The influx of migrants can bring down wages, but generally pay for other workers, and only 1-3%. In general, the impact on wages or the number of jobs is neutral or positive", said the expert of the Institute of International Migration at Oxford University. So why other countries are closing their doors to refugees? Experts point out that the reasons are not economic, they are driven by the fear of cultural influence of foreigners. In August, for example, Slovakia stated that the Syrians will accept only the Christian religion. However, Europe will have to put in order its own rules on asylum and learn how to deal with cultural differences because the refugees who are fleeing from hunger who are from war, sometimes even dying on the way to Europe.

According to the estimates of the European Commission, by 2017 in EU will arrive at least 3 million immigrants who continue to arrive in the Mediterranean Sea in ever increasing quantities. According to the executive body of the EU, it will have a positive, albeit barely perceptible effect on the economy, increasing GDP by 0.2-0.3%. At the same time, government spending on the resettlement of refugees and the content can reach this year 0.5% of the GDP of the European Union.

The population of the EU will also increase by 0.4%, taking into account the fact that part of the asylum seekers will be denied. The United Nations recognizes that the flow of Syrian refugees in Europe has not dried up. Five thousand per day. Despite the fact that as the winter weather in the Aegean Sea has been steadily deteriorating, it does not stop the settlers. "The war in Syria pushes people to desperate measures, forcing them to leave the country, and this situation will continue. The responsibility for them lies with the world, but first and foremost to Europe. "In Europe, rush not only residents of Syria. Conflicts, human rights violations and economic difficulties in Iraq, Afghanistan, Eritrea and Somalia make people to leave their seats and seek a better life in Europe. Most of migrants are coming from countries of the former Yugoslavia, as well as Pakistan, Bangladesh and the countries of Central Africa. At the meetings of the United Nations High Commissioner for Refugees (UNHCR), it is expected that this winter from Turkey to Greece on a daily basis will be arriving 5 thousand people. Speaking to the economic outlook for the autumn, the European Commissioner for Economy Pierre Moscovici noted that the additional public spending and inflow of labor in the face of received refugee status would lead to a slight increase in the EU's GDP [6].

At the same time the process of recognition of the migrant as a refugee often takes a long time, during which the status of the applicant is not permitted to engage in employment.

Alarming forecasts. Meanwhile, the leader of the Party of Independence of the United Kingdom (UKIP) Nigel Faraj, commenting on the European Commission the reduced figure of three million workers, said that nothing could better illustrate the need to exit from the EU and the introduction of a full border control than these alarming forecasts. UKIP claims that by staying in the EU, Britain is powerless to prevent immigration from other EU countries. The European Commission itself indicates that the figure of 3 million is only estimative and this is not an official forecast, including those illegal migrants who have arrived in the EU in 2015. According to the UN, this year in the European Union by sea arrived more than 750 thousandworkers, while for the entire 2014 there were 282 thousand. The vast majority of migrants (608 thousand) fell in Greece, which has become a favorite place for the landing of illegal immigrants.About 140 thousand came in 2015 in Italy.



Fig. 1. The path of migration to Germany

Source: Europol, BBC.

With the ultimate goal of migrants usually is Germany, where they hope to receive asylum. German authorities believe that this year they will take not less than 800 thousand. New migrants, and their total number may reach half a million.

The greatest number of immigrants per capita of the local population in the EU accounts for Sweden.

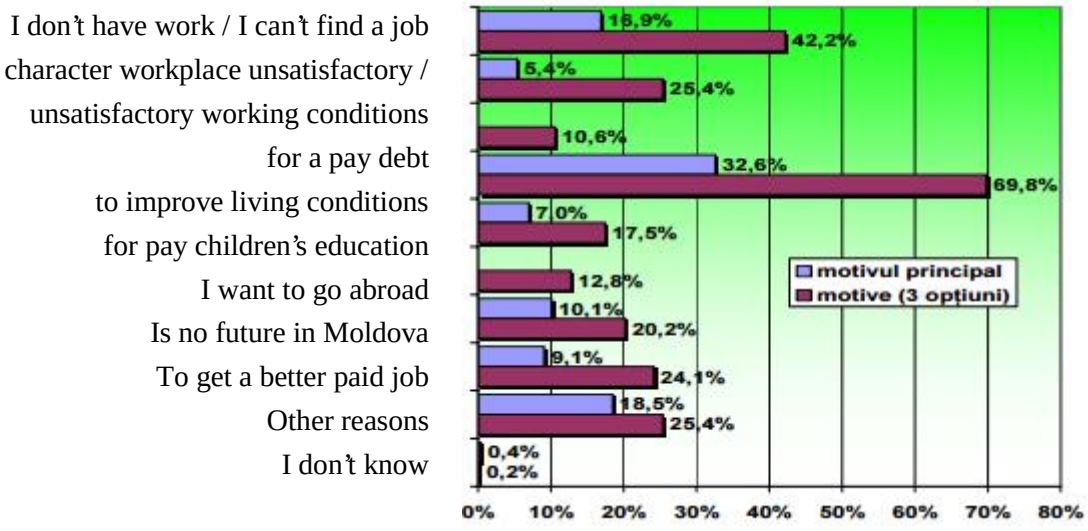


Fig. 2. The reasons for repeated emigrations from the Republic of Moldova

According to the European Commission, the added burden of government spending could reach this year to 0.5% of GDP, with the attendant positive impact of migration on economic growth will be less than this figure.

Conclusion. All the above examples show that, in spite of globalization, migration is primarily a regional problem. Consequently, the approach to the same criteria for evaluating the effectiveness of migration is not possible. The lack of consensus on the economics of material benefits of migration means that in the near future, it will be evaluated, it is still based on emotional stereotypes rather than scientific facts.

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PROBLEMS OF FINANCIAL STABILITY OF COMMERCIAL BANKS IN THE REPUBLIC OF MOLDOVA

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Banks are an integral part of the overall financial activity of the country, business activity indicator in the Republic of Moldova. Therefore, making an analysis of the activities of these institutions, as a system, it will be possible to make correct conclusion about the state of the national economy at the present stage of development of our state. This explains the relevance of the topic.The purpose of this article is to identify the features of the functioning of the financial institutions system, in particular the banking system of the Republic of Moldova. When writing this article we used printed periodicals, book publications, Internet resources. We used scientific methods of research, such as synthesis, grouping, comparing and others.

***Keywords**: commercial bank, financial stability, financial condition, profitability, liquidity*

Băncile sunt o parte componentă a activităţii financiare a întregului stat, indicator al activităţii de afaceri din Republica Moldova. De aceea, efectuând analiza activităţii instituţiilor date ca sistem, putem face concluzia corectă despre starea economiei naţionale la etapa actuală de dezvoltare a statului nostru. Cu aceasta şi se explică actualitatea articolului dat. Scopul articolului dat este detectarea particularităţilor funcţionării sistemului financiar, şi îndeosebi a sistemului bancar în Republica Moldova. Pentru perfectarea articolului dat au fost folosite ediţii periodice, sursele internetului. În articol au fost folosite aşa metode ca cercetarea, sinteza, gruparea, compararea şi altele.

***Cuvinte-cheie:** banca comercială, stabilitatea financiară, poziţia financiară, profitabilitatea, lichiditatea*

Банки – это составная часть всей финансовой деятельности страны, показатель деловой активности Республики Молдова. Поэтому, сделав анализ деятельности этих учреждений, как системы, можно будет сделать правильный вывод о состоянии национальной экономики на современном этапе развития нашего государства. Этим и объясняется актуальность данной темы. Цель данной статьи является выявление особенности функционирования системы финансовых учреждений, и в частности банковской системы Республики Молдова. Для написания данной статьи использовались печатные периодические издания, книжные издания, Интернет-ресурсы. В работе использовались такие общенаучные методы исследования, как синтез, группировка, сравнение и другие.

***Ключевые слова:** коммерческий банк, финансовая устойчивость, финансовое состояние, прибыльность, ликвидность*

JEL Classification: E58, E59, E63, E62, E69, H69.

Introduction. The activity of commercial banks is so diverse that their real essence is uncertain. In modern society, the commercial banks, which are private and public institutions, engage in a wide variety of types of operations and provide their clients with a wide range of financial services. They not only organize the turnover of money and credit relations, through them are carried out cash, currency

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transactions, sale and issuance of securities, in some cases, brokerage and asset management, as well as the financing of the national economy as a whole. Commercial banks have a number of non-traditional banking transactions such as leasing, factoring, operations with precious metals, forfeiting, trust operations, guarantees and sureties and other types of services.

Today, the group of commercial banks in different countries includes a number of institutions with different structures and different ownership relations. This topic is very relevant nowadays. Commercial banks system develops very rapidly. Commercial banks have their place in the economy and play a special role in the functioning of economic entities.

Results and discussions. The effectiveness of the credit and banking system of the country is largely determined by the financial stability of each commercial bank individually. Stability refers to the ability of the bank in a dynamic market environment conditions to withstand negative external and internal factors, to ensure the reliability of deposits of legal entities and individuals, to protect the interests of shareholders and to fulfill their service obligations regarding customers that generally determines the stability and the rhythm of profit growth.

To ensure the stability of the bank and effective management of the commercial bank in the current environment, it is necessary to assess its real financial condition.

The assessment of the financial condition of credit institutions together with the mandatory standards can be carried out by analyzing the system of financial indicators that provide the criterion for evaluating specific aspects of banking activities, focusing on the profitability of a commercial bank.

With the commercialization of the banking activity profitability is the main aim of credit institutions. The income, generated by the assets, becomes a source of growth. High profitability of banking business allows to pay dividends to the shareholders of the bank, it is a necessary condition for increasing its capital.

The profitability of the bank is an important characteristic of its stability. It is necessary to create adequate reserve funds, incentives for staff and management to expand and improve operations, to improve the quality of provided services and, finally, to carry out successful emissions and, consequently, to obtain capital growth, allowing to increase the volume and improve the quality of provided services.

When analyzing the stability of a business bank in terms of its profitability the following items are determined:

- The level of return on assets;
- Interest margin;
- Interest rate spread;
- The level of coverage of non-interest expenses by non-interest income;
- Profitability of the prevailing assets;
- Profitability of borrowed funds;
- Profitability of credit operations, etc.

The analysis of banking activity in terms of its profitability allows the managers to formulate the credit and interest rate policy, to identify less profitable operations and to develop recommendations in order to gain more revenues. The solution of these tasks aims at reaching the objectives that the bank's shareholders settle for the management: to improve the quality of assets, to reduce the cost of liabilities and, on this basis, to provide capital growth and income, sufficient for the reproduction of banking activity and payment of dividends.

The level of profitability depends on several key factors:

- the use of financial leverage;
- the use of fixed costs share, which the bank bears by increasing its operating profit;
- control over operating costs in order to transform the biggest part of the costs into net income;
- control over the degree of risk of banking operations, so that the losses would not reduce to zero the bank's profit and equity.

The qualitative analysis of profitability is based on the analysis of the structure of incomes and expenses of the bank, trends in the structure change, as well as quantitative measurement of banking operations profitability. The reserves of profitability growth are usually found in more efficient use of assets by increasing the proportion of "working" or interest-earning assets and by reducing the assets that don't bring income (cash, correspondent and reserve accounts, investments in fixed assets, etc.). Thus

profit depends on the quality of assets, the level of their profitability, volume and structure of attracted resources and their costs.

Since the ultimate goal of the banking activity is to make a profit, the bank's task is not only to find the resources for active operations and to ensure the return of borrowed funds at the request of the owner, but also to attract the resources at optimal terms and price, and to place them so as to cover acquisition costs, receiving income. The nature of banking activities implies the possibility of obtaining high income and at the same time implies the presence of high risk. Taking into account the bank's liabilities to depositors and the bank's role in the economy, it is necessary to find such a combination of active and passive operations, which would offset the costs, provide the required level of profitability and liquidity, offset risks and the bank's activities would fit the parameters of regulatory requirements.

Having analyzed the data of the commercial banks from the Republic of Moldova on profits and / or losses for the years 2014-2015, the size of the total profit of the banking sector exceeded 1.4 billion lei.

Compared to 2014 when this indicator was 713 million lei, the total profit in the sector has doubled.

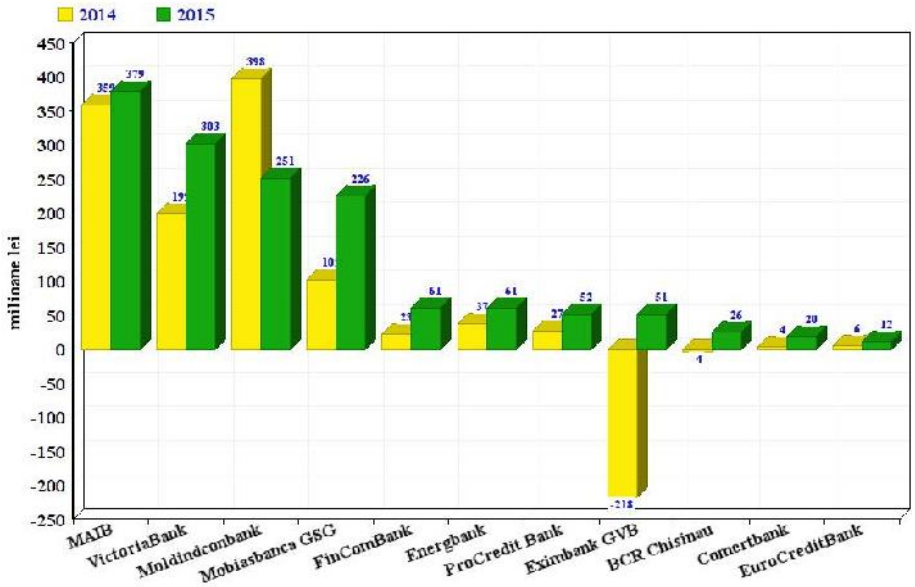


Fig. 1. Profits / losses reported by the banks from Moldova in 2014-2015, mil. lei
Source: Elaborated by the author based on the data provided by the NBM.

Moldova Agroindbank registered the highest profits in 2015 - 378.5 million lei. VictoriaBank ranks second with a result of 303.3 million lei of financial profit. The 3rd position belongs to Moldindconbank, which finished 2015 with a profit worth 251.3 million lei.

Mobiasbanca Groupe Societe Generale ranks the fourth, at a short distance from the "podium", it reported profit for the year amounted to 225.5 million lei.

Next in the rankings are FinComBank (61 million), Energbank (60.7 million lei), ProCredit Bank (52.2 million lei) and Eximbank GVB (51.4 million).

The profitability ranking for 2015 is completed by BCR Chisinau (26.4 million lei), Comertbank (20 million lei) and EuroCreditBank (12.2 million lei).

We note that none of the 11 licensed banks have reported losses at the end of 2015, while at the end of 2014 four banks reported losses. The exact data on profits or losses reported by banks in 2014 and 2015 are presented below in a table.

Also you can see graphs illustrating the financial results of banks in late 2014 or 2015 as well as the evolution of the first 4 banks during 2015.

Liquidity is also a necessary condition for the stability of the financial condition of the commercial bank. Liquidity is characterized by the ability to quickly convert assets into means of payment for early repayment of debts. Providing liquidity is an essential condition of the stability. Liquidity refers to the ability of credit institutions to fulfill their obligations and meet customers' needs through the sale of assets or their borrowing at prices no higher than competitors'. Any difficulty in the bank's activities relating to liquidity is only a symptom that points to the existence of other more fundamental problems.

Liquidity management is one of the key tasks of bank management and the mistakes and miscalculations in this area could lead to significant negative consequences, both for the individual bank and the entire banking system as a whole.

Liquidity analysis reveals the potential and actual trends, indicating a deterioration in the liquidity of the bank's balance, to analyze the factors that caused the development of negative trends and to take necessary measures to improve the situation. The key factors affecting the liquidity, are:

- the quality of management of the bank's activities
- the sufficiency of the bank's equity capital;
- the quality and stability of the bank's resource base;
- the degree of dependence on external sources of borrowing;
- balance of assets and liabilities by amounts and terms;
- the risk level of the bank's assets;
- the profitability of the bank's assets;
- assets' structure and diversity.

Liquidity is of great importance not only for the bank itself, but also for its customers. High liquidity is an indicator that the client can return the invested funds or can obtain a bank loan at any time. It protects the shareholders of the bank against the forced sale of assets in case of force majeure.

Experience has shown that current liquidity is the most important in terms of the bank's stability, which means that the bank has short term assets with maturities for paying liabilities to the depositors.

In most cases the banks, that have difficulties with current liquidity, are not able to survive, even if they possess long-term quality assets. Delays in paying liabilities to the clients cause chain reactions among bank customers. The news spreads on the market, panic starts among customers and the bank is forced to interrupt payments.

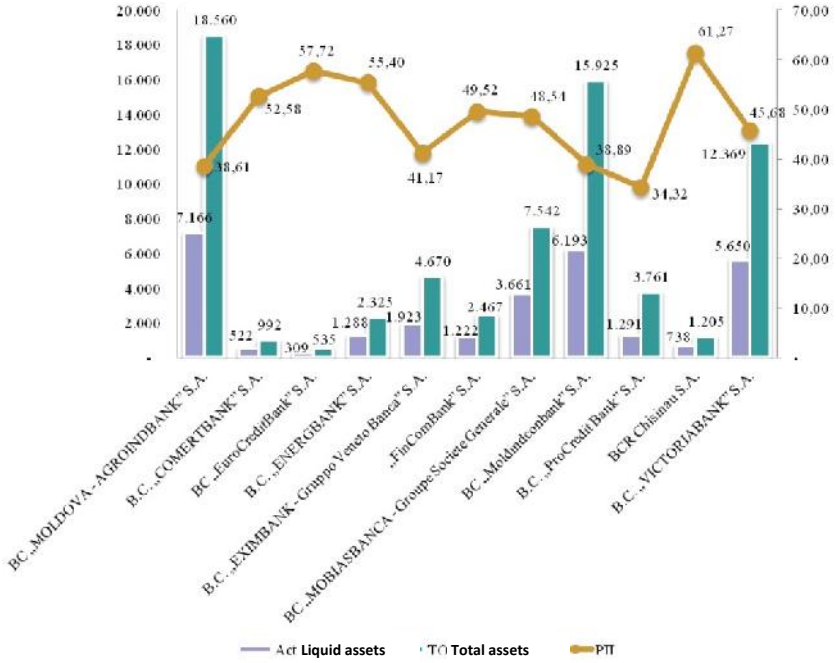


Fig. 2. Principle II in the banking sector of the Republic of Moldova on 01.31.2016, mil. lei
Source: Elaborated by the author based on the data provided by the NBM.

From Figure 2 we can see that on 31/01/2016 all licensed banks had the liquidity indicator (P II) higher than the norm set by the National Bank of Moldova (at least 20%). The biggest indicator of Principle II system belongs to BCR Chisinau (61.27%) and the lowest to B.C. "ProCredit Bank" S.A. (34.32%), the average in the sector being 42.59%.

Figure 2 shows that there is excess of liquidity in the banking sector. At first glance this phenomenon is not too positive because it shows that the bank doesn't invest its resources rationally.

According to the Regulation on bank liquidity, long-term liquidity (PI) is the ratio of assets with maturity over 2 years and bank liabilities, this ratio should not be higher than 1 (one).

From Figure 3 we can see that there are banks that have long-term liquidity ratio close to the limit, which means that the bank in question has placed money at about the same term when it withdrawn its resources. This does not mean that the bank will encounter some difficulties in honoring its obligations.

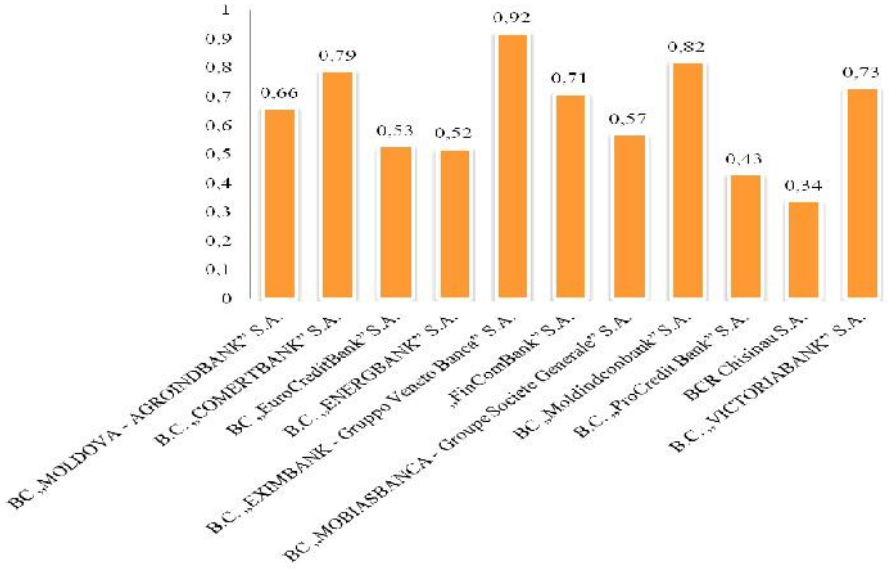


Fig. 3. Principle I in the banking sector in the Republic of Moldova on 31.01.2016, mil. lei
Source: Elaborated by the author based on the data provided by the NBM.

Banks always have access to REPO's operations conducted by the National Bank of Moldova, some banks have access to credit lines from parent banks or from the group to which they belong. Total regulatory capital is included in the calculation of Principle I of liquidity. All licensed banks have sufficient capital and reserves from retained earnings to meet any challenges that may arise in their work. Thus, there is no reason for any concern.

Conclusions. Banking system is a major economic component of any country in the world. No state can exist without this kind of financial institutions like banks. The development of the financial sector contributes to meeting the needs of the economy for quality financial services and financial infrastructure, and to ensuring effective implementation of economic and social policies of the state. In exercising the functions of financial intermediaries, commercial banks were able to mobilize and reinvest considerable financial resources.

Profitability and liquidity indicators of the banks are inversely proportional: the requirements of sufficient profitability of a commercial bank always encounter the limitation of its liquidity. The conflict between liquidity and profitability is a key one, and the stability of the credit institution largely depends on its resolution. The bank is constantly balancing between higher income that can be obtained by granting long-term credits to the borrowers with questionable credit status, by long-term investment, by reducing unused balances and meeting credit demand, on the one hand, and meeting the bank's obligations arising from the withdrawal of deposits, on the other hand. The price for the bank's high profitability is always a loss of liquidity, and the price for the maintenance of a high level of liquidity is the loss of a significant proportion of its earnings. With excessive cash balances at the cash boxes, there is minimal profit on correspondent accounts, and vice versa, profit increases with a decrease in cash balances, an increase in granted loans, increase of investments in other operations.

Thus, when considering the formation of bank's profits and liquidity, their nature and interaction, they seem to be complete opposites in mutual conflict, as in an effort to achieve their maximum profit and liquidity pursue completely opposite goals.

Carrying out an aggressive policy, aimed at maximizing profits, is accompanied by a decrease in the liquidity of the bank balance. At the same time the risk of losses dramatically increases due to the need for the rapid transformation of assets in the means of payment. Liquidity disturbance and lack of available liquid resources to meet current obligations lead to the attempts to compensate it by their additional attraction. Such actions immediately affect negatively the bank's profitability, as these fleeting asset sales usually occur at great discount prices, and attracting liquidity means entails additional costs in the form of interest.

Facing the problem of liquidity, the bank begins to conduct overly cautious policy by placing in cash longer than necessary. Excess liquidity in the bank's balance sheet allows it to feel free in terms of its payment obligations, however, it immediately affects the overall level of profitability. The reasons for reducing the efficiency of the banking sector in the Republic of Moldova are: increasing competition, the massive introduction of new banking products, requiring additional and regular expenses, physical expansion of the network of structural divisions of banks and the growth of related fixed costs, the growth effects of interest rate risk, especially for the banks serving the accounts of the Treasury of the Republic of Moldova, the administrative decision of the National Bank on raising interest rates, and others.

In this connection we can offer the main ways of solving the problems in the banking sector of the Republic of Moldova:

- to increase the share of investments in the fixed assets of the banks in order to increase the competitiveness of financial services on the market,
- to attract a bigger investment volume to be able to give credit not only to enterprises and companies, but also to individuals,
- to lower the interest rate on loans in order to increase the attractiveness of the services provided,
- to increase the network of the companies with which the bank could conclude leasing contracts,
- extensive lending to the population,
- to offer credits to mortgage companies,
- to provide new high quality services,
- the National Bank of Moldova should strengthen control and supervision of commercial banks,
- to change national regulations concerning banking activities in accordance with international regulations and requirements.

In order to harmonize domestic legislation in accordance with BASEL III, Regulation No. 575/2013 of the European Parliament and Council of 26 June 2013 and Directive 2006/48 / EC of the European Parliament and Council of 14 June 2006, the National Bank will introduce Principle III of liquidity (liquidity by maturity bands). Principle III will be calculated as the ratio of effective liquidity and the liquidity needed in each maturity band and shall not be less than 1 per each maturity band. Each component of the asset to be counted will be weighted with a certain coefficient. This is a reserve of funds in order to cope with shocks that may arise or in other words – the actual liquidity. Liabilities are also weighted and the obtained product represents funds that may be required prior period. Principle III of liquidity (liquidity by maturity bands) will enter into force starting with 30/06/2016.

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MECHANISM OF INITIATING ENDOGENOUS GROWTH IN PERIPHERAL REGIONS: IN CASE OF AUTONOMOUS TERRITORIAL UNIT GAGAUZIA

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This study shows the possible mechanism of initiation endogenous growth in peripheral regions with poorly developed industry and innovation infrastructure (in case of Autonomous Territorial Unit Gagauzia, Republic of Moldova). Understanding of scientific problem has required an attempt to create the concept of Innovation Development Systems in peripheral rural areas of countries with emerging market economies identifing the goal of this study. The empirical research base consists of two units: statistical data and the results of special studies conducted by the author. The analysis used the theoretical and empirical methods, including synthesis, scientific generalization, analogy forecasting, observation, interviews, document analysis, comparative analysis of scientific sources and documentation of legal framework forregion, a secondary analysis of data definition obtained from other research groups. Proposed mechanism will demonstrate the impact of Innovation and Education Cluster activity on increasing the innovative entrepreneurship activity, building relationships between cluster members and other elements of the Regional Innovation System. Subsequent investigations can be dedicated to search relationships in the development of innovative activity between regions of the RM and other countries in which universities play an important role in building the regional innovation development.

Keywords: *Innovation and Educational cluster, regional development, Moldova, UTA Gagauzia.*

Acest studiu demonstrează mecanismul posibil de iniţiere a creşterii endogene în regiunile periferice cu industria slab dezvoltată şi infrastructura de inovare (în cazul Unităţii Teritoriale Autonome Găgăuzia, Republica Moldova). Înţelegerea problemei ştiinţifice a necesitat o încercare de a crea conceptul de inovare şi dezvoltare a sistemelor în zonele rurale periferice ale ţărilor cu economii de piaţă emergente identificate. Scopul acestui studiu. Baza de cercetare empirică este formată din două unităţi: date statistice, inclusiv informaţii de statistici, dar şi rezultatele studiilor speciale realizate de autor. În timpul analizei au fost folosite metodele teoretice şi empirice, inclusiv sinteza, generalizarea ştiinţifică, prognoza, analogia, observaţia, interviul, analiza documentelor, analiza comparativă a surselor ştiinţifice şi documentarea cadrului legal pentru regiune, analiza secundară de definire a datelor obţinute de alte grupuri de cercetare. Mecanismul propus va demonstra impactul activităţii Clusterului de Inovare şi Educaţional pe creşterea activităţii de antreprenoriat inovativ, formarea relaţiilor între membrii clusterului şi alte elemente ale Sistemului de Inovare Regională. Investigaţiile ulterioare pot fi dedicate pentru a căuta relaţii în dezvoltarea activităţii de inovare între regiunile RM şi alte ţări în care universităţile joacă un rol important în construirea dezvoltătii regionale de inovare.

Cuvinte-cheie: *Clusterul de Inovare şi Educaţional, dezvoltare regională, Republica Moldova, UTA Gagauzia.*

Это исследование иллюстрирует возможный механизм инициирования эндогенного роста в периферийных регионах с неразвитой промышленностью и инновационной инфраструктурой (в случае автономного территориального образования Гагаузия, Республика Молдова). Осознание данной научной проблемы потребовало попытку создать концепцию системы инновационного развития в периферийных сельских районах стран с формирующейся рыночной экономикой, что и определило цель данного исследования. Эмпирическая база исследования состоит из двух блоков: статистические данные, в том числе статистическая информация и результаты специальных исследований, проведенных автором. При анализе использованы теоретические и эмпирические методы, в том числе синтеза, научного обобщения, прогнозирования аналогии, наблюдения,

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интервью, анализа документов, сравнительного анализа научных источников и документально правовой базы в регионе, вторичный анализ определения данных, полученных другими исследовательскими группами. Предлагаемый механизм демонстрирует влияние деятельности инновационно-образовательных кластеров на повышение инновационной активности предпринимательства, формирования отношений между членами кластера и другими элементами региональной инновационной системы. Последующие исследования могут быть посвящены поиску взаимоотношения в развитии инновационной деятельности между регионами РМ и другими странами, в которых университеты играют ведущую роль в построении регионального инновационного развития.

Ключевые слова: *инновации и образование кластеров, региональное развитие, Молдова, Гагаузия.*

JEL Classification: R58, E2, O18, P48.

Introduction. Economic growth in the modern states according to most researchers is provided by the National Innovation System (NIS). The problem of transformation of the existing NIS in developing countries related to the question: what factors can develop countries catch up to develop? Answering this question Gershenkron (1962) noted that a developing country has only one advantage - "advantage of backwardness": the possibility of existing institutions to borrow technologies and management methods. The problem of borrowing easier and less costly than the development of something fundamentally new". How true is this statement ? Is it possible to quickly transfer existing practices and methods of innovation development without adaptive mechanism, without preparing the ground for an effective assimilation?

Modern studies have mainly focused on highly urbanized technologically advanced regions, characterized by the institutional infrastructure development, with plenty of high-tech firms and a high level of associating enterprises, high-intensity knowledge sharing and absorptive capacity. Only a small number of empirical researches emphasize the unfavourable for innovative development conditions, characterized by the lack of innovation environment, supporting organizations, and undeveloped networking of regional development (Trippl, 2005 and Isaksen, 2001). This questions are typical for the "emerging market economies" countries for which Vercueil (2012) proposed the following characteristics: intermediate income (between 10-75% per capita income of the average EU level), catching- up growth (narrowing the income gap in the last 10 years in comparison with developed economies), economic opening and institutional transformations.

Innovation development in such regions is very difficult for a number of reasons: lack of high- tech sectors, which would have the technological complementarities and perform the role of "prime mover" of the regional economy, poorly developed network of interaction between the actors of innovation environment, lack of their critical mass, lack of institutional framework and environment that encourages innovation and technological growth (Isaksen, 2001, Todtling and Trippl, 2005).

The aim of this article is to answer the question about possibility of developing an innovative system in the peripheral regions with poorly developed industry and innovation infrastructure. The answer to this question can be found in modern studies on territories innovative development through the clustering processes. Creating an innovation network, accelerating the interactive learning process between local knowledge based actors and their external partners based on the concept of cognitive economics (Cappellin, 2003). For these reasons, in our study we focus on the one type of knowledge cluster – Innovation and Educational Cluster (IEC), which is actual for the regions with poor developed industry but universities present.

Organizations cluster benefits due to synergetic effect are obvious. The symbiosis of entrepreneurs, government agencies, educational institutions and business service providers in the region with the core – regional based University allows to establish exchange flows of innovative information, inventions and technologies between all members of the cluster and further distribute them to the entire region and beyond. This kind of innovation network allows all key actors to exchange existing information, knowledge and expertise (Cantner, Graf, 2011). The purpose of the study is to show the impact of IEC promotion innovation activities on increasing regional entrepreneur's innovation potential focusing on the determinants of relational interaction.

Shortcomings of Innovation Systems in emerging market economies. Emerging market economies require a special mechanism for the development of innovative systems with concentration on collaboration between entrepreneurship and R&D organisations. Schumpeter scholar (1939) highlighted the importance of innovation for economic growth and business development. Most innovation firms in such regions are focusing on incremental and process innovations (Tödtling, 1992; Feldman, 1994; Fritsch, 2000). This is due to the differences in regional specialization and innovation activity (Howells; 1999) with geographical limitation of knowledge spillover effects (Audretsch and Feldman; 1996, Bottazzi and Peri; 2003). Moreover, development of regional policies and institutions competences are partly bound to existing sub-national territories (Cooke et al., 2000) which characterize directly the case we describe. As a rule, the first stage of Regional Innovation System (RIS) development is fragmented and consists of non-connected actors being characterized by general problems:

- *Intra-regional level:*

1. Lack of demand for innovations due to firms' inability to identify their needs for innovation along with low quality and quantity of scientific and technological infrastructure;
2. Lack of an entrepreneurial culture in relation to inter-firm cooperation and consequently absence of economies of scale which may make profitable local innovation efforts;
3. Sectorial specialization in traditional industries with little inclination for innovation and links to the international market;
4. Weak cooperation links between the public, private sectors and regional R&D actors in policy planning (lack of coordination between public and private research organizations, collaboration between Universities and enterprises, support of innovation active entrepreneurs in priority regional sectors).

- *Inter-regional (national) level:*

1. Inadequate coordination between national and regional actions (lack of coordination of the science and technology policy between Departments (Ministries);
2. Traditional financial systems lockable for risk of seed innovation capital, defined as 'long-term intangible industrial investments with an associated high financial risk' (Muldur, 1992);
3. Poor adaptation of public assistance schemes to local SMEs innovation needs (Landabaso, Oughton&Morgan, 1997);
4. Scarcity of technological intermediaries capable of identifying local business demand for innovation and channel it to national and international sources.

- *International level*:

1. Low level participation in international R&D networks, difficulties in attracting skilled labour and accessing external know-how;
2. Poor links of large transnational companies with the local economy, low level of outsourcing development.

Barriers to increasing innovation potential of Gagauz SMEs

Due to the Schumpeter definition of an entrepreneurship (1934) SMEs play a driver forces role in the economy. Proceeding from their relatively high labor intensity and less capital investment, SMEs are able to respond flexibly and adapt to changing market conditions quicker than their larger counterparts. Entrepreneurial sector in the RM consists up to 98% from SMEs, of which 76% (until 9 employees) are micro enterprises which contribute in new job creation, support innovation and stimulate competition. More flexibility, reaction on the market demands and challenges of business environment create conditions for realizing innovation culture changing, development networking relationships and collaboration. These conditions are crucial for companies choosing innovative way of development, because the technology transfer brings the latent conflict, which leads to discrepancy innovations against the organizational culture of the company receiving innovation. In connection with these attributes is very important to keep in mind some determine features of innovative SMEs capacity identified by Hill and Nelly (2000):

- Resources: financial, intellectual, human and physical capital;
- Culture supporting innovation;
- Competence affecting on the level of absorptive capacity;
- Networking ties for innovation.

The researchers acknowledged the limitations of studies in the field of cooperation relations among SMEs (Classen et al., 2012). In turn, Rothwell (1989, 1991) gave a more in-depth assessment of the capacity of SMEs in preparing the R&D personal in- house, a high level of inter-industry knowledge exchange, complementarities with outside experience gathering. These characteristics are very important in the context of developing countries and peripheral regions, which are characterized by limited financial resources for supporting of innovative development and poor access to high-quality education opportunities.

Model of increasing SMEs innovative potential

Since 2012, a series of consultancy and educational studies with local entrepreneurial in Gagauzia have been conducted in framework of IEC activity, where different types of communication in knowledge transferring process for regional SMEs have been used. At the terms of these meetings created new partnership, increased a number of social relationships based on direct personal contacts (Fontes, 2005), fostering development of "collective learning processes" (Boschma and Lambooy, 1999).

Innovation process in SMEs is rather unstructured and seems as a chaotic action therefore to provide an adequate description of the innovation process pay attention to Saren (1984) who identified five types of innovation development models: departmental-stage models, activity-stage models, decision-stage models, conversion process models, response models. Focusing on Conversion process models, we consider two accelerate variables that are expected to influence the input – throughput – output – performance relationships.

Based on the above, disclosing of our model of increasing innovative potential of regional SMEs expressed through the process of transformation inputs to outputs. In the "black box" model we included accelerating innovation processes components: inside of organization – "collaboration and innovation culture" and outside – "collaboration and innovation network". As a condition of innovation culture will be taken the activity marked in the questionnaire as a "participation in study in the field of innovation" and availability of innovative policies in the firm management. As an accelerator of "network creation" examined data related to the firm cooperation with universities and R&D structures. Using the main stages of conversion model were examined the relationships between innovation "Input and Output" in regional SMEs. In addition, we included accelerators internal and external variables: innovation organizational culture and collaboration culture which support of network creation and appeared due to the activity of main agent of region innovation activity – IEC.

Table 1

Variables and descriptive statistic

	Variables	***Description***
INPUTS	Num_HR	Total number of firm physical resources
	Num_ RDHR	Total number of firm R&D intellectual personnel
	Prosp_Dev	Prospects of firms development
	Firm_Pos	Currently economic position firms in the market
	RD_Expen	Volume of expenditure on R&D
DRIVERS	Collab_Uni	Firm collaboration with university innovation incubator
	Collab_RDStruc	Collaboration with R&D structures: Research institute, NGOs, Business service providers etc.
	Inno_cult_SMEs	Most active SMEs, participating in training and seminars SMEs with more developed innovation culture
OUTPUTS	Num_Innov	Numbers of SMEs innovation
	N_patents	Number of patents
	Inno_Prod	Share of innovative products in total production
	Inno_Share	Share of profits from realization of innovative products

Inputs: Resources (financial capital (volume of expenditure on R&D), human and physics capital (total number of firm physical resources and R&D intellectual personnel), currently economic position firms in the market and prospects of firm's development, currently economic position firms in the market.

Outputs: Innovation results (numbers of innovations and patents share of innovative products, share of profits from realization of innovative products).

Drivers (accelerator of innovation potential SMEs increasing):

- Internal driver – Collaboration and Innovation organizational culture (Innovation culture support and promotion of innovation activity, most active SMEs, participating in studies and grant programs);
- External driver – Collaboration and Innovation Network creation (firm's collaboration with R&D institutions: National (International) Research institute, NGOs, Business service providers, Knowledge intensive business services etc.).

For the proof of importance of driver forces influence on SMEs innovation activity in the region in the study tested the relationship between the following variables represented in Table 1. Standard model with instrumental variables is obtained by adding to the usual regression equation that relates the endogenous regressions and instrumental variables:

$$y_i = \beta_0 + x_1\beta_1 + x_2\beta_2 + \cdots x_n\beta_n + \varepsilon_i \qquad (1)$$

The study of linkages between the studied factors and the results showed that all of the dependencies in this example are rectilinear character. We assume that the unknown function is a linear combination of the above factors and for estimating coefficients applied a linear model method ordinary Least Squares. Each dependent variable allowed us to create four models:

1. $\text{Num_In} = \beta_0 + \text{Num}_{HR} \times \beta_{Num_HR} + \text{Num_R\&D}_{HR} \times \beta_{Num_RD_HR} + \text{Prosp}_{Dev} \times \beta_{Prospects_dev} \times \text{Firm}_{Pos} \times \beta_{Firm_Pos} + \text{R\&D}_{Expen} \times \beta_{RD_Expend} + \text{Collab_Uni} \times \beta_{Collab_Uni} + \text{Collab_RDStr} \times \beta_{Collab_RDStr} + \text{Inno_cult} \times \beta_{Inno_cult} + \varepsilon_i \qquad (2)$

2. $\text{N_Patent} = \beta_0 + \text{Num}_{HR} \times \beta_{Num_HR} + \text{Num_R\&D}_{HR} \times \beta_{Num_RD_HR} + \text{Prosp}_{Dev} \times \beta_{Prospects_dev} \times \text{Firm}_{Pos} \times \beta_{Firm_Pos} + \text{R\&D}_{Expen} \times \beta_{RD_Expend} + \text{Collab_Uni} \times \beta_{Collab_Uni} + \text{Collab_RDStr} \times \beta_{Collab_RDStr} + \text{Inno_cult} \times \beta_{Inno_cult} + \varepsilon_i \qquad (3)$

3. $\text{Inno_Prod} = \beta_0 + \text{Num}_{HR} \times \beta_{Num_HR} + \text{Num_R\&D}_{HR} \times \beta_{Num_RD_HR} + \text{Prosp}_{Dev} \times \beta_{Prospects_dev} \times \text{Firm}_{Pos} \times \beta_{Firm_Pos} + \text{R\&D}_{Expen} \times \beta_{RD_Expend} + \text{Collab_Uni} \times \beta_{Collab_Uni} + \text{Collab_RDStr} \times \beta_{Collab_RDStr} + \text{Inno_cult} \times \beta_{Inno_cult} + \varepsilon_i \qquad (4)$

4. $\text{Inno_Share} = \beta_0 + \text{Num}_{HR} \times \beta_{Num_HR} + \text{Num_R\&D}_{HR} \times \beta_{Num_RD_HR} + \text{Prosp}_{Dev} \times \beta_{Prospects_dev} \times \text{Firm}_{Pos} \times \beta_{Firm_Pos} + \text{R\&D}_{Expen} \times \beta_{RD_Expend} + \text{Collab_Uni} \times \beta_{Collab_Uni} + \text{Collab_RDStr} \times \beta_{Collab_RDStr} + \text{Inno_cult} \times \beta_{Inno_cult} + \varepsilon_i \qquad (5)$

Standardized coefficient determines the strength of the effect of variations in the variation of Xj having a productive factor Y if for abstracted from the concomitant effect of variations in other factors included in the regression equation. Formula of elasticity for the linear model:

$$E_j = \hat{}_j \frac{\overline{X}_j}{\overline{Y}} \qquad (6),$$

where: $\hat{}_j$ is estimated coefficient (or estimator), E – average coefficient of elasticity, $\overline{X}_j$ arithmetic mean for X_j.

Since standardized regression coefficients are comparable, the largest of these coefficients can be ranked according to the strength of the factors affecting the result. Obtaining the following results of increasing innovation entrepreneurships potential models with four independent variables: NUM_INNOV, N_PATENT, INNO_PROD, INNO_SHARE. The greatest influence on the variation NUM_INNOV, provides factor RD_EXPEN, because standardized coefficient 0.6560 is greatest. Next on the strength of the effect – INNO_CULT (0.1336), then number of R&D personnel – 0.11573 (Table 3). The greatest influence on the variation N_PATENT, provides factor INNO_SHARE, because standardized coefficient 0.4568 is the greatest. Next on the strength of the effect are– RD_EXPEN and COLLAB_UNIV.

Table 3

Coefficient elasticity

	Model 1		**Model 1**		**Model 1**		**Model 1**	
	NUM_ INNOV	**NUM_ INNOV**	**N_ PATENT**	**N_ PATENT**	**INNO_ PRODUCT**	**INNO_ PRODUCT**	**INNO_ INTENS**	**INNO_ INTENS**
Factors	Coefficient elasticity average	Standard. Coefficient	Coefficient elasticity average	Standard. Coefficient	Coefficient elasticity Average	Standard. coefficient	Coefficient elasticity average	Standard. coefficient
NUM_RD_ HR	0.27153	0.11573	-	-	0.07311	0.12691	0.16463	0.26695
RD_ EXPEN	1.3563	0.6560	0.50156	0.26721	0.15445	0.12913		
COLLAB_ UNI	-	-	0.2375	0.1481	-0.13894	-0.13598	0.06445	0.05892
INNO_ CULT	0.2444	0.1336	-	-	-	-	-	-

Source: Made by author.

The greatest influence on the variation INNO_PRODUCT, provides to factor INNO_SHARE, because standardized coefficient 0.6350 is the greatest. Next on the strength of the effect – PROSP_DEV then RD_EXPEN and NUM_RDHR. The greatest influence on the variation INNO_SHARE provides factors: INNO_ PRODUCT, NUM_RDHR, N_PATENT and COLLAB_UNIV. The impact of the university in "Share of profits" from realization of innovative products explained by consulting in marketing research for businesses. University has no impact on "Share of innovative products" because there is no technical component on the university, and therefore possibilities of aid in this direction of development.

Conclusions. During the development of the Innovation driven model of increasing SMEs innovative potential have been considered a number of models adaptable to regional countries with emerging market relations. It has been analyzed and proved a high degree of influence of geographical proximity and relationship to the growth of innovation activity and exchange of innovations. Summing up the analysis of the proposed model the case of Gagauzia region, we identified determinants of innovation SMEs development and the General Inputs and founded Drivers: Internal driver – Collaboration and Innovation organizational culture and External driver – Collaboration and Innovation Network creation.

One of the main objectives of the autonomous region initiatives are to promote innovative start- ups firm, to supporting the existing perspective business and creating the strong network between main actors of development. Proposed mechanism demonstrates the impact of knowledge network creation based on the Innovation and Education Cluster activity with the core of this innovation network – Comrat State University. Observable increasing of innovative entrepreneurship activity, due to the development of collaboration and innovation culture, launches the formation processes of relationships between potential cluster members and other actors.

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EUROPEAN POLICY REGARDING ENERGETIC SECURITY IN THE FIELD OF RENEWABLE ENERGY

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In recent years the European Union has been working continually to promote green energy. Renewable energy presents certain social, economic and environmental benefits, has a low environmental impact, therefore, can support economic growth on a sustainable basis. Theme analyzes progress in the EU, trends and long-term scenarios in renewable resources. Renewables have a high potential to stimulate EU industrial competitiveness. Developing new energy sources with low carbon is very important to avoid high costs of climate change and pollution conditions. Renewable energy can use all our energy requirements: electricity production, transport and domestic heating. Hydropower and wind are exclusively used for generating electricity, while biomass, geothermal and solar can be used to produce electricity and heat.

Keywords: *renewable resources, competitiveness, energy security, sustainability.*

În ultimii ani, Uniunea Europeană a fost preocupată în permanenţă de promovarea energiei verzi. Energia regenerabilă prezintă anumite beneficii sociale, economice şi de mediu, are un impact redus asupra mediului, deci, poate susţine o creştere economică pe baze durabile. Tema analizează, progresele înregistrate în spaţiul UE, tendinţele şi scenariile pe termen lung în domeniul resurselor regenerabile sunt benefice. Energiile regenerabile au un potenţial ridicat de stimulare a competitivităţii industriale a UE. Dezvoltarea de noi surse de energie cu emisii reduse de carbon este foarte importantă pentru a evita costurile ridicate generate de schimbarea condiţiilor climatice şi de poluare. Energia regenerabilă poate fi utilizată pentru toate cerinţele noastre energetice: producerea de electricitate, transport şi încălzirea locuinţelor. Hidroenergia şi energia eoliană se folosesc doar pentru generarea de electricitate, în timp ce biomasa, energia geotermală şi cea solară se pot folosi pentru a produce electricitate şi căldură.

Cuvinte-cheie: *resurse regenerabile, competitivitate, securitate energetică, sustenabilitate.*

В последние годы, Европейский союз постоянно содействовует продвижению зеленой энергии. Возобновляемые источники энергии представляют определеннюые социальные, экономические и экологические апкимущества, имеея низкую степень воздействия на окружающую среду, поэтому, может поддерживать экономический рост на устойчивой основе. Тема анализирует прогресс в долгосрочных тенденций и сценариев ЕС в области возобновляемых ресурсов. Возобновляемые источники энергии имеют высокий потенциал, чтобы стимулировать конкурентоспособность промышленности ЕС. Разработка новых источников энергии углерода низкой является очень важным, чтобы избежать высоких затрат на изменение климата и условий загрязнения. Возобновляемые источники энергии могут быть удовлетворить все наши энергетические потребности: производство электроэнергии, транспортные и бытовые отопительные. Гидроэнергетика и ветер используются исключительно для выработки электроэнергии, в то время как биомасса, геотермальная и солнечная энергия может быть использована для производства электроэнергии и тепла.

Ключевые слова: *возобновляемые ресурсы, конкурентоспособность, энергетическая безопасность, устойчивость.*

JEL Classification: Q21, Q28, Q47, Q48.

Introduction. The European Union is the first in the world in terms of renewable energy, a sector with considerable economic importance. The continued development of renewable energy technologies,

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renewable energy production has increased substantially and costs decreased. The development was uneven in EU countries which have yet renewables, only a small share in the energy mix and because the external costs of fossil fuels, such as environmental impact, renewable energy is not competitive.

Renewable energy-wind, solar, hydroelectric, geothermal, biomass and biofuels – are alternatives to fossil fuels that contribute to the reduction of greenhouse gas emissions, diversify energy supply and reduce dependence on volatile markets and free reliability of fossil fuels, especially oil and gas. The European Union is a leader in technologies for producing energy from renewable sources, which owns 40% of patents in this area worldwide.

EU renewable energy policy is now more important than ever. Renewable energy has a vital role in reducing emissions of greenhouse gases and other pollution, and increases security of supply and supports European industry in the field of green energy industry occupying the leading position worldwide. For this reason, EU leaders agreed to adopt binding national targets for increasing the share of renewable energy using so that it should reach 20% throughout the EU by 2020 [1].

Günther Oettinger, Commissioner for Energy said that the objectives set out in the Renewable Energy Directive, is "headline" of the entire European regulatory framework in this area. The European Strategic Energy Technology provides the framework for the development of new industrial initiatives; energy labeling and eco-design standards for energy efficiency helps to increase energy efficiency and reduce energy consumption; also the Renewable Energy Directive provides rules for reducing administrative procedures, training of field labor, sustainability criteria for biofuels and bioliquids, and other regulatory reforms to ensure mass deployment of green technology that we needto achieve the target of 20%.

Renewables have a high potential to stimulate EU industrial competitiveness. The development of new energy sources with low carbon is very important to avoid high costs of climate change and pollution conditions. High-tech green industrial development creates new green jobs currently being 1.5 million employees with a turnover of over 50 billion euros. Supported the continuation of this development, the sector could provide another million jobs by 2020, with a substantial increase in turnover.

Renewable energy can use all our energy requirements: electricity production, transport and domestic heating. Hydropower and wind are exclusively used for generating electricity, while biomass, geothermal and solar can be used to produce electricity and heat.

Background and recent advances in renewable energy in the EU

In its communication of January 10th, 2007 entitled "Renewable Energy Roadmap – Renewable energies in the XXI century: building a more sustainable future that establishes a long-term strategy for renewable energy in the EU by 2020", the Commission proposed a binding target that by 2020, 20% of EU energy consumption to come from renewable energy sources, a binding target that by 2020, 10% of the consumption of transport fuels to come from biofuels and creating a new legislative framework. At the 2007 Spring European Council, EU leaders endorsed policy objectives for 2020 [2].

Renewable Energy Directive adopted by co-decision on April 23rd, 2009 (Directive 2009/28/EC and repealing Directives 2001/77/EC and 2003/30/EC) has set a binding target that, by 2020, a proportion of 20% of EU energy consumption to come from renewable energy sources, secondary objective broken down into binding national targets, taking into account the different starting points of Member States. In addition, all Member States must ensure that, by 2020, 10% of transport fuels come from renewable sources. The Directive also defined various mechanisms which Member States can apply to achieve its goals (support schemes, guarantees of origin, joint projects, cooperation between member states and third countries) and sustainability criteria for biofuels [3].

In 2010, Member States have adopted national action plans in the field of renewable energy. European Commission assessed the progress made by Member States towards reaching the targets for 2020 on renewable energy in 2011 and 2013. The latest report shows that the growth in renewable energy has improved significantly, and most Member States have reached interim targets set out in the Directive of 2009.

However, given that the trajectory for achieving the final goal becomes harder to follow towards the end, almost all Member States should make further efforts to meet the targets set for 2020. The latest figures from Eurostat show that renewables represent 14% of energy consumption in the EU-28 in 2012. In its report, the Commission draws attention to a number of concerns about further developments deviation of Member States from their own national action plans on renewable energy, persistence of administrative barriers related and route network exploitation of renewable energy, disturbing recent

changes in national support schemes for renewable energies and finally, late transposition of the directive into national law. The Commission has already initiated a series of actions for failure to fulfill obligations related to failure to transpose the Directive by some Member States (notably Poland and Cyprus) [4].

In its communication of June 6th, 2012 entitled "Renewable Energy: a major player in the European energy market", the Commission has identified areas where efforts should be intensified in 2020 for the production of renewable energy in the European Union continues to grow in 2030 and thereafter, particularly for technologies in the renewable energy sector to become less expensive, more competitive and, ultimately, adapted to the market (with support schemes granted only to less developed technologies) and to encourage investment in renewable energy sector (by gradually reducing subsidies to fossil energies sector, a market of carbon dioxide thoughtful functional and energy taxes) [5].

In November 2013, the Commission provided further guidance on support schemes for renewable energy and the use of cooperation mechanisms for achieving renewable energy targets at least cost the Commission announced a complete overhaul grants which Member States are authorized to provide renewable energy sector, preferring public offerings, and the first fixed rate obligations instead of commonly used fixed tariffs. New guidelines on state aid in the field of environment and energy, to be published in July 2014 will shape the new framework for support schemes for renewables [6].

The EU has already begun to prepare for the period after 2020 in order to clarify the arrangements provided for investors by 2020. Renewable energy plays a key role in the long-term strategy outlined in the Commission Communication "Energy Roadmap 2050" [7]. Decarbonisation of the power sector projects proposed in the roadmap indicates to achieve a proportion of renewable energy to at least 30% by 2030. However, the roadmap suggests that in the absence of other interventions, the increase in the energy sector after 2020 renewable sources will slow, following the publication in March 2013 Green Paper "A Framework for 2030 for climate policy and energy" [8].

The Commission, in its communication of January 22nd, 2014 entitled "A framework for climate and energy policy during 2020-2030" [9] proposed not to renew binding national targets for renewable energy beyond 2020. Binding objective that 27% of consumption energy must come from renewable sources provided only at EU level. The Commission expects the binding national targets for emissions of greenhouse gases to stimulate growth in the energy sector. The shift has led to intense debate with Council and Parliament.

The European Parliament has always pleaded in favor of renewable energy sources and stressed the importance of setting mandatory targets for 2020 [10] and, more recently, for 2030. In February 2014 Parliament adopted a resolution [11] criticizing the Commission's proposals on the climate and energy for 2030 as limited and lacking ambition. It asked the obligation that 30% of EU energy consumption to come from renewable energies, to be achieved by binding individual national targets and objectives extend beyond 2020 on transport fuels. In addition, Parliament called in the past the long-term establishment of a system of incentives for renewables EU-wide [12], arguing at the same time supporting smart grids [13]. The Parliament also asked the Commission on numerous occasions to propose a legal framework for renewable energy for heating and cooling in order to increase their share in energy production.

In recent years the European Union has been working continually to promote green energy. Thus, even in the Maastricht Treaty established the objective of stimulating sustainable growth, while protecting the environment. The Amsterdam Treaty added to the EU principle of sustainable development. Additionally, the European Commission proposed on March 3rd, 2010 "Europe 2020 Strategy" as a 10-year agenda for economic and social development of the European Union. This strategy aims to "smart, sustainable and inclusive growth" with greater coordination of national and European policies. The Strategy promotes as one of the main objectives, reducing emissions of greenhouse gases by at least 20% compared to 1990 levels or by 30% if there are conditions, and increasing the share of renewable energy in final energy consumption to 20%, to achieve a 20% increase in energy efficiency [14].

Background and recent advances in renewable energy in the EU

Expanding renewable energy is a main objective of the Europe 2020 strategy for smart, sustainable and inclusive growth. The European Commission's Communication COM (2012)/271 entitled "Renewable Energy: a major player in the European energy market" is emphasized the importance of diversifying supply sources by promoting renewable energy. According to this document, the European

Commission will continue to concentrate its renewable energy *in the following areas:*

- Fostering the integration of renewable energy sources in the internal energy market and addressing incentives for investment in electricity production;
- Promoting and guiding the increased use of cooperation mechanisms which allow Member States to achieve their national binding targets by trading renewable energy and to reduce such costs;
- Ensuring better regulation of energy cooperation in the Mediterranean region, taking into account that, in the Maghreb, an integrated regional market would facilitate large-scale investments in the region and enable Europe to import more electricity from renewable sources.

The conclusions of the European Commission Communication COM (2012)/271, shows that regardless of the form it will take objectives of energy from renewable sources by 2020 they must ensure that renewable energy is part of the European energy market, with support limited but effective, where appropriate, and subject to a high volume of transactions. It also highlights the need to ensure owned maintaining global leadership of the European Union in terms of research and industry. European Commission recommends the further development of renewable energy resources in an effective and affordable, and the opportunities related to competitiveness, economic growth and employment [15].

Table 1 presents data on available energy annually per square meter of the surface world for 6 renewable sources. Energy technologies based on renewable resources generates relatively little waste or pollutants which contribute to acid rain, urban smog, or cause health problems and do not impose additional costs for environmental remediation or landfilling. Holders of energy systems based on renewable resources should not be concerned about potential changes to global climate generated by excess of CO2 and other polluting gases. Solar energy systems, wind and geothermal do not generate CO2 in the atmosphere, but when biomass absorbs CO2 and thus regenerates the whole process of generation, use and regeneration of biomass lead to almost zero CO2 global issues.

The concept of sustainable development refers to the kind of economic development which ensures meeting the needs of the present generation without compromising the ability of future generations to meet their own requirements. Sustainable development puts to the fore, with regard to the energy industry, the following objectives: refocusing energy production technologies and implementing risk control them; preserve and enhance the resource base, reducing CO2 emissions, developing renewable resources, decision-making processes unification of energy, the economy in general and environmental protection in particular. The "renewable energy" means energy derived from a wide range of resources, all having the ability to renew itself, such as: hydropower, solar, wind, geothermal and biomass (garbage, municipal, industry and agriculture) [16].

Table 1

The no. of criteria	Renewable resource	Annual delivered energy (kWh/mp)
1	Wind energy (intermittent)	11 (at the average wind speed)
		18 (at the maximum wind speed)
2	Solar (depending on latitude, altitude and cloud coverage 5 – 10)	600…2600
3	Geothermal (geysers)	160…200
4	Photovoltaic (intermittent)	50…100
5	Biomass	15 (low calorific value)
		45 (high calorific value)

Source: The benefits of regenerable energy [accessed on September 14, 2015]. Available on: bookshop.europa.eu/

Biomass is derived from different types of organic materials, such as energy plants (oilseeds, plants containing sugar) and forestry waste, agricultural or urban waste including wood and household waste. Biomass can be used for heating, cooling, electricity and biofuel use in transport. The use of biomass significantly reduces greenhouse gas emissions. The carbon dioxide that we release during the combustion of biomass is offset by the amount absorbed during plant cultivation concerned. But there are always some emissions from processes like cultivation and fuel production, which makes the biomass not being completely carbon-free. Different types of biomass use different technologies and processes for

the production of organic energy. Solid biomass (like wood and straw) can pass through several processes, including combustion, pyrolysis, hydrolysis or gasification, after producing bioenergy. Biogas can be produced from organic waste through fermentation and can be obtained from gas from landfills. He can power vehicles adapted to the operation on gas.

Arguments in support of the use of biomass: diversifying sources of energy supply; replaces conventional fuels with high CO2 emissions; contribute to recycling; protect and create jobs in rural areas; EU maintains its leading position in the field of bioenergy.

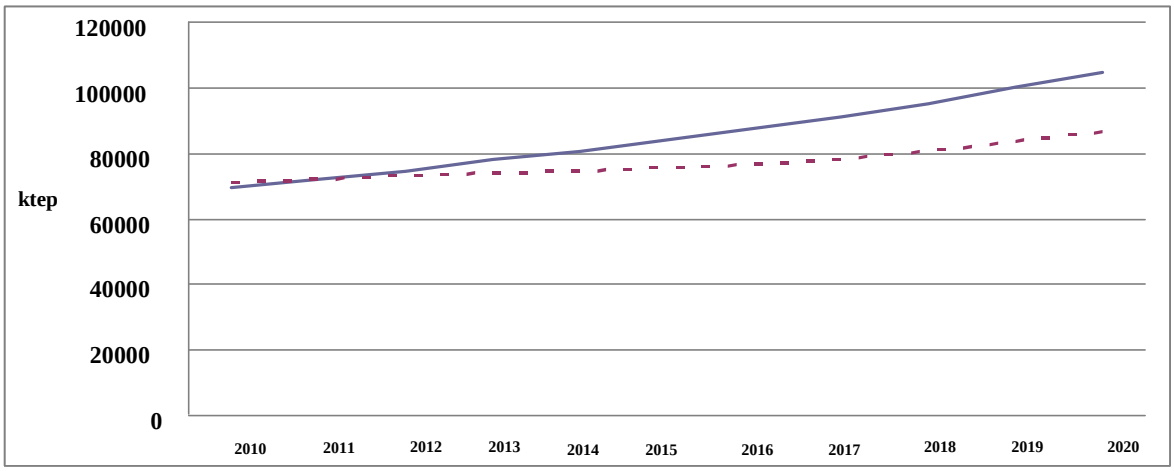


Fig. 1. Trend planned to estimated trend (phantom) energy from biomass in the EU
Source: European Commission, Report on progress in renewable energy, COM (2013) 175.

Biofuels and bioliquids originate renewable resources using biomass (organic matter or plants). Currently, biofuels are the only energy resource widespread that can replace fossil fuels in the transport sector. There are two main types of biofuels: biodiesel and bioethanol. Both are liquid fuels derived mainly from the present agricultural crops or plants.

Biodiesel is produced mainly from oilseeds such as rapeseed or sunflower, the result of the reaction between vegetable oils and methanol. Bioethanol is produced mainly by fermentation of sugar from sugar beet, different cereals, fruits or even wine. Second-generation biofuels, explicitly promoted by the new directive, are currently made from cellulosic biomass feedstock consisting of. It can get so new methods of biofuel production from agricultural, forestry, wood, pulp and paper, including byproducts and waste, more complex processes.

Arguments in support of biofuels: widespread are the only renewable source that can be an alternative to fossil fuels in transport; contribute to recycling; allow diversification of energy sources for the country that are not producing oil; reduce CO2 emissions and other pollution; creates jobs, especially in agriculture and forestry.

Solar energy. The sun is the primary energy source in the world, and solar power systems can harness the sun as a clean energy source and high temperature to generate heat or electricity. Conversion of solar radiation for heating and cooling has a wide range of applications including domestic hot water, space heating and industrial processes, cooling assisted by the sun, desalination and swimming pools.

Even the simplest solar thermal systems can provide enough hot water to a certain extent (sometimes higher). Although such systems are clearly more productive in sunny regions, return these new equipment to enable them to contribute at least providing heating and hot water supply anywhere in the EU (sometimes in combination with existing boiler systems). Solar energy can be used in a cooling system of air-conditioning systems creating heat sink.

Arguments in support solar energy: diversifies energy supply; produces no noise, harmful emissions or polluting gases; creates jobs and stimulates the local economy locally and technological development; use a free and inexhaustible energy source; it can generate both heat and electricity; it requires a minimum of maintenance.

Wind energy is one of the most promising renewable energy technologies, is an area where there were numerous achievements that have increased power generation efficiency. Between 1991 and 2006, cumulative wind power capacity in the EU increased on average by 33% per year.

Between 1995 and 2009, cumulative capacity of wind power installations in the EU increased from 2497 MW to 74,767 MW [6]. Modern wind turbines extract energy from the wind by transferring the momentum of moving air to rotor blades. The power that can be generated by the turbines depends on air density, wind speed and turbine size. The rotors of most wind turbines are oriented and move according to the wind direction. The energy is concentrated in a rotary shaft and is transformed into electricity.

Arguments in support of wind energy: It is a source of clean energy without carbon dioxide emissions; indigenous energy supplies at lower cost; it is already an important export industry; although the landscape changes around it can take place unhindered farming/industrial; it can be implemented both on land and offshore.

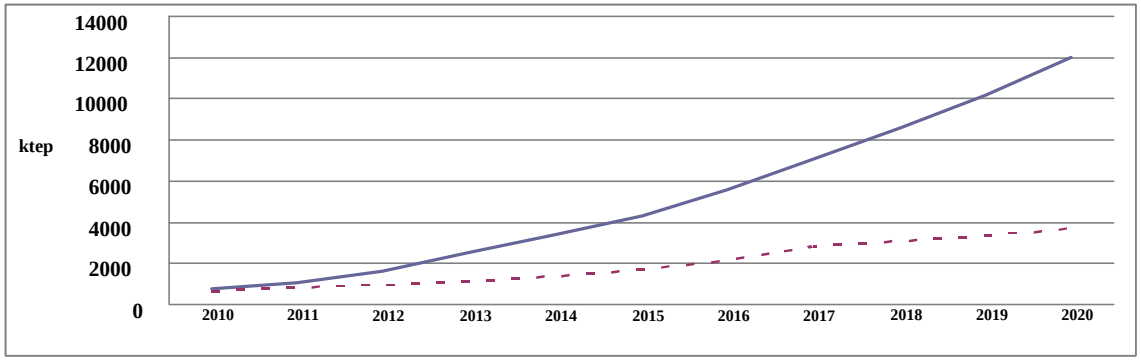


Fig. 2. Trend planned (blue) to estimated trend (dotted) of offshore wind energy in the EU
Source: European Commission, Report on progress in renewable energy, COM (2013) 175.

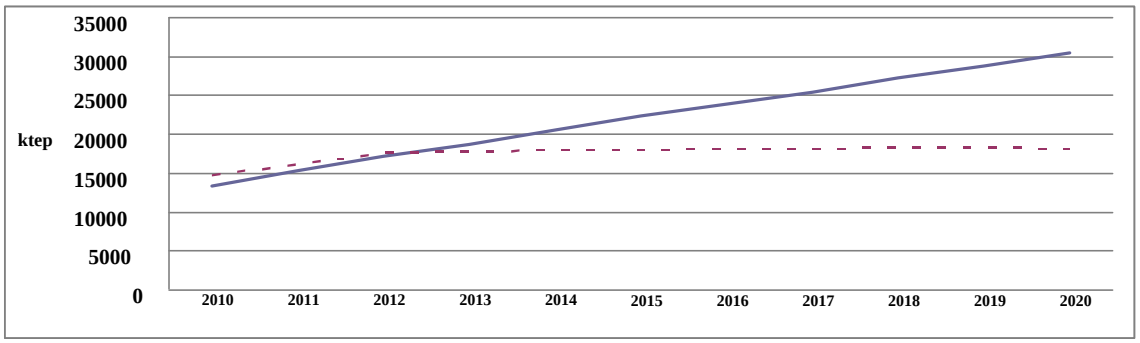


Fig. 3. Trend planned to estimated trend (dotted) onshore wind energy in the EU
Source: European Commission, Report on progress in renewable energy, COM (2013) 175.

Hydropower is made using the motion of a water body, such as a river, a channel or a stream of water. Hydropower schemes useful energy obtained from the potential energy of water, whose course is characterized by a certain level difference (referred to as "liquid column height"). For such systems is the need for a capture zone of the precipitation, a hydraulic pressure, a pipe or device to carry the water to a turbine and a turbine housing which contains the power generation equipment and the water control. After use, the water returns to its natural course. Small hydro systems are defined generally as having a nominal capacity of less than 10 MW, while large dams have large storage tanks.

Small hydro is useful for producing electricity, especially in remote areas. The major approaches saturation point, which determines the orientation of small hydro, still largely untapped.

Arguments in support of small hydro: diversifies energy supply; contributes to local development; helps to maintain river basin; promotes rural electrification; has a high energy efficiency.

Geothermal energy is used for hundreds of years and for heating water for baths. It is obtained from the earth's natural heat in dry, steam or liquid and can be used for electricity generation and heating. The deep geothermal resources include hydrothermal systems (hot water and/or steam contained in porous rock or faulted), geothermal systems under pressure (hot water aquifers under high pressure) and hot rock geothermal systems (geological formations dry, but unusually hot). In Europe, the heat pump is the most promising way of using geothermal energy.

This consists in extracting heat from hot geothermal fluid found in shallow and transfer that heat to water or air which is used to provide heat. Even at shallow depths of 50-100 m, there is enough heat in the earth that can be extracted using heat pumps – often located in the gardens of suburban houses – and used directly to heat household. Heat pumps using ambient air or water resources is another way of capturing ambient heat for the use in housing and other buildings.

Arguments in support of geothermal energy: reduces emissions of greenhouse gases; uses an inexhaustible energy source; can provide heat directly; requires less land area than other energy resources, is available continuously.

Photovoltaic energy. European Commission highlighted in 2013, there is a surplus that will take some time, but efforts in research and investment in infrastructure can provide 50% of energy for heating and cooling in the EU by using solar thermal energy 2050 which includes a roadmap for implementation and show conditions – non-technological framework that will achieve this ambitious goal by 2050.

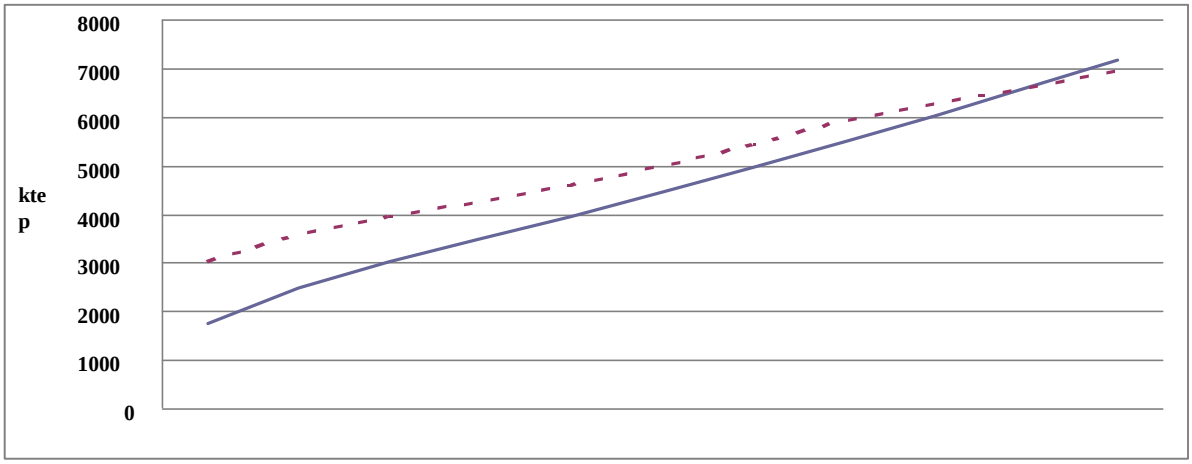


Fig. 4. Trend planned to estimated trend (dotted) of PV in the EU
Source: European Commission, Report on progress in renewable energy, COM (2013) 175.

Trends and long-term scenarios for renewable energy. The challenges facing Europe include energy issues such as increasing dependence on imports, limited diversification, high and volatile energy prices, increasing global energy demand, security risks affecting producing countries and transit threats increasingly larger of climate change, slow progress in energy efficiency challenges arising from the growing share of renewable energy and the need for a maimare transparency, better integration and interconnection energy markets. European energy policy has in its center a whole variety of measures that are meant giving achieve integrated energy market and ensure security of supply and sustainability of the energy sector [16].

Table 2

Share of renewable energy in final energy consumption in%

Countries	2006	2007	2008	2009	2010	2020
EU27*	**9,0**	**9,9**	**10,5**	**11,7**	**12,4**	**20,0**
Belgium	2,7	3,0	3,3	4,6	-	13,0
Bulgaria	9,6	9,3	9,8	11,9	13,8	16,0
Czech Republic	6,5	7,4	7,6	8,5	9,2	13,0
Denmark	16,5	18,0	18,8	20,2	22,2	30,0
Germany	6,9	9,0	9,1	9,5	11,0	18,0
Estonia	16,1	17,1	18,9	23,0	24,3	25,0
Ireland	2,9	3,3	3,9	5,1	5,5	16,0
Greece	7,0	8,1	8,0	8,1	9,2	18,0
Spain	9,0	9,5	10,6	12,8	13,8	20,0
France	9,6	10,2	11,1	11,9	-	23,0

Countries	2006	2007	2008	2009	2010	2020
Italy	5,8	5,7	7,1	8,9	10,1	17,0
Cyprus	2,5	3,1	4,1	4,6	4,8	13,0
Latvia	31,1	29,6	29,8	34,3	32,6	40,0
Lithuania	16,9	16,6	17,9	20,0	19,7	23,0
Luxembourg	1,4	2,7	2,8	2,8	2,8	11,0
Hungary	5,1	5,9	6,6	8,1	-	13,0
Malta	0,2	0,2	0,2	0,2	0,4	10,0
Netherlands	2,7	3,1	3,4	4,1	3,8	14,0
Austria	26,6	28,9	29,2	31,0	30,1	34,0
Poland	7,0	7,0	7,9	8,9	9,4	15,0
Portugal	20,8	22,0	23,0	24,6	24,6	31,0
Romania	**17,1**	**18,3**	**20,3**	**22,4**	**23,4**	**24,0**
Slovenia	15,5	15,6	15,1	18,9	19,8	25,0
Slovakia	6,6	8,2	8,4	10,4	9,8	14,0
Finland	29,9	29,5	31,1	31,1	32,2	38,0
Sweden	42,7	44,2	45,2	48,1	47,9	49,0
United Kingdom	1,5	1,8	2,3	2,9	3,2	15,0
Croatia	13,8	12,4	12,2	13,2	14,6	20,0
Norway	60,6	60,5	62,0	65,1	61,1	67,5

Source: Eurostat* share of energy consumption from renewable sources in gross final consumption of energy. Final energy consumption is the energy used in households, industry, services, agriculture and transport.

Table 3

Increasing renewable energy

Global indicators of energy from renewable sources	2008	2009	2010	2011	2012	2013
Investment in new capacity of renewable resources (annual, mil. USD)	130	160	211	257	244	214
Power capacity from renewable energy (GWe)	1,140	1,230	1,320	1,360	1,470	1,560
Hydroelectric capacity (GWe)	885	915	945	970	990	1,000
Wind capacity (GWe)	121	159	198	238	283	318
Capacity solar/photovoltaic (GWe)	16	23	40	70	100	139
Solar hot water capacity (GWth)	130	160	185	232	255	326
Ethanol production (annual) (109 liters)	67	76	86	86	83	87
Production of biodiesel (annual) (109 liters)	12	17.8	18.5	21.4	22.5	26
Countries with policy targets for renewable energy use	79	89	98	118	138	144

Source: "REN 21 Renewables 2013 Global Status Report", accessed on January 30, 2014.

Renewable energy is an option "no regret", but there were some concerns about the cost and impact on the internal market. By reducing the costs of technologies, many renewable energy sources are becoming more competitive and ready to join the market (eg wind energy terrestrial). Their integration will require large-scale networks smarter energy distribution and solutions for energy storage. It may be necessary and consideration of mechanisms to ensure regional capacity [17].

The European Parliament resolution of May 21st, 2013 is a comprehensive analysis of the challenges and opportunities for renewable energy in the EU internal energy market (2012/2259 (INI)). In this document there are clear references to a number of renewable energy on the internal energy market, *namely:*

- Renewable energy sources, along with energy efficiency and flexible and intelligent infrastructure are the recommended options and that renewables will, in the EU, an increasing share in the energy supply, both in the supply of electricity and in the field of heating (which

encompasses about half of energy demand in the EU) and cooling, and transport, and energy dependence of Europe will decrease conventional energy sources;
- It believes that objectives and milestones established in 2050 to present a credible perspective for the future in terms of renewable energy in the EU;
- Recalled that all scenarios presented by the European Commission Energy Roadmap 2050 allocated a quota of at least 30% RES in the EU energy mix by 2030 and proposes that the EU efforts to obtain a greater share and invites the Commission to propose a binding target of RES in the EU for 2030, taking into account the effects of possible interaction with other environmental objectives and energy policy, in particular the objective of reducing GHG emissions and the impact on the competitiveness of EU industries, including industrial sectors SRE;
- To see that cooperation mechanisms provided for in Directive 2009/28/EC on the promotion of renewable energy have not yet used widely, but it is planning a series of cooperation schemes and stresses that better use of existing opportunities for cooperation could bring considerable benefits;
- Noted that the EU should strive at its industrial capacity, research and development, if it wants to maintain its technology leadership in renewable energy sources and stressed the need to ensure a competitive environment for the operation and internationalization of SME organizations, and to endeavor to reduce bureaucratic obstacles. Only innovation through research and development can ensure the continued leadership of the EU market in renewable energy technologies;
- Proved that it is essential, in the context of plurality of support mechanisms in the Member States, to encourage greater convergence and an appropriate European support mechanism after 2020. In the long term, a more integrated system to promote RES in the EU, which takes full account of regional differences and geographical and existing supranational initiatives, and is part of a general effort aimed at decarbonising, could help provide the most efficient in terms of costs for renewable energy and a level playing field, which may allow their full potential.

At the summit in Paris in December 2015, the G7 leaders pledged to "cleanse" the world economy on fossil fuels forever. For two years, activists against climate change played a key role in mobilizing global civil society for this, as the main organizers of the March of citizens for climate action proportions, which drew nearly 700,000 people in the street; gathered 2.7 million signatures for a petition which demanded 100% clean energy; were sent a quarter of a million messages to environment ministers from around the world before the UN climate summit in Lima from 1 to 12 December 2014 and were organized dozens of demonstrations, surveys and campaigns in the media (all funded community) which asked ambitious national and global targets for reducing carbon emissions. They have contributed to changing the attitude of politicians towards this subject, paving the way for a stunt in the last two months before the G7 summit. It's not just fossil fuels. G7 Summit reached a deal on ambitious climate action in general. Here are the plans for the summit in Paris:
- The decarbonisation of of the global economy until the end of the century;
- The signing of a legally binding agreement;
- Efforts to change the energy sector in 2050;
- Adoption of a 70% reduction target in carbon emissions by 2050 (compared to 2010);
- Develop a plan for targeting the 100 billion dollars to the climate protection programs in developing countries;
- Creation of security and protection systems four times more effective for 400 million poor people and affected by climate change.

Conclusion. Renewable energy has many social, economic and environmental benefits, can be regenerated, so can support sustainable economic growth. Also it does not produce waste or toxic products such as carbon dioxide or other chemical pollutants, so has minimal impact on the environment. As social benefits plan, the renewable energy industry has provided new job opportunities in the EU.

Renewable energy presents disadvantages; it is difficult to generate the amount of electricity as large and steady as those produced by traditional fossil fuel generators; security of supply; Renewable energy often depends on the weather, the source of power, hydro generators need rain to fill dams; Wind turbines need to activate them; solar collectors need blue skies and sun to collect heat and electricity. Therefore, most experts recommend an energy mix option, depending on the resources and needs of each region.

But the main obstacles to boosting renewable energy production difficulties are the high costs. The European Commission underlines that the recent economic crisis has led investors to exercise caution towards the energy sector. Liberalized EU energy markets, the growth of renewable energy depends on private sector investment. The European Commission's Communication COM (2012)/271, highlights the level of risk so high, especially in countries with strained capital markets, leading to a high cost of capital,

thus increasing costs of energy projects renewable sources, which reduces their competitiveness. In this regard, the European Commission highlights the importance of simple administrative systems, of stable and reliable support schemes and facilitate access to capital, to increase the competitiveness of renewable energy.

All Member States should take into account the challenges of achieving large-scale energy security, respectively security of energy supply, resource efficiency and innovative solutions for renewable energy. Therefore, the "Strategy 2020 - A strategy for energy competitive, sustainable and secure energy" and the experience of other EU Member States shows that renewables are a viable alternative and preferred other alternatives current energy, because it provides both energy security and environmental protection at the same time, in order to support sustainable development of the EU in future.

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ORGANIZATIONAL METHODS OF SEMINAR-DISPUTE ON ECONOMICS SPECIALTIES

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Actuality. The topic of teaching economic disciplines has always been relevant and useful. The article considers the technique of organization and of the seminar-dispute on economic subjects. In this paper there are also identified criteria for evaluating the participants of the seminar-dispute. Methods of teaching economic disciplines in higher education are held by holding lectures and seminars. The seminar provides an opportunity to determine the degree of independence and responsibility, to rise creativity in every student. The purpose is to disclose the main objectives of the seminar-dispute, which as a result of the preliminary work on the program material, the teacher and students are in a situation of direct active communication during performance of students on topics arising between discussion and generalizations by teacher, bu solving the problem of cognitive, developmental and educational character that imparted methodological and practical skills to students. Methods. Logical and descriptive, monographic, analysis and synthesis. Results. It should be concluded that in preparation for the seminar, students acquire the skills to work with the book, read the analysis, selection of the main and necessary speeches for the report, , and systematizing the selected materials. Students learn to clearly express their thoughts, work out the ability to speak without papers to prove their beliefs, to establish contact with the audience, etc. Accordingly, it is best to choose the topics of the seminar where the student must not only learn certain information, but also find a solution. One of the most popular forms of classes in the framework of methodological approaches to the teaching of economic disciplines is a seminar-dispute.

Keywords: *methods of teaching, seminar, seminar-dispute, innovative education.*

Actualitate. Subiect predare discipline economice a fost întotdeauna relevante şi utile. În articol se abordează metodele de organizare şi desfăşurare a seminarelor sub formă de dezbateri la disciplinele cu profil economic. În lucrare de asemenea, sunt indicate criteriile de evaluare a studenţilor participanţi la dezbateri. Metodica predării disciplinelor cu profil economic în instituţiile de învăţământ superior include desfăşurarea atât a orelor de curs sub formă de prelegeri, cât şi seminare. Scop. Expand principalele obiective ale seminar dezbaterii, la care, în rezultatul învăţării prealabile a materiei predate de către profesor, a implicării active a studenţilor în procesul de învăţare, a soluţionării diferitor neclarităţi, probleme practice pe marginea temelor abordate, identificării anumitor idei principale şi concluzii împreună cu profesorul; studenţii dobândesc abilităţi teoretico-practice, precum şi de analiză şi sinteză a informaţiei. Seminarul oferă posibilitatea de a determina nivelul de independenţă şi responsabilitate a studentului în cadrul procesului de învăţământ, de a releva abilităţile practice şi analitice ale fiecărui student. Metode. Logică şi descriptiv, monografic, analiză şi sinteză. Rezultate. Ajung la concluzia ca pregătindu-se pentru seminare, studenţii dobândesc abilităţi practice şi teoretice de lucru cu manualele, analizează şi studiază informaţia, selectează ideile principale; generalizează şi sistematizează informaţia studiată, pregătindu-se pentru răspuns. Studenţii se învaţă să-şi exprime liber gândurile, să vorbească fără a se folosi de conspect; să-şi argumenteze poziţia, să-şi susţină punctul de vedere, să stabilească un contact cu auditoriul, ş.a. Respectiv, cel mai oportun e ca pentru orele de seminar să fie abordate astfel de teme în care studentul să dobândească nu doar un anumit volum de informaţie, dar şi soluţionarea practică a diferitor probleme. Una din cele mai des utilizate forme de desfăşurare a orelor de seminar la specialităţile cu profil economic le constituie dezbaterile.

Cuvinte-cheie: *tehnici de predare, seminar, seminar-dezbateri, predare modernă.*

Актуальность. Тема преподавания экономических дисциплин всегда являлась актуальной и востребованной. В статье рассматривается методика организации и проведения семинара-диспута по экономическим дисциплинам. В работе также определены критерии оценки

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участников семинара-диспута. Методика преподавания экономических дисциплин в высших учебных заведениях предполагает как проведение лекционных занятий, так и семинарских. Семинар дает возможность выяснить степень самостоятельности, ответственности, проявить творческие способности каждому студенту. Цель. Раскрыть главные задачи проведения семинара-диспута, на котором в результате предварительной работы над программным материалом преподавателя и студентов, в обстановке их непосредственного активного общения, в процессе выступления студентов по вопросам темы, возникающей между ними дискуссии и обобщений преподавателя, решаются задачи познавательного, развивающего и воспитательного характера, прививаются методологические и практические умения и навыки учащимся. Методы. Логико-описательный, монографический, анализ и синтез. Результаты. Сделать выводы, что, готовясь к семинару, студенты овладевают умениями работы с книгой, анализа прочитанного, отбора главного и нужного для доклада, выступления, компонирования и систематизации отобранного. Студенты учатся четко излагать свои мысли, отрабатывают умение говорить без бумаги, доказывать свои убеждения, устанавливать контакт со слушателями и т.д. Соответственно, лучше всего для семинара выбирать такие темы, где студент должен не просто усвоить определенные сведения, но и найти решение проблемы. Одной из наиболее востребованной форм семинарского занятия в рамках методических подходов к преподаванию экономических дисциплин является семинар-диспут.

Ключевые слова: *методика преподавания, семинар, семинар-диспут, инновационное образование.*

JEL Classification: O29, O3, O39, Z0.

Introduction. Education in our country has entered a period of fundamental change, characterized by a new understanding of the goals and values of education, awareness of the need to move to continuous education, new conceptual approaches to the development and use of learning technologies, etc. Implementing many of the challenges facing the education system at the present stage, the task is impossible without the use of innovative methods and tools. On the other hand, the very formulation of these tasks creates the conditions for the most complete and effective disclosure of the potential of innovative education. The urgency of the consideration of practical techniques for workshops disputes increases, as the correct organization of the seminar-dispute, the procedure for carrying out impact on the efficiency of student mastery of the material. Effective seminar involves purposeful preparation, when teachers and students are adjusted to serious work. Moreover, the question of quality education and development of personal and professional qualities of the student are closely interrelated. Lecture laying the foundations of scientific knowledge, and seminars focused on the details of this knowledge on the development and consolidation of skills of professional activity. Of course, a seminar for students is a mean of cultural development of scientific thinking. The seminar provides an in-depth study of the economic discipline, the development of methods of scientific knowledge.

Basic text. Methodological beginning of the theory of learning in higher education is a theory of knowledge. Legitimacy of the theory of knowledge is directed to mental activity of students on an objective understanding of the environment, an objective assessment of the events, legitimacies and relationships. Science education is seen as a complex knowledge of contradictory process of going from ignorance to knowledge, from incomplete knowledge to more complete knowledge of the objects of knowledge and requirements of the objective world to the knowledge of nature, laws of ties.

In the framework of the methodology an important position is the position of the theory of knowledge, which indicates on the existence of objective reality, which essentially means the following:

First, the beginning of methodological learning theory is the theory of knowledge.

Secondly, the laws of the theory of knowledge focused on the mental activity of students on an objective understanding of economic phenomena.

Third, the theory of knowledge is inextricably linked with the dialectics of thinking.

Fourth, thinking in the educational process is the main tool in cognitive activity. In the process of thinking the person has your understanding of the world.

Fifth, through thinking in the learning process, the student identifies the basic, essential forms of its understanding [4].

On this basis, the workshop is one of the tools of the theory of knowledge.

The form of organization and holding are several types of workshops:

1. Seminar-discussion is conducted in the form of expanded talks on the plan developed by the teacher with a brief introduction and conclusion, involves training classes to all students according to the plan. This form allows you to involve the majority of the audience in active discussion threads.

2. Seminar-hearing when there is a discussion of reports and papers and assumed prior distribution issues between students (listeners), preparation of reports and abstracts.

3. The seminar-dispute involves collective discussion of any issues in order to establish ways of reliable solutions. Seminar-dispute held in the form of dialogic communication participants. It involves high mental activity of the participants, instilling the ability to debate, to discuss the material, to protect the views and beliefs, concisely and clearly express their thoughts.

4. Innovative seminar is a form of organization of joint activity of individuals to address diffuse, complex problems using a systematic analysis, technology solutions group, various techniques of thinking. A teacher that uses in his work an innovative workshop turns into a researcher, as well as an expert in the field of management, organization, behavioral science, and perhaps as a Methodist.

5. Mixed form of a seminar, which combine discussion of the reports, free performances of students as well as controversial discussion [1].

Let us consider the particular seminar dispute as one of the main directions of innovative education and economic disciplines, and most forms of collective work of students. Workshop dispute involves collective discussion of any issues in order to establish ways of reliable solutions. Seminar-dispute held in the form of dialogic communication participants. It involves a high mental activity, imparts skills to debate, to discuss the problem, to defend their views and beliefs, concisely and clearly express thoughts. Functions of the actors at the seminar-debate may be different.

Table 1

Functions of dramatic persons at the seminar-debate

Personage	Responsibilities
Speaker	It is set out in summary form the essence of the protected point of view, positions
Co-lecturer	Argues, proves, illustrates the position of the speaker, can provide statistical information, facts
Opponent	To express their own point of view on the issue (different from the chosen speaker) leads counterexamples and counterarguments
Expert	Is responsible for the comparative analysis of the arguments and counterarguments, determines their validity
"Provocateur"	Specifies the "controversial" issues, resulting in unexpected examples - initiate a general discussion
Assistant	It provides logistical support (posters, charts, diagrams, and so on.)

References: [3].

The main functions of the seminar-dispute are informative, educative function, control richness, depth and regularity of independent work of students, as well as organizational orientation and systematized. Educational debate – a method of problem-based learning. It is used in the analysis of problem situations, when you need a simple and unequivocal answer to the question, while there are alternative answers. In order to involve all participants in the discussion it is advisable to use the method of cooperation, based on mutual learning while working together. In this case, integrated intelligent effort and energy of fellow students to achieve a common goal [2].

When academic cooperation is necessary to use such a scheme of action:

1) define the problem;

2) form small groups, assign roles;

3) bring to the discussion group.

Thus, the seminar-dispute is a specially prepared and organized scientific debate on the current topic, which involves members of permanent staff and the parties arguments in support of their positions.

Criteria for assessing the effectiveness of the seminar-dispute

The results of the seminar-dispute should be formed in students the knowledge and skills and the ability to convincingly defend their own point of view on the subjects. In terms of the effectiveness of the teacher in preparing, conducting and summarizing the results of the seminar-dispute can be divided into three groups of criteria: criteria for evaluating the content of seminars, assessment criteria methodology workshop-dispute, the criteria for assessment of the organization of the seminar-dispute, evaluation criteria guide the work of students on seminar-dispute.

Group 1. Criteria for assessing the content of seminars.

- Compliance with the theme of the seminar work program;
- Quality of the plan of seminars (completeness, detail or disconnectedness, contradictions and inconsistencies);
- Clarity of statement of purpose and objectives of the workshop;
- Consideration of the issues from the standpoint of contemporary economic schools of science and technology;
- Disclosure of the relationship of theory and practice;
- Professional orientation seminars, is the integration of theoretical material to future practical activities of students;
- Implementation of the content of seminars interdisciplinary and interdisciplinary connections [9].

Group 2. Criteria for assessing the methodology of the seminar-dispute.

- The validity of the choice of dispute as a of the seminar;
- The general logic of the seminar, the sequence of discussion of the topic;
- Inclusion in the work methods of activating students' thinking;
- The use of methods of securing the information presented;
- Paying attention to effective methods of monitoring the progress of the discussions and the results of students' work;
- The application of technical training, training manuals [1].

Group 3. Criteria for assessing the organization of a seminar-dispute.

- Match the length of the working class program and thematic plan;
- Having a plan dispute;
- Clarity of the start and end of the seminar-debate (no delay time), as well as the rational allocation of time in class; although the events at the seminar-debate may develop differently than it provides teacher.
- Attendance and discipline at the workshop;
- The level of preparation of students for the workshop;
- Availability of the required amount of literature that provides independent work of students in the preparation;
- Compliance with the audience, which held a seminar-debate, the necessary rules and regulations (the possibility of the use of technology, design and so on).

Group 4. The evaluation criteria guide the work of students at the seminar-dispute.

- Monitoring the preparation of students required materials, reflecting the results of independent work with literature prior to the workshop;
- Encouraging students to the statement, analysis of speeches and comments made during the seminars;
- Control group: the ability to establish contact with students;
- Summarizing, evaluation of students, tips for improving training of students, the answers to questions from the students during the final word;
- Setting tasks for the next seminars.

The supreme achievement of the seminar-dispute can be considered a situation in which produce methodological tools and ways of working, and students use them on their own that stimulates the creative search of new opportunities. As a result, the effectiveness of the seminar can be assessed such important in terms of teaching quality criteria such as:

1) the development of skills of independent work of students, the development of skills of self-searching and processing information. This is facilitated by the homework, the formulation of questions for the preparation, the indication of primary sources.

2) strengthening the intellectual activity of the students, as well as stimulating mental activity (memorization and accurate reproduction of the information; productive activity: analysis and synthesis intellectual activity of students).

Methods. It should be noted that in the context of economic change alone classical academic education is not enough to be a professional in any field of the economy; the need to establish professional competence, skills and extensive industry knowledge. Large-scale economic transformation and the ensuing modernization of the education system have caused the development of active forms and methods of teaching students. Hallmarks of economic education is the fact that this trend is due to the training of managers in enterprises that operate in the market and set among the main objectives of improving the profitability of the enterprise, especially in the face of international competition.

The dispute - a specially prepared and organized a public debate on scientific or socio important topic, which involves two or more parties to defend their positions. The workshops-debates is to form value judgments, approval worldview [1].

The success of the dispute requires considerable training, focused on the introduction to the problem, and establishment of an adequate atmosphere of the audience. The success of the dispute is largely determined by the subject, as well as thought-out organization of the seminar, training for teachers and students. Educators need to think:

1. The objectives of the seminar-dispute;
2. Forecast for the discussion of selected issues;
3. The possible answers or value judgments;
4. The conclusions which members can come as a result of the discussion.

Lecturer at the seminar-dispute in the lead role performs the following functions:

1. The right to speak and who wish to speak to opponents;
2. Regulate the order of speeches to express their own comments;
3. To ensure the continuation of the discussions during the workshop.

At the end of dispute, evaluate the following:

1. The depth of the set and the sides discussed issues;
2. How true were the answers and the quality of these responses;
3. Activity and depth of preparation of individual subgroups of students and classes in general.

The debate at the seminar gives a boost to its own reflection (as a student and teacher), sometimes helping reveal resolving problems.

Preparing students for the seminars. Experienced teachers, creating an atmosphere of creative work, orient students to the performance evaluation of character, discussions, combining them with the simple statement prepared by the hearing of the abstracts. Given the personality of students, the teacher controls the discussion and assigns roles. Self-doubt, students are offered uncommunicative questions that give the opportunity to speak and to experience the psychological feeling of success. In the organization of seminars implemented the principle of joint activities. Collective efforts can improve the efficiency of learning. In addition a seminar debate effective when carried out as a pre-prepared joint discussion of issues put forward by each of the participants. Implement a common search for answers to the training group, the possibility of disclosure and justification of different points of view of students. Such workshops provide control over the assimilation of knowledge and contributes to the development of scientific thinking of students.

Preparation of teachers to a seminar-dispute. It is of great importance for the entire course of the seminar is its methodology. Seminars preceded by a long thorough preparation. As a rule, the teacher seeks to link the theme of this seminar lessons from previous employment, building thus a single logical chain of knowledge of the discipline. In addition, students are required to inform in advance the topic and questions for the workshop, for example, at the beginning of a semester.

Unlike seminar dispute on other types of workshops is to maintain a constant composition of the group. In order to better absorption of the material can even be used incorrect statements not necessarily immediately ready to give the correct answer and make a statement of the student's subject for discussion.

For a successful seminar with creative discussions there is a need for targeted preparation. And teachers and students should tune in to a serious and in-depth critical analysis of the scientific literature and read the content you listened to a lecture on the subject. Teacher gives students specific tasks for independent work in the form of problem-formulated questions that require them to not only search the

literature, but also develop their own opinion that the holder should be able to argue and defend (to defend its position and reject contrary to his colleagues' opinion).

The purpose of employment must be very clearly stated by the teacher to organize the rest of the training: the selection of issues for discussion, recommendation of literature for self-study, the purpose of the speaker, the wording of the essay topics (if provided), etc. This work should be well planned teacher.

In summing up the lessons and evaluating student performance, should be admitted to fix their mistakes in a mild form of these shortcomings. Special tact is needed in relation to the weak students in a timely manner can be noted, even small progress in their knowledge and ability to express their thoughts on the economic issues will strengthen their faith in themselves and further enhance the activity.

Conclusion. Thus, the proper organization of the seminar-dispute is the joint efforts of the teacher and students, and implies respect for the basic rules of the debate. The effective conduct of dispute depends on the quality of preparation of students for the stated theme. Workshop dispute has a special goal – building a worldview, the formulation of value judgments. Seminar-dispute involves collective discussion of any issues in order to establish ways of reliable solutions. Workshop dispute involves a high mental activity of participants that instills the ability to debate, to discuss the material, to protect the views and beliefs while clearly expressing their thoughts.

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COMMUNICATION – PICTURE WITHOUT WORDS

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Communication occurs when a transmitter transmits to a transmitter, information or messages related to a specific subject (product, service, idea, etc.) for the purpose of this receptor messages, make it known to awaken a certain emotional reaction. Communication through images offer multiple advantages over media communication, it uses the most modern means of collection, processing and transmission of the image with which beneficiaries can build brand company / person using marketing techniques and gaining important benefits in terms promoting products or services. Image is an important communication support, which should give it considerable attention generation, transmission and its reception by a coded language, well structured and efficient. Method and methodology – for the study we used the literature in the field and direct observation. The results were processed by methods of literature and practical examples taking place in an unstable competitive environment.

Keywords*: communication, image, service, potential customer.*

Comunicarea are loc atunci când un emițător transmite la un transmițător, informații sau mesajele referitoare la un anumit subiect (produs, serviciu, idee etc.), în scopul acestor mesaje de receptor, face cunoscut pentru a trezi o anumită reacție emoțională. Comunicarea prin imagini oferă mai multe avantaje față de media de comunicare, acesta folosește mijloacele cele mai moderne de colectare, prelucrare și transmitere a imaginii cu care beneficiarii pot construi compania de brand / persoana folosind tehnici de marketing și de a obține beneficii importante în ceea ce privește promovarea produselor sau serviciilor. Imaginea este un sprijin important de comunicare, care ar trebui să-i dea o atenție considerabilă generarea, transmiterea și primirea acesteia de către un limbaj codat, bine structurat și eficient.

Cuvinte-cheie: *comunicare, imagine, serviciu, client potențial.*

Общение происходит, когда передатчик передает на передатчик, информации или сообщений, относящихся к конкретной теме (продукта, услуги, идеи и т.д.) с целью этого рецептора сообщений, сделать его известным, чтобы пробудить определенную эмоциональную реакцию. Связь через образы предлагают несколько преимуществ по сравнению с массовой коммуникации, она использует самые современные средства сбора, обработки и передачи изображения, с которым получатели могут построить бренд компании / человека с использованием методов маркетинга и получить важные преимущества с точки зрения поощрения продуктов или услуг. Изображение является важной коммуникационной поддержки, которая должна дать ему значительное внимание поколение, передачу и прием его кодированным языком, хорошо структурированной и эффективной.

Ключевые слова: *коммуникация, имидж, сервис, потенциальный клиент.*

JEL Clasification: M3, L82, L83, D83.

Introduction. Communication occurs when a transmitter transmits to a transmitter, information or messages related to a specific subject (product, service, idea, etc.) for the purpose of this receptor messages, make it known to awaken a certain emotional reaction.

According to the Explanatory Dictionary of the Romanian Language (DEX) 1998, p.475 "Image is meant by Sensory reflection of an object in the human mind, in the form of sensations, perceptions or representations, visual or auditory representations, object perceived by the senses or reproduction of an object obtained using an optical system; plastic representation of the appearance of a being, a thing, a life scenes, a painting from nature, etc., obtained through drawing, painting, sculpture, etc. Artistic reflection of reality through sounds, words, colors, etc. in music, literature, the arts, etc. The figure obtained by

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joining the points where they meet the light rays reflected or refracted or their extensions and image comes from French and Latin imago "-inis".

Communication through images offer multiple advantages over media communication, it uses the most modern means of collection, processing and transmission of the image with which beneficiaries can build brand company / person using marketing techniques and gaining important benefits in terms promoting products or services. Image is an important communication support, which should give him considerable attention generation, transmission and its reception by a coded language, well structured and efficient.

Communication – Picture without words

Essentially communication of any message or several messages must answer five questions [Balle, F., Padioleau 1973, p.31]: Who communicates? What messages? By what means? To whom? With what effect?

Today visual communication flooded the media; the images are fixed in our memory, marking our feelings fingerprint type at the same time unique and memorable. To be efficient, direct and lasting impact on the image receptor, it should aim emotions, sensations, information and resonances triggered the memory of those whom it is addressed. Without knowing the central role of the image, we can not intervene enough on it. Entering into an image crisis is a risk that no one can take.. Therefore, image management involves a number of alternative strategies and concrete actions for prevention, to avoid the image of a victim of the crisis. Most of the information we receive from the outside is about 80% visual, the man having the best suited eye to see this.

Personal image can be created from words, sounds, pictures, gestures, symbols, posters, internet, etc. It is easier and more economical to serve a flyer with photos or videotape, rather than sending the entire subject. For example, the waterfall or mountain Duruitoarea Ceahlău, we can easily know them from pictures, than to move the spot.

Often the picture may be improved, beautified or hated by a person by saying: "it looks better than in reality. "From here derives the right of each image. The objectives of the marketer are getting based on common things, anonymous, reaching obtain an image distinct brand that characterize the attractiveness of belief, notes consumer's image. The image created by marketer, must design an action, a politician, a product, a country in a possible future default. The image used badly can become in the future a vector dangerous, with the risk of getting you out of reality. Transmitters of images, marketers must engage with the public memory footprint object that has modulated image as a symbol, a unique benchmark for consumer audience. The success lies in the submission by marketer of a synthesis of the essential elements characterizing the product and the audience among which wants to promote, having regard to: datasheet Market research findings, social needs, negative and positive reactions from the public, consumer motivation, fashion, etc.

The marketer must have a well-defined social profile, strengthened skills and well motivated because the image that you create should not suffer. He must raise the anonymous mass, a "product" in people's consciousness in such a way as to make it out among existing products, creating convincing consumers that its product is the best. Marketer, creator of the picture, either as an individual or in a team, becomes an opinion leader, which is why he must enjoy a good reputation. It is interesting to find the answer to the question: In what world we live? Using our items that we offer image theory, the answer would materialize through two image: in a changing world (Romania) and in the information society (globally). Each of us has a self-image world in which we live. But it is necessary strategic vision, precisely, a clear picture of where we want to go and then organize ourselves to achieve that goal. In this case, the image serves as a means of understanding the goal.

Specialists are preparing a plan image, plan containing principles and mandatory actions to follow when creating the image. In the bigger picture, the marketer can use means that:

- press specializing in creating the image such as magazines, newsletters, the Internet, where the marketer can submit images created about the product you want to promote it;
- create professional publications and newsletters and promote the image of their product.

Specialists in the field of image are very few nowadays, because thy still do not realize now the importance of the specific image.

The images represent visual challenges. For example, images of Niagara Falls, Canada, USA, presented color in images that move gives us the impression that we are near the torrent of water that

"throws" of 49 meters high, causing around her a fairy-tale atmosphere, power, majesty and eternity. But we have some example images with the most beautiful goals indescribable in Romania:



Source: www. Images of Romania

Or Moldovan representative images:



Source: www. Images of Moldova Monastery Tipova and Soroca Fortress.

By creating brand image producers seek to define clear and distinct legitimacy which is nothing but a plot summary values that it endorses an organization / company / person, it represents the concentrated all the feelings and values that contribute to promoting reputation, all validated consumer / public opinion on which market positioning in the field working. By promoting communication and marketing, brand values are converted to images that are evaluated and received by viewers / scavenger's images.

By its content, the image must be understood as a complex whole which includes knowledge, belief, art, law, morals, and customs, known to viewers who are part of a certain system and certain psychological skills and educational [Adapted Guriţă, D 2013].

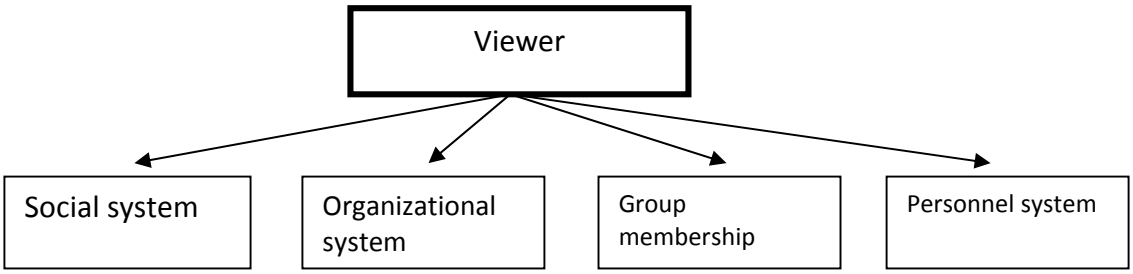


Fig. 1. The system which can make an image viewer

In the organizational system image can take certain forms depending on:

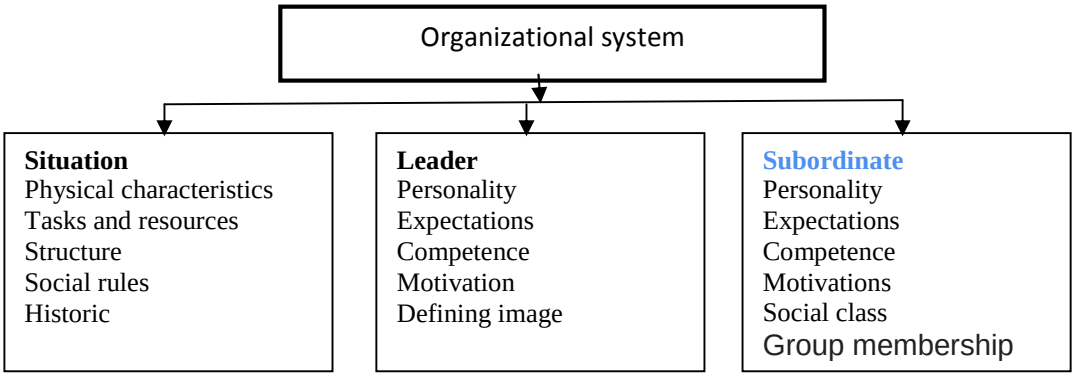


Fig. 2. Situation, leaders, subordinates

In everyday life, the individual as a consumer must always take decisions, decisions that are taken most often in the real situation, but depending on how it is perceived situation. This image plays an important role. The image of a product or an institution is to awaken the client or consumer confidence.

Swedish researcher Mats Alvesson lists four main reasons why the image has gained prominence in recent decades:

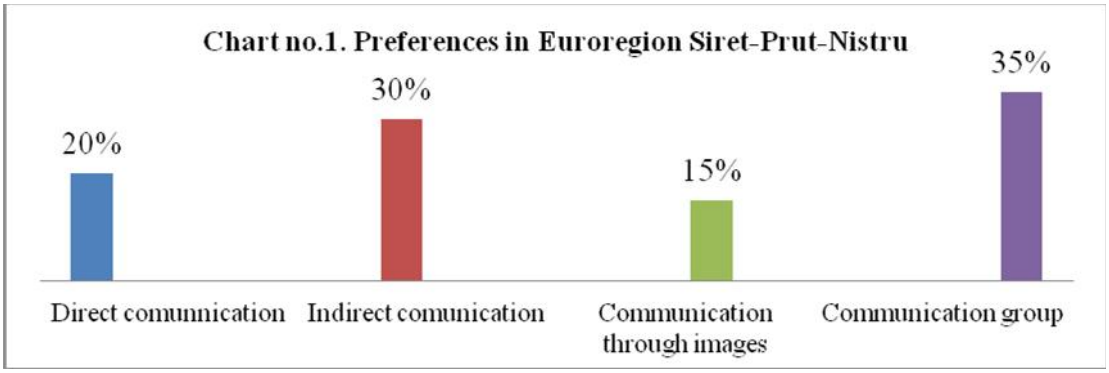
1. People have become much more flexible in terms of norms, values and their views of the world and life, which led with it a certain amount of uncertainty.
2. The second argument is based on the idea of developing society whose complexity does not allow its members an overview.
3. Another reason for the increased relevance of the image in contemporary society is linked to the development services segment expense of industrial goods whose quality materials are easily testable.
4. Developing media is in turn responsible for intensifying intensifying concern to develop and image management.

As leaders it is necessary to do a lot of quality in a short time unit. Process analysis led to the identification of key components in the art of leadership:

1. Patience is a competence necessary for the development of sound and effective leader. Its practical utility is supported by the belief that people's values and underlying success. Receptive to new ideas, open for cooperation and understanding in the transmission and imaging tasks, delegation of authority and accountability for decisions fail to become the architects of the future.
2. Enthusiasm is the measure of faith and creative energy, contagious to others, clarity and experience are acquired along the way, acting with perseverance towards achieving objectives. I believe strongly in their vision and imagination in transforming diligently seek useful ideas. Emotional experience that leaders really need when they act, barometer inner state is good that you have confirmed they have made the right decision.
3. Direction, is known in common parlance as the intuition or flair. Rotter and social learning theorists promotes the concept of "locus of control" (LOC) to define "specific modulus of an individual to perceive the connection between his own behavior and that it offers backup environment." [www.lideri architects of the future]

If subordinates perception plays a very important addition is a subjective reflection of an image in line with the conscience of the facts, objects and phenomena of objective reality that act directly on the sense organs. Compared sensation, perception is a higher level of processing and integration of information about the outside world. Superiority perception is to provide a synthetic images unit where objects and phenomena that act directly as a fully integrated and reflected in their particular individuality.

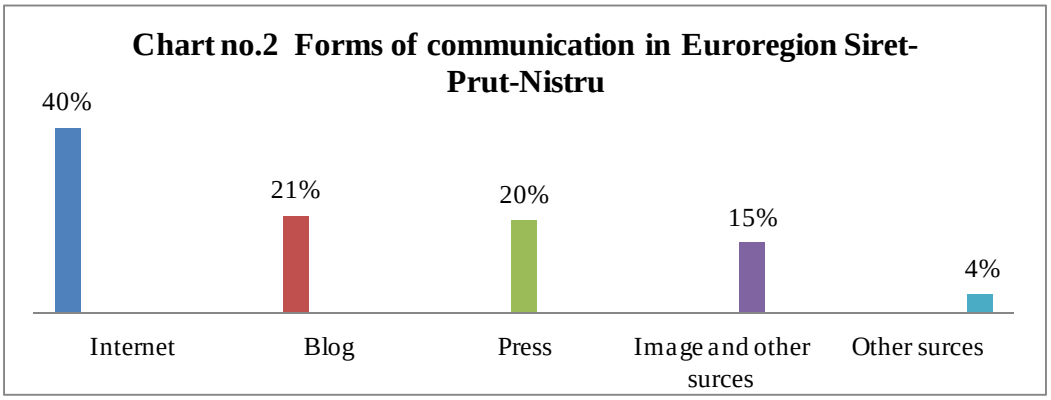
After material existence from subordinates as important is the perception of time: objective (seconds, minutes, hours, etc.); subjective (depending on age, mood, etc.) perception of space: right; egocentric. But every man is a unique personality, training, experience, aspirations elements together or separately influences understanding of messages and images transmitted.



Source: Data processed by author.

Our study revealed preferences of the Siret-Prut-Dniester following:

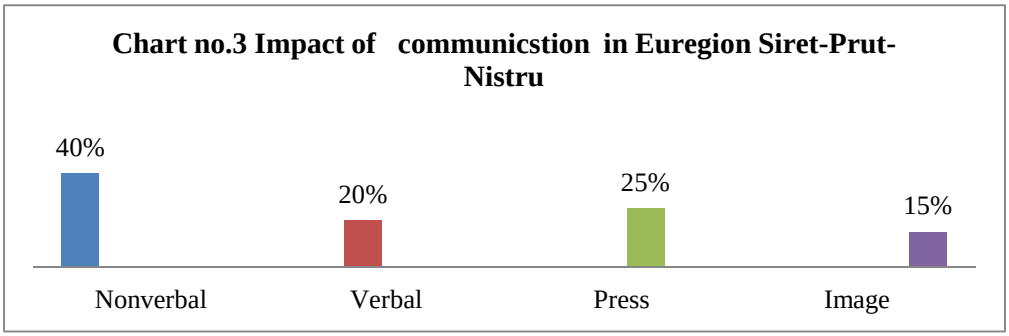
- 20% of respondents prefer direct communication;
- 30% of respondents choose indirect communication;
- 15% admit communicating through images;
- 35% prefer group communication.



Source: Data processed by author.

Other form of communication preferred by customers in Euroregion Siret-Prut-Nistru is highlighted by the following study:

- 40% of respondents use the internet as a form of communication;
- 21% of respondents use the blog;
- 20% of respondents use tooth print media (newspapers, magazines, leaflets, brochures);
- 15% of respondents use tooth image;
- 4% other sources.



Source: Data processed by author.

- 40% of respondents admit nonverbal communication;
- 21% of respondents practice verbal communication;
- 25% of respondents recognize the impact tooth media (newspapers, magazines, leaflets, brochures);
- 15% tooth respondents recognize the impact a good image.

In conclusion, the communication is an integral part of the media, new concept, which was developed particularly in the postwar period, as a direct consequence of the emergence of new forms of information transmission, or by which radio or through images.

Image they convey must be distinctive and not blurry, dull, unconvincing. Hence the main task of the creator of the image or marketer "to do stuff without personality and valuable picture of something brand with individuality, the power of attraction and persuasion" [Matei Gherman, C, 2015]. Creator must be: "...in step with the times, appreciate and exploit scientific knowledge and social" [Burlui, V., Marinescu Gh., C., 2013, p.31].

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FISCAL POLICY OF THE REPUBLIC OF MOLDOVA: ACHIEVEMENTS OF THE FISCAL CONTROL AND ENTITY BEHAVIOR

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It is an actual theme, determined by achievements of tax control in Moldova and its impact on the behaviour of the entity as important elements of fiscal policy. There are examined different methods for differentiating the problem, supplemented by deduction, induction, synthesis, analysis of defining phenomena of fiscal policy and its elements. The methodology used in this study is based on assessments of the theory, studies and interpretations of specialized literature and analyzes the practical activities specific for taxation at national, European and international levels, depending on which some opinions, conclusions and proposals were founded and formulated, to minimize the impact of tax evasion and fraud.

Keywords*: economy, tax and duties, social contribution, tax burden.*

Actualitatea temei este determinată de realizările controlului fiscal din Republica Moldova și impactul acestuia asupra comportamentului entității, ca elemente importante ale politicii fiscale. Sunt examinate diferite metode de diferenţiere a problematicii, completate de deducţie, inducţie, sinteză, analiza fenomenelor definitorii privind politica fiscală şi elementele acesteia. Metodologia utilizată în acest studiu se bazează pe evaluări ale teoriei, studiilor şi interpretărilor din literatura de specialitate și analizele din activitatea practică, specifică domeniului fiscal la nivel naţional, european şi internaţional, în funcţie de care s-au fundamentat şi formulat unele opinii, concluzii şi propuneri proprii, cu impactul minimizării evaziunii și fraudei fiscale.

Cuvinte-cheie: *economie, impozite și taxe, contribuții sociale, povara fiscală.*

Актуальность темы обусловлена результатами налогового контроля в Республике Молдова и его влияния на поведение предприятия. Анализируются различные методы дифференциации поставленных задач, дополненные дедукцией, индукцией, анализом и определения явлений налоговой политики.Методология, используемая в данном исследовании, основана на оценках теории, исследования и интерпретации литературы и анализа практической территориальной деятельности, характерные для налогообложения на национальном, европейском и международном уровнях, в зависимости от чего и были сформулированы некоторые мнения, выводы и предложения, чтобы свести к минимуму влияние эфекта уклонения от уплаты налогов и налогового мошенничества.

Ключевые слова*: экономика, налоги и пошлины, социальные взносы, налоговое бремя.*

JEL Classification: E62, F41, G19.

Introduction. In most of EU countries fiscal reforms are different as depth, oscillating between implementing tax policies by increase or reduction of tax burden and implementing some elements of European fiscal policy – in line with EU recommendations or charges, with multiple implications at the level of the taxpayers and the public decision makers. Practice has shown that processes of economic integration determined outsourcing of specific problems of each state within the Union, including fiscal ones, the impact of which can have an effect on other Member countries, or may affect two key factors: ensuring community freedoms, and protection of the single market. Tending to mitigate these effects once "the European single market project" is launched, the explicit emphasis was put on tax harmonization that is based on the rule of Community norms prevalence in relation to national legislation, so that national tax

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rules to be restructured and adapted uniformly as possible, and fiscal relations between the member countries of the Union to rely on fiscal neutrality [2. p.41].

The overall objectives of fiscal policy in the Republic of Moldova in the medium term are based on the following:

• ensure equity, sustainability and fiscal transparency;
• streamline the tax burden;
• systematize the national tax law;
• improve and simplifying tax systems;
• harmonize the national tax legislation, as well as in line with implementation of the Association Agreement between the European Union and the European Atomic Energy Community and its Member States, on the one hand, and the Republic of Moldova, on the other hand [2. p.4].

Fiscal policy measures. In the medium term, in Moldova there is expected a number of fiscal policy measures related to major types of taxes, as follows: harmonization of the VAT legislation with the European Union in accordance with the timetable established under the Association Agreement between the European Union and the European Atomic Energy Community and its Member States, on the one part, and the Republic of Moldova, on the other hand, namely:

- Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax;
- Council Directive 2007/74/EC of 20 December 2007 on the exemption from value added tax and excise duty of goods imported by persons traveling from third countries;
- Thirteenth Council Directive **86/560/EEC** of 17 November 1986 on the harmonization of the laws of the Member States relating to turnover taxes – Arrangements for the refund of VAT to taxable persons not established in the Community [2. p.31].

According of December 31, 2014, in Moldova there were on record a total number of 689,580 taxpayers practicing entrepreneurship, business, retain and pay taxes at the source of payment. Of this number, 122 057 persons constituting legal entities, farms – 507 256 units, individual enterprises – 59 989 units and individuals who practice professional activity – 278 people. Additionally, during 2014, a number of 16007 entrepreneurship patents were issued, and 38, 7 mln. MDL were claimed [5. p.127].

To the situation on 31 December 2014 a number of 15975 patents remained valid. The Republic of Moldova recorded successes in the most popular annual rating on comparing business regulations for local entrepreneurs in 189 economies published by the World Bank Group. Thus, in terms of tax payment, the experts of the study ,,Doing Business 2015" appreciate the work of tax bodies with plus (+) 35 positions compared to the previous report (position 105 – Doing Business 2014, position 70 – Doing Business 2015). According to the main tax indicators, Doing Business 2015 data is presented in Table 1.

Table 1

Data related to fiscal domain according to Doing Business 2015

Indicators	Moldova DB 2014	Moldova DB 2015	Europe and Central Asia	OECD
Number of payments/year	31,0	21,0	20,5	11,8
Time used (hours/year)	181	185	234,3	175,4
Income taxes (% of revenue)	9,6	9,3	10,4	16,4
Taxes and deductions from salary (% of revenue)	30,6	30,2	21,4	23,0
Other levies/taxes (% of revenue)	0,2	0,2	3,1	1,9
Total tax rate (% of revenue)	40,4	39,7	34,9	41,3

Source: STIM, 2015.

One of the reasons due to which the above mentioned progress was registered is the implementation of E-declarations, online payment of obligations, reduced number of declaration by their merging. During 2014, the Republic of Moldova has made 60,523 tax audits. Compared to the year 2013 (74 029 tax audits), their number decreased by 13,506 or 18%.

Table 2

Dynamics of tax audits conducted during 2010-2014

Indicators	**Years**				
	2010	**2011**	**2012**	**2013**	**2014**
Total tax examinations conducted on the spot, including by verification method:	66875	71900	63527	74029	60523
Total (plan and over plan)	5602	4947	3652	2959	3922
themes	25685	28804	24696	29968	24484
repeated	176	118	153	96	88
operative	11621	13401	12500	12519	9315
contraposition	1340	1550	1936	3523	3801
cameral check	18729	19347	17383	19275	16391
other	3722	3733	3207	5689	2522

Source: STIM, 2015.

We find that number of tax audits planned by the method of total checking/plan increased by 431 controls (1087 in 2014 and 656 in 2013). The dynamics of all checks in 2014 compared to the same period of the previous year, is decreasing by 18%. According to information provided by the State Tax Inspectorate of Moldova (STIM), following an overall control additional tax liabilities in the amount of 249,200 MDL were calculated in average per STI. The highest level was obtained by STI Chişinău municipality, STI Edinet, Straseni, Dubasari and the STIM General Directorate for Large Taxpayers Administration. At the same time, a level much lower than the average recorded Nisporeni STI, Soroca, Calarasi, Telenesti, Cahul, Ialoveni, Glodeni, Cimislia, Balti, Gagauzia, Stefan-Voda etc. [2. p.38].

The share of total calculated amount of money paid in addition to the budget (except for amounts calculated using estimates, to operators that are in the process of insolvency, the amounts contested at STS or in court and the reduced amounts under the legal framework) is 87%. Cost-effectiveness analysis shows that per one MDL paid as salary (according to gross salary of the tax inspectors from the control units) about 10 MDL real revenue collected at the budget was obtained. The highest efficiency in terms of expenditures for one MDL cashed after the checks have been done were registered at territorial STI Chisinau, Falesti, Causeni, Briceni, Drochia, STIM General Directorate for Large Taxpayers Administration.

Next, we make a reference to the influence of the external environment on the economic entity's fiscal behavior. It is understood: the size of the entity (micro, small, medium-sized enterprise), seasonal character (work are ongoing, seasonal – winter, summer, occasionally), the region where the company operates, respectively its field of activity. It should be noted that values assigned according the ranges depend on the statistics provided by Moldovan territorial STI (2014/2015 editions). As a sample for analysis, it was used: size, revenue from sales, the economic results of companies in the region, etc. In this sense, we consider β coefficient expressing the impact of influence factor (those listed above) on the fiscal behavior of the company, with positive values between 0 and 1 (or 0% – 100%), β € [0;1]. We therefore:
β=0, as the company is not influenced, behavior is correct; **β=x** – value, when that factor has an impact on the company. The β value is closer to 1, the company is vulnerable factor, and behavior aims to be incorrect, escapist; **β=1** – escapist behavior, factor has a major impact on the company.We propose the following:

We note ***Y = Fb/If***, an impact report, indicating the extent to which fiscal behavior is influenced by these influence factors; Fb – fiscal behavior of the economic entity; If – (external) influence factor. β € [0;1], …in the ranges [0-0,4]; [0,5-0,7]; [0,8-1]. Also, Σ – is the set of economic entities that fall in that sample. Y means: Y € [0-0,4] behavior is not affected by the impact of that factor; Y € [0,5-0,7] behavior is influenced to an acceptable level; Y € [0,8-1] the impact on behavior is strongly negative.

a) F1 = company size

Table 3

Fiscal behavior depending on the size of the entity

Y=Fb/size	**[0-0,4]**	**[0,5-0,7]**	**[0,8-1]**
Microenterprises	-	-	∑xi
Small enterprises	-	∑xi	-
Medium-sized enterprises	∑xi	-	-

Source: Based on the STIM territorial statistics, 2015.

According to estimates, the type of micro businesses have the lowest degree of compliance; the opposite is the medium ones that are frequently subject to tax controls.

b) F2 = seasonality

Table 4

Fiscal behavior depending on the seasonal activity

Y=Fb/seasonality	**[0-0,4]**	**[0,5-0,7]**	**[0,8-1]**
Permanent activity	∑xi	-	-
Seasonal activity	-	∑xi	-
Occasional activity	-	-	∑xi

Source: Based on the STIM territorial statistics, 2015.

We believe that companies with permanent activity are honest, they comply with tax; one reason is the fact that they are included in an evidence at the official level and fiscal control can be performed at any time. Instead, regarding seasonal work it is well known that both during the holiday season and during holidays most businesses do not pay their obligations to the state. Also, economic units with occasional activity have a reduced degree of tax compliance, most often evasion is related to VAT, labor taxes.

c) F3 = region, where the economic entity operates

Table 4

Fiscal behavior depending on development region

Y=Fb/region	**[0-0,4]**	**[0,5-0,7]**	**[0,8-1]**
Nord	∑xi	-	-
including Balti municipality	-	-	∑xi
South	-	∑xi	-
ATU Găgăuzia	-	-	∑xi
Center	-	∑xi	-
Chişinău municipality	∑xi	-	-

Source: Based on the STIM territorial statistics, 2015.

In line with mentioned above, in Chisinau and the Northern development region the firms have an honest behavior. A medium fiscal behavior is with entities in the South and the Center. The rest (Gagauzia, Balti), are regions which are developed economically, but often evade taxes [3. p.138].

d) F4 = sphere of activity

Table 5

Fiscal behavior depending on the sphere of activity

***Y=Fb/*sphere of activity**	**[0-0,4]**	**[0,5-0,7]**	**[0,8-1]**
Agriculture	-	-	∑xi
Mining industry	-	-	∑xi
Processing industry	-	∑xi	-
Production and supply of electricity and thermal energy, gas, warm water	-	-	∑xi
Water supply, sanitation	-	∑xi	-
Constructions	-	-	∑xi
Trade	-	-	∑xi

Transport and storage	-	∑xi	-
Hotels and restaurants, catering	-	-	∑xi
Information and communications	-	∑xi	-
Financial intermediation and insurance	-	∑xi	-
Real estate transactions	-	-	∑xi
Professional, scientific and technical activities	-	∑xi	-
Public administration	-	∑xi	-
Education	-	∑xi	-
Health and social assistance	-	∑xi	-
Entertainment, recreation and arts activities	-	∑xi	-
Activities of households	-	-	∑xi

Source: Based on the STIM territorial statistics, 2015.

According to latest reports (Ministry of Finance, STIM), economic agents tending to avoid taxes are from agricultural sector (grains, vegetables, fruits), those who operate with products subject to excise duty (tobacco, alcohol, energy products), real estate, hotels and restaurants, food industry, constructions and trade. Tax evasion is done mostly in relation to VAT (especially in constructions, hotels and restaurants, where, for example, employees receive their wages "in envelopes"), declaring incorrect number of tourists (tourism), appointment made "to black" etc. According to research, entities meet main development obstacles in:

- drop in domestic demand;
- excessive taxation, bureaucracy;
- late payment of invoices from private firms;
- development of the legislative framework, political changes, etc.

Conclusions. We believe to avoid a decrease in tax compliance of entities, continuous improvement of fiscal policy, adjusted to EU standards and requirements is needed. Thus, major influences will have:

- increase of the efficiency of the control system and labor and taxation evidence system;
- strict application of penalties and sanctions in case of detection of informal activities;
- simplification of taxes, while reducing bureaucracy;
- reduction of certain taxes that hinder work in the formal sector, investments or private initiative, while increasing others that are currently undersized in Moldova, as well as wealth tax or capital and the land tax;
- introduction of a complex deductions and incentives system and its effective application, following the EU model.

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THE SOCIO-ECONOMIC IMPORTANCE OF PROGRAMS FOR THE FINANCING OF CROSS-BORDER COOPERATION

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The topic of European funding shows a great interest for present and, especially, for the future. The common problems of areas implied in the cross-border programs are correlated to socio-economic development of communities. By this paper we propose an analysis, by inventory type, descriptive and qualitative, of implemented projects and of the perspectives for projects in 2014-2020 period. The results of paper consist in identification of solid arguments about the importance and necessity of these programmes and projects.
Keywords: *European funds, cross-border, cooperation, necessity, importance.*

Subiectul finanţărilor din fonduri europene prezintă un interes ridicat în prezent şi, mai ales, pentru viitor. Problemele comune ale zonelor implicate în programele transfrontaliere sunt corelate cu dezvoltarea socio-economică a comunităţilor. Prin lucrarea de faţă ne propunem analiza, de tip inventar, descriptiv-calitativă, a proiectelor implementate şi a perspectivelor de proiecte din perioada 2014-2020. Rezultatele lucrării constau în identificarea argumentelor privind importanţa şi necesitatea unor astfel de programe şi proiecte.
Cuvinte-cheie: *fonduri europene, transfrontalier, cooperare, necesitate, importanţă.*

Тема финансирования из европейских фондов представляет в настоящее время повышенный интерес, особенно для будущего. Общие проблемы зон, включенных в трансграничные программы, находятся в непосредственной зависимости от уровня социально-экономического развития населенных пунктов. В настоящей работе авторы предлагают различные виды анализа, в том числе инвентаризационный, описательно-качественный, как внедренных проектов, так и проектов в процессе внедрения в период 2014-2020 годов. Результаты работы заключаются в идентификации аргументов относительно значения и необходимости данных программ и проектов.
Ключевые слова*: европейские фонды, трансграничный, кооперирование, необходимость, значение.*

JEL Classification: E02, F35, F43, F6, O11.

Introduction. The grants obtained from European funds or other sources, represent a major stake of current socio-economic development, especially of the European countries recently integrated in EU or the acceding countries. The funding sources are numerous, and their typology is very wide. Among the most popular funding programs designed to support the international cooperation and the development of European Union border areas, we note the cross-border cooperation programs, which aim to achieve a high level of socio-economic development, and also, the growth, improvement, diversification of activities in all areas of interest: economic, social, cultural, educational, environmental, etc.

By this paper we propose to realize an incursion in the chronology of borders collaborations funding programs, with aim to demonstrate that the development of an economy only through internal efforts and actions is not sufficient, in conditions which the good cooperation and forces of neighbour countries reunification is, certainly, an impulse and a necessity. Starting from the results of previous funding programs developed to support the cross-border cooperation (2007-2013), concretized in varied and numerous projects, we will refer to the funding programs of the next period: 2014-2020. Thus, it can be shows that the need and importance of cross-border cooperation are circumscribed to a long-term approach. The main

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references will be made for Romania, based on official data that we had available; also, we will focus on the past and future partnerships between Romania, Moldavia and Ukraine.

Incursion in the cross-border cooperation funding programs. The most representative recent financing program for the projects of cross-border cooperation for Romania-Ukraine-Moldavia area is the Joint Operational Programme Romania-Ukraine-Moldavia (2007-2013). The Funder is the European Union through the European Neighbourhood and Partnership Instrument. The value of program was about 138 M €, of which 126.72 M € European contribution [20]. The functionality and necessity of the program are supported by concrete arguments such as: full amount allocated was absorbed, all funding lines were closed, and full financial allocation was contracted. In this context, we consider that it has proved a remarkably successful program, based on real and appropriate needs. The total number of projects implemented was 140, of which: 67 finalized (with a total value over 9 mil. Euro), 12 technical finalized, but the final payments were to be held at the end of 2015 (totalling over 12 mil. Euro) and 61 still in the implementation stage. In terms of territorial coverage, direct and adjacent (for these can be implemented only projects that do not involve investments), the regions included in this program are:

Romania: Suceava, Botoşani, Iaşi, Vaslui, Galaţi, Tulcea counties / adjacent: Brăila;

Ukraine: Odessa and Chernivetska oblasts / adjacent: Ivano-Frankivska and Vinniytska oblasts, 10 districts from Khmelnyitska, 12 districts from Ternopilska;

Republic of Moldova – entire territory.

We consider that for understanding the programs' objectives, very attractive and suggestive is the slogan: *Joint borders. Joint solutions*, from which we deduce that the program aims to create a bridge between three partner states. The main goal is to support the communities of border areas in order to identify efficient solutions to the common or similar faced problems. Moreover, it aims to increase the local economy, to solve the environmental problems, to strength the emergency preparedness, to have a better interaction between communities in the border areas etc.

The specific of projects implemented in the framework of analyzed programs. The main types of projects that were implemented in the cross-borders cooperation programs, as well the results obtained is the subject of hereinafter analysis. Given that the number of funding programs is rather large and the number of projects is impressive, we decide to analyze some key issues specific for Joint Operational Program Romania – Ukraine – Moldavia (for 2007-2013 funding period).

According to the Funding Program Guide, the priorities of this program are 3 in number, plus the Technical Assistance component [20]. The priorities are grouped into measures or specific key domains, as follows:

Priority 1. Towards a more competitive economy of border area aims: to improve the productivity and competitiveness in the urban and rural areas; to develop the cooperation initiatives in transport, border infrastructure and energy networks;

Priority 2. Environment and preparedness for emergencies aims: the common solving of environmental issues; preparing for the emergencies situations; the management of water and wastes;

Priority 3. Promoting the activities of type „people to people" aims: promoting the good interaction between communities from border area; sustain the local and regional administration and civil society; cultural, social and educational exchanges;

Technical Assistance aims the efficient implementation of program from technically and administrative point of view and the widest possible participation of the public.

The results of the program are concretized in investment projects implemented with aim to support a mutually advantageous collaboration for the 3 involved countries. The initiatives (solid, various and sustainable) have economic, financial and socio-cultural high value. The projects were conducted on specific priorities, like:

- improvement of border cooperation;
- arranging and reconfiguring the routes for gas and electricity;
- creation and improvement of communications and transport infrastructure;
- inventory, assessment and remediation of anthropogenic sources of pollution;
- prevention and flood protection and waste management;
- development of tourism and historical/ethnographical heritage conservation;
- supporting the entrepreneurship and create a favorable investment climate;
- ensuring the human security, as well as the human resources development.

Priority 1 was focused on the increase of economic competitiveness of the border area of Romania, Moldavia and Ukraine. The major investment projects for this priority were implemented by various entities of the three countries: ministries, customs, agencies - all interested by a better functionality of cross-border cooperation in vital areas: petroleum products, food, natural resources, electricity, transport and communications. Given the specificity of the projects, their implementation period was quite large, the most of the projects being for approximately 2 years. The values were significant, totaling over 24 mil. Euros, of which over 75% European funds. On the first call of this priority, 15 projects were contracted. The organizations involved in implementation are various and numerous: NGOs, municipalities, universities, county development agencies, county councils etc. Project's value range from 241,000 to 2,700,000 Euro.

The major investment projects implemented into Priority 2, with respect to protection of the environment, prevention and solving the problems appears in emergency situations, were another essential support in cross-border cooperation under this program. Financing line has been exhausted and the implementation of the three high value projects (over 5 mil. Euros each, or a total of about 20 million Euro), denote that the necessity of cross-border cooperation in this direction was a priority. The partnerships were mainly trilateral. The applicants were ministries of the three countries, and the cover of projects' value was done of about 90% by European funds. For the first call of the second program priority related to environmental protection and emergencies situations, were implemented 5 valuable projects in the fields of: health and life safety, water and waste management, biodiversity conservation. The institutions involved as applicants are: universities, district councils, public health institutions. The coverage of projects' value was about 90% and the lowest value was 131,200 Euro, while the highest value project was amounted to about 3 million Euro.

For Priority 3, which was aimed to promote a sustainable interaction between citizens, civil society and local communities through intercultural exchanges, the social and cultural-educative sustainability, the number of implemented projects was over 60. We note the diversity of fields of project implementation. The most accessed financed domains were: protection of children and vulnerable persons, combating the persons trafficking, health services, waste management, promotion of culture through reading, art, theater etc., improvement of conditions at work, promoting the sportive education, the organic agriculture and a healthy lifestyle, promoting volunteerism and cultural diversity etc. The most numerous applicant organizations were non-profit associations and NGOs, followed by municipalities, universities, hospitals, government units. Although the unit value of the projects was not very high (about 45,000 Euro to 150,000 Euro / project), the large number of these produce multiple results, diverse and expected. The most projects were conducted during one year. Almost all accessed and contracted projects for this funding line, were supported with European contribution in percentage of 90%.

Programs for cross-border cooperation in 2014-2020 period. Concerning the continuation of initiatives started in the 2007-2013 period, these will be supported by new funding programs in 2014-2020, by which the European Union will support financially the Joint Operational Program Romania-Ukraine, through the European Neighborhood Instrument (ENI). The counties from Romania, targeted by this program are: Satu Mare, Maramureş, Botoşani, Suceava, Tulcea, and from Ukraine the oblasts: Ivano-Frankivsk, Zakarpatska, Chernivtsi, Odesska. The financial allocation is 60 Million Euro.

Another program designed to continue the initiatives from 2007-2013 period and to capitalize the results achieved through implemented projects, is the Joint Operational Program Romania-Moldavia, funded by European Union for the period 2014-2020, through ENI and which addresses to area from the border between Romania and Republic of Moldavia. The counties participants from Romania are: Botoşani, Iasi, Vaslui, Galaţi and entire territory of Republic of Moldavia. The financial allocation from the European Union is 81 million Euro. The projects with priority financing are from economic and social area, environment and, also, culture. Overall, in the funding period 2014-2020, the Ministry of Regional Development and Public Administration from Romania manages 12 European territorial cooperation programs, that take place both at the internal and the external borders of the European Union. Other cross-border cooperation programs for 2014-2020 period are: V-A Interreg Program Romania-Bulgaria, IPA Cross-Border Cooperation Program Romania-Serbia, Romania-Hungary Interreg V-A Program, The Joint Operational Program "Black Sea basin", Hungary-Slovakia-Romania-Ukraine Program, Interregional cooperation program Inter-Reg-Europe, Cooperation Program Interact III, Operational Program Urbact III, Transnational Program "Danube", Cooperation Program ESPON 2020 [19].

The most consistent activities supported in the 2014-2020 funding period, in the framework of cross-border cooperation projects are: investments, acquisition of equipment, studies, strategies, exchange of

experience, joint actions to support the disadvantaged groups, development of partnerships and networks between universities for common development of theoretical research, awareness campaigns, investments in customs infrastructure, etc. [19].

Conclusions. The general objectives of the cross-border cooperation programs are considering the economic growth and development of areas covered by funding programs, to improve the quality of life, to increase the volume of investments in culture and education, in infrastructure and health, transport and communications, ensuring the basic utilities, guaranteeing the safety and security of the citizens from countries involved in the programs. Other objectives derived from the necessities identified from specialized studies and researches are: technological development and innovation (with a budgetary allocation over 7 million Euro), promoting the culture and preserving the historical heritage (a budget over 12 million Euro).

The contribution of funding programs from 2007-2013 and 2014-2020 periods is significant and essential for development of good cooperation relations between communities of countries involved, and the efforts of management structures was materialized in, and still aims, the successful results. Overall, the financing by cross-border cooperation programs from 2007-2013 period is considered with positive impact, and for 2014-2020 it is hoped in a high degree of success. We consider that the strategic-partnership orientation promoted by specific of these programs is beneficial for economies and societies of all countries and regions participating in program and contributes significantly to social welfare and providing the conditions to sustain a healthy, equitable and prosperous economy.

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SOCIAL MOBILITY OF POPULATION AND EDUCATION

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Stratification designates the manner in which a society differentiates and ranks the functions. Throughout history mankind has seen different forms of stratification – castes, statuses, classes. Education is a factor that influences on social mobility. For many sociologists, education could also reduce social inequality. For these reasons we intend to analyze the situation of education in the Republic of Moldova. There are a number of indicators that tell us about the situation of education in one country or another: the percentage of GDP for education spending, education spending per capita, the percentage of young people with complete secondary education, the number of students per ten thousand inhabitants, etc.

Keywords: *social stratification, social mobility, social structure, social inequality, education, profession.*

Stratificarea desemnează maniera în care o societate diferențiază și ierarhizează funcțiile. Pe parcursul istoriei sale omenirea a cunoscut forme diferite de stratificare – caste, stări, clase. Educația este un factor care influențează mobilitatea. Mulți sociologi sunt de părerea că educația reduce inegalitatea socială. Din aceste considerente noi ne-am propus să analizăm situația din domeniul învățământului în Republica Moldova. Sunt un șir de indicatori care ne vorbesc despre starea de lucruri din domeniul educației dintr-o țară sau alta: procentul de cheltuieli pentru învățământ din PIB, cheltuielile pentru învățământ pe cap de locuitor, procentul tinerilor cu studii medii complete, numărul de studenți la zece mii de locuitori ș.a.

Cuvinte-cheie: *stratificare socială, mobilitate socială, structură socială, inegalitate socială, educație, profesie.*

Социальная стратификация определяет распределение ролей и функций в обществе. Образование является фактором влияющее на социальную мобильность. Ряд социологов считают, что образование уменьшает социальное неравенство. Исходя из этого мы сочли нужным исследовать ситуацию в области образования в Республике Молдова. Есть ряд факторов, определяющих состояние в области образования в той или иной стране: процент ВВП затрат на образование, количество молодых людей со средним образованием, соотношение количества студентов к десяти тысячам жителей и др.

Ключевые слова: *социальная стратификация, социальная мобильность, социальная структура, социальное неравенство, образование, профессия.*

JEL Classification: I25, I30, I20

Due to the speed the events develop currently, history achieves new forms and overcomes the capacity of the human being to direct itself in life according to the genuine values. Although they do not panic, the humans sometimes understand that the old concepts about life go under, and the new ones are very doubtful from ethical point of view… In order to keep the individuality, the humans become morally insensitive and everyone inhibits in its own personal life. The world needs not only information, because in the "age of events" the information attracts their attention so much so that they cannot assimilate it [1,6].

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In this study, we decided to analyze the concept's studying degree of class and social stratification, the factors of social structure, the role of the education in forming social structure and mobility, the accessibility and studies' quality in Republic of Moldova according to opinion of the respondents. As empirical material, we used the results of the researches realized by the Sociology Section within the project *Social Stratification Evolution under the Conditions of Society's Transformation and Prospects of European Integration of Republic of Moldova*, performed in 2014 on a sample of 1200 respondents, representative for grown-up population of Republic of Moldova, with a maximum error of 3%; it was used also the statistic data and the method of documents' analysis.

Once emerged, the society was based on inequalities. Certain persons or groups of persons were holding a more privileged place, others could not benefit of any facility in the conditions they were living. The stratification assigns the way a society differs and ranks its functions. Throughout its development history, the humanity experienced different forms of stratification – castes, stages, classes. This problem was a study object of the researchers of all times. More than that, there were a series of authors, especially during Enlightenment period (Th. Morus, Campanella), whose works described ideal social models, without classes. This concept perpetuated during all historic periods, being performed social experiments, where through Republic of Moldova passed.

The education is a factor that influences the social mobility. According to the opinion of many sociologists, the education could reduce the social inequality. For these reasons, we want to analyze the situation of the education field from Republic of Moldova. There a number of indicators that shows the current condition of the education in a country or in another one: cost percentage for education from GDP (Gross Domestic Product), costs for education per capita, the percentage of the young people with incomplete secondary education, the number of students at ten thousand habitants, and others. Quality advancement of the education system is determined largely by the available financial allowances. During 2008-2014, the quota of allowances assigned to the educational field constituted on the average 8,5% from GDP, decreasing with almost a percent in the last two years.

At the chapter of education's financing, the things are bad not only at government level, but also at households' level. According to the statistic data, the average monthly costs of population consumption in 2013 constituted on the average per person 1775 lei, increased in comparison with the same period of the last year – in 2012 the consumptions costs constituted 1598 lei. The largest part of the costs were assigned to cover the need of food consumption – 44,9% with 1,7 percentage points more than 2012. The less money are assigned to education – 0,8%, in decrease with 0,2 percentage points than 2012. UNESCO is concerned about the quality of education from Republic of Moldova. The access to studies of the children depends on the welfare of the family, the children with a poor welfare are discriminated within the pre-university education institutions. The discrimination doesn't happen at official level, but de facto the children from social-vulnerable families do not have access to the education institutions they want. More than that, they do not attend school because of material reasons: their parents cannot assure all the necessary things for that. According to statistic data, the covering gross rate of the primary education in 2010-2011 was of 93,6%.

Table 1

Graduates of the secondary education institutions, students of higher education institutions in 2007-2013

Year	Graduates schools/high schools	Graduates of higher education institutions	Graduates of higher education institutions at 10000 habitants
2007	**40.506**	**19.972**	**56**
2008	**36.644**	**29.614**	**83**
2009	**35.527**	**26.611**	**75**
2010	**34.878**	**28.408**	**80**
2011	**33.272**	**27.788**	**78**
2012	**29.902**	**26.730**	**75**
2013	**29.661**	**24.848**	**70**

Source: National Bureau of Statistics of Republic of Moldova (www.statistica.md).

Another indicator of education's quality is the number of high school graduates and high education institutions students. The number of high education institutions' students is bigger than five years ago. Statistic data denote an increase of the higher education institutions' graduates applicable to 10.000 habitants. But we also observe here a less relevant tendency; probably the number of schools and highs schools graduates is decreasing. In 2012 the number of graduates from schools/high schools is almost equal to the number of graduates from higher education institutions.

The profession is decisive in holding a position within social hierarchy. According to the results of our researches, the majority of the respondents (over 60%) invoke as first criterion of a profession – its high remuneration. The work's feature and emotional aspects are less important, only every fifth respondent considers that a prestigious profession has to be interesting. Although, when they were asked to name the top most prestigious professions, they selected not the most paid ones. The most prestigious profession is to be a doctor (47%), follows the jurist (36%), teacher and economist – with less than 20%, programmer – 18%. Although as a first criterion of a prestigious profession is invoked the income it offers we can see that only the profession of economist and programmer would satisfy the respondents desideratum, because the minimum wage on economy is the highest in this field, others being less paid, if it is taken into consideration other income sources than the official ones. These professions, though are less remunerated attained the top of the most prestigious from more considerations. First of all for the rural sector, which represents 61% from the sample, they are a constant source of income, fact that cannot be said about the activities from agrarian sector. Still in rural localities, it is kept the tradition that the professions of doctor and professor have a particular social status, more superior than others.

The results of our research indicate a bigger interest (in comparison with the researches realized previously) toward workers' professions. So the tenth respondent considers as prestigious the professions of constructor and carpenter. A great part of respondents from rural space choose the profession of farmer. It is prefigured the idea that not only the professions presuming intellectual work are prestigious and those presuming physical work.

We mention that level of studies and the age of the respondents influence on the criteria for the determinations of professions prestige. For the persons with higher education it is important, first of all, that the profession to be interesting, the more the level of studies is lower, the less this criterion is important. The respondents with complete and incomplete secondary studies focus on the remuneration of the profession. This tendency is observed also in reference to the respondents' age: for young people, the offered salary is not so important. Once the age increases, the preferences of the respondents change also, i.e. the older respondents are the most pragmatic.

According to statistic data, in the employees' distribution on types of economic activities prevails the employees from the field of industry and education. In 2010-2014, it almost doubled the number of employees of hotels and restaurants. It increased almost twice the number of employees from the field of trade and constructions and therefore it increased almost twice the number of persons that work in the field of real estate transactions.

The statistic data on population distribution according to economy's sectors indicate an essential decrease of the population in the field of agriculture. From 2005 since 2014 the population number, working in this branch, decreased with almost 15%. It is observed an increase during these years of the population working in the field of construction and industry. The biggest percent of the occupied population work in the field of services – 54,3%, in increase with 10% since 2005 until 2012.

Table 2

Distribution of the occupied population on the economy's sectors (in%)

Field / Year	2005	2011	2012
Agriculture	**40,7**	**27,5**	**26,4**
Industry	**12,1**	**13,1**	**13,2**
Constructions	**3,9**	**5,7**	**6,1**
Services	**43,3**	**53,7**	**54,3**

Source: Statistics Almanac of Republic of Moldova: Chisinau, Statistics 2013, page 72.

The field of activity and the incomes are important factors in holding a position in the social hierarchy for a person. The level of income and training is determinant also in the creation of respondents' future plans. More the respondents' studies are advanced, more their aspirations and future plans are optimistic. Therewith, these respondents are more demanding toward their training level and obviously they have a higher information degree.

The level of income influences the professional mobility intentions of the respondents. It is being inversely proportional with the intentions of professional mobility. Once the level of income increases, it decreases the intentions of the respondents to change the profession or the field they work within. Although one of the main reasons for the intention to change the profession is the poor salary for the position they hold currently, few are those who have the intention to open their own business or declare that they would like to work in the private sector. The majority if the respondents opt for budgetary sector, due to relatively constant situation. This fact is ascertained mostly in rural localities, where the budgetary sphere allows people to have a small income without any risks.

Every second respondent doesn't work according to the obtained profession and almost the same number assign to the profession they currently perform an average degree of prestige. One-fourth of the respondents consider that the work they perform is not prestigious. More than half of the respondents that affirmed they do not work according to the obtained profession have the age between 30 and 49, at this age is namely the biggest professional mobility. If we analyze the professional mobility according to the type of the locality, we can observe that this kind of situation prevails in rural localities – 67%. We can suppose that the change of the profession took place not from the desire to change for something better in life, but from the lack of possibilities to choose, because the social transformations from Republic of Moldova reduced drastically the variety and the number of work positions, especially in rural localities. The professional mobility is more reduced for the persons with higher education – only 14% affirmed that they do not work according to the obtained profession, more than half of the respondents with secondary and specialized secondary education do not work according to the studies they made.

The work should offer to people the possibility to live peacefully and well – every second respondent has this opinion. Then it follows the possibility to communicate with others – 38% of them gave the maximum mark to this preference. The possibility to advance, to work creatively is less important. We observe as in the top of selecting the most prestigious professions that people want to live well without many efforts and risks. Here the individual – psychological factors say the word and the social factors too; in a society where the laws function preferentially, we cannot have an avalanche of entrepreneurial enthusiasm. This situation is formed due to the lack of an education strategy for the population regarding the cultivation of social-professional skills. Although at theoretical level, the competent bodies undertake certain actions to rectify the situation in this field. According to the new strategy of education's development for 2014-2020, the education system needs multi-dimensional changes. It is necessary to improve the expenditure of the public money invested in education, the capitalization of the opportunities offered by the information technologies, the extension and the diversification of the training system of the grown-ups all lifelong, the adaptation of the national education to the European educational space.

The situation from the economy's field has impact on all other spheres of the social life, so we asked the respondents to give an appreciation to the changes produced in the economic sphere in the last two years in urban and rural localities. But the type of localities does not influence on the perception of economic situation: the majority considers it neither good, nor bad – 29% in the village and 33% in the city, bad – 23% and respectively 20%. Only 2% of respondents appreciate the changes produced in the last two years as very good. It is obvious that this assessment, the way and the degree the social-economic reforms affected them are connected the future plans of the respondents. When they were asked about their future plans, many of the respondents, almost one-third, opted for obtaining a better remuneration of the work. A great part of the population planned to go abroad, every sis person has the intention to this thing in the near future. We can suppose that a part of the respondents that opt for obtaining a better paid work want to do this thing abroad, once the economic situation of our country is seen through dull colors. In comparison with the results of previous investigations, the current research denotes the increase of those who want to stay in the country, at least for a close period of time.

The future plans are determined to a great extent by the income level of the respondents. The persons with a small income have the intention in the nearest future to raise their qualification – almost

every fifth person wants to do this. And only 5% of respondents with such level of income have the intention to change their place of work; whilst one-fourth of them would like to get a higher remuneration of the work. Abroad, as it was expected, have the intention to go the persons with low incomes – every eighth person wants to find a job abroad. It is extremely small the number of those who would like to gain a new profession. According to the results of the research, we obtained a percent at the level of margin of error of the investigation for those with humble incomes, and the well provided respondents do not event take into account the possibility to get a new profession in near future. So, the professional mobility, even at the intentions level, is extremely reduced, regardless of the respondents' income level.

Regarding the improvement of the professional qualification, the most demanding are the persons with higher education and specialized secondary education: almost one-fourth of the respondents would like obtain it in the near future. Once the level of studies decreases, it decreases suddenly the intentions of the respondents to improve their professional level – only 5% of respondents with secondary education (complete and incomplete) would like to do this in the near future. The same tendency is observed in the intention to get a better remuneration of the work or to work abroad: the trained, with higher education of specialized secondary educations persons have this intention prevalently.

In the issue we can say that changes took place in the field of social-professional stratification, with or without the desire of the social actors, even if they are not as quick and positive as we would like them to be. There are some factors that form the perception of the individuals concerning this fact. The level of training and income is important in the creation of the respondents' future plans. More the respondents have advanced studies, more their aspirations and future plans are optimistic. Therewith, these respondents are more demanding toward the level of training and, obviously, they have a higher information degree.

The level of income influences the intention of professional mobility of the respondents. Once the level of income increases, it decreases the intentions of the respondents to change the profession or the field they work within. Though, one of the main reasons of the intention to change the profession is the small salary of the position they hold currently, few of them would have the intention to open their own business or declare that they would like to perform in the private sphere. The majority of the respondents opt for the budgetary sector, due to relatively constant situation. This fact is ascertained especially in the rural activities, where the budgetary sphere allows people to have a small income, but without risks.

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THE REALITY AND PERSPECTIVES OF ACHIEVING THE MILLENNIUM DEVELOPMENT GOALS REGARDING POVERTY IN THE REPUBLIC OF MOLDOVA

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The novelty of the paper consists in the importance of poverty phenomenon, which has become a serious problem both at national and regional levels in recent years. The main paper objective consists in researching of poverty eradication, which is possible just by finding multilateral and complex solutions, because of the complicated nature of this scourge of society. In this case, the involvement of international organizations has a major importance. According to the EU commitments and of international community, public assistance for development should be increased as soon as possible. But, beneficiary countries, must improve their economic and institutional governance. Thus, the Republic Moldova has aligned itself along with other countries in achieving these objectives. There where used the following research methods: systematic analysis, synthesis, logic, etc. The main scientific results of the authors in this paper are the identification, analysis and systematization of the central elements in fighting with poverty phenomenon in our country taking into account its international character.

Keywords: *poverty phenomenon, poverty eradication, the Millennium Development Goals, multidimensional poverty indicator.*

Actualitatea prezentului articol constă în importanţa abordării multilaterale a fenomenului sărăciei, care a devenit o problemă stringentă atât la nivel naţional, cât şi regional. Articolul are ca scop central cercetarea procesului de eradicare a nivelului sărăciei care este posibilă doar prin găsirea unor soluţii complexe şi multilaterale, reieşind din caracterul complicat al acestui flagel din societatea actuală, iar implicarea organizaţiilor internaţionale este una de o importanţă majoră. Conform angajamentelor UE şi ale comunităţii internaţionale, nivelul ajutorului public pentru dezvoltare trebuie să fie majorat rapid. Ţările beneficiare ale ajutorului trebuie să se angajeze la îmbunătăţirea guvernării lor economice şi instituţionale. Astfel, Republica Moldova s-a aliniat de rând cu celelalte state în atingerea obiectivului enunţat. Metodele principale de cercetare utilizate au fost: analiza sistemică, sinteza, logica, ş.a. Principalele rezultate ştiinţifice obţinute în articol, urmare a cercetării, sunt identificarea, analiza şi sistematizarea elementelor centrale în lupta cu fenomenul sărăciei în ţara noastră luând în consideraţie caracterul internaţional al acestuia.

Cuvinte-cheie: *fenomenul sărăciei, eradicarea sărăciei, obiective de dezvoltare a mileniului, indicele multidimensional al sărăciei.*

Актуальность данной статьи состоит в том что в последние годы бедность стала серьезной проблемой на национальном и региональном уровнях. Цель данной статьи направлена на искоренение нищеты, которое требует поиска разносторонних и комплексных решений, учитывая сложный характер этого явления. В этом процессе имеет большое значение участие международных организаций. В соответствии с обязательствами ЕС и международных органов помощь для развития бедных стран, в т.ч. Молдовы, в ближайшее время должна быть увеличена. Однако, страны-бенефициары должны способствовать улучшению экономического и

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институционального управления. Таким образом, Республика Молдова присоединилась к другим странами для достижения данной цели. Были использованы следующие основные методы исследования: системный анализ, синтез, логика и т.д. Основные научные результаты, полученные из исследований, являются идентификация, анализ и систематизация центральных элементов в борьбе с явлением бедности в нашей стране, принимая во внимание его международный характер.

***Ключевые слова**: бедность, искоренение нищеты, цели развития тысячелетия, индекс многомерной бедности.*

JEL Classification: I3, I30, I32, I39.

Introduction. One of the main trends of research on labour market issues, which has increasingly been of interest among researchers in the last decade, is the effect of educational level on the situation of workers on the labour market and their employment opportunities. Today, education is a specific asset, an element of human capital. The benefits of having education refer both to individuals, who possesses it and are rewarded in proportion to their abilities, as well as their economic environment. Macroeconomic models and management strategies show that the expenditures on human capital development are desirable, because they foster economic growth and the development of various sectors, industries and individual.

The main considerations. Poverty eradication is the greatest global challenge facing the world today and is an indispensable requirement for sustainable development. On 10 September 2014, the UN General Assembly decided that the Report of the Open Working Group on Sustainable Development Goals would be the main basis for integrating the SDGs into the post – 2015 development agenda. The first of the seventeen proposed SDGs is *"End poverty in all its forms everywhere"* [1].

The Republic of Moldova is one of those countries, which have signed agreement regarding achievement of fixed objects and targets included in the Agenda. It also participated along with other countries and came up with a set of proposals which will be included in a UN Joint Action Plan, objectives regarding premiums. Such for our country, poverty eradication, changing unsustainable and promoting sustainable patterns of consumption and production, protecting, managing the natural resource base of economic and social development became the overarching objectives of essential requirements for sustainable development.

As it is known, the Millennium Declaration was adopted in September, 2000 at the Millennium Summit by 191 countries including the Republic of Moldova, which such other countries set the targets of the Millennium Development Goals (MDGs). This Declaration is the only global development agenda over which represent a result of reached agreement at the highest level between most countries of the world. At the Millennium Summit, Member states have set a number of 8 essential goals (the Millennium Development Goals) with fitting targets which should be achieved by 2015. Among the eight Millennium Development Goals, first is regarding *poverty eradication* and it is called *"End poverty in all its forms everywhere"*. This goal includes:

- by 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day. (Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation to provide adequate and predictable means for developing countries, in particular LDCs, to implement programs and policies to end poverty in all its dimensions).
- by 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions. (Create sound policy frameworks, at national, regional and international levels, based on pro-poor and gender-sensitive development strategies to support accelerated investments in poverty eradication actions).
- implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.
- by 2030 ensure that all men and women, particularly the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership, and control over

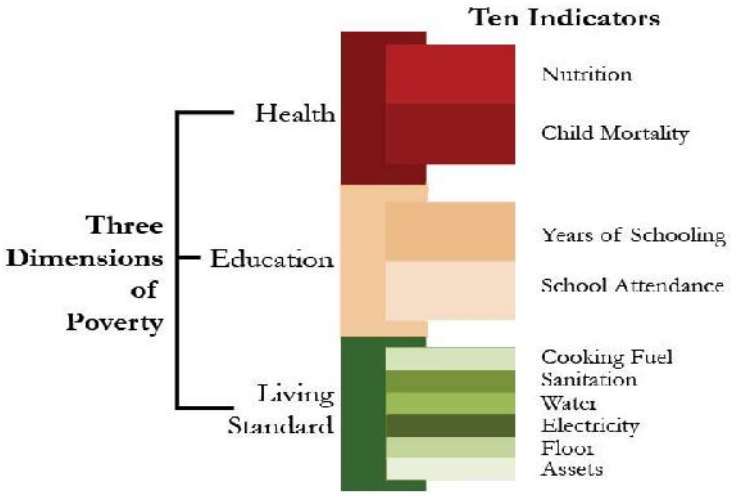
land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services including microfinance.

- by 2030 build the resilience of the poor and those in vulnerable situations, and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters [2].

It should be mentioned, that the global Multidimensional Poverty Index (MPI) is an international measure of acute poverty covering over 100 developing countries. It complements traditional income-based poverty measures by capturing the severe deprivations that each person faces at the same time with respect to education, health and living standards. The MPI assesses poverty at the individual level. If someone is deprived in a third or more of ten (weighted) indicators (see left), the global index identifies them as 'MPI poor', and the extent – or intensity – of their poverty is measured by the number of deprivations they are experiencing. Therefore, lower level of MPI is associated with lower poverty.

The MPI can be used to create a comprehensive picture of people living in poverty, and permits comparisons both across countries, regions and the world and within countries by ethnic group, urban/rural location, as well as other key household and community characteristics. This makes it invaluable as an analytical tool to identify the most vulnerable people – the poorest among the poor, revealing poverty patterns within countries and over time, enabling policy makers to target resources and design policies more effectively.

The global MPI was developed by OPHI with the UN Development Programme (UNDP) for inclusion in UNDP's flagship Human Development Report in 2010. It has been published in the HDR ever since.



Sursa: [3] http://www.ophi.org.uk/multidimensional-poverty-index/

According to the latest data (for 2012) of the Oxford Poverty and Human Development Initiative the MPI for Moldova was 0.0027, that is one of the best level among post Soviet countries [4]. Notably, Moldova outperforms even its neighbor, Ukraine (0.0043) mainly due to lower share of population in poverty. But if we compare "quality" of life of such population, Moldova is still behind Ukraine. It should be noted that overall dynamic is positive, that means countries are moving in right directions, but current developments both international and domestic: political crisis in Moldova, refugee crisis in the EU, low oil prices, Russian-Ukrainian conflict have led to increasing risks of poverty expanding. Thus it should be get more attention of national bodies and international organization to the issue to intensify governmental efforts.

The Republic of Moldova took commitment to reduce along with other signatories of the Millennium Declaration in 2000, and has pledged to reduce by the end of 2015 poverty and hunger. To achieve their Moldovan Government has outlined to achieve the following targets:

- To reduce the population rate which consumption is under $ 4.3 per day /per person which was in 2006 – 34,5%, in 2010 – 29% and in 2015 was 23%.

- Decrease the share of population which is below of absolute poverty level, from 4,5% in 2006 to 4% in 2010 and 3,5% in 2015.

Regarding the degree of population rate reduction whose consumption is under $ 4.3 per day/ per person from 34.5% in 2006 to 29% in 2010 and 23% in 2015, our country has managed to achieve the final target set for 2015 since 2012, and in 2013 advanced further in terms of reducing poverty according to international threshold of $ 4.3 per day/per person. The international poverty threshold of $ 4.3 per day/per person decreased from 34.5% in 2006 to 20.8% in 2012 and up from 15.8% in 2013, such it was exceeded the final target of 23.0% for 2015.

By 2006, as an international monitoring indicatory of poverty in the Republic of Moldova was used "the people share with an income below $ 2.15 per day/per person from whole purchasing power parity (PPP)". If in 2006 this indicatory was 13.2%, then in 2012 dropped significantly up to 5.5%. According to MDG targets, it was decided to shift to a higher standard for poverty measuring – the international poverty threshold of $ 4.3 per day /per person from PPP and the use of consumption instead of income to assess population welfare, taking into consideration that consumer spending is a more accurate indicatory in the Republic of Moldova.

By analyzing the overall adoption by each country the related MDG targets specific to national context, it was created a monitoring progress mechanism at national, regional and global levels. In the Republic Moldova, the monitoring is done by the Government, with the support of UN agencies in Moldova and nongovernmental organizations. Thus, globally, over one billion people live on less than a dollar per day. Malnutrition is the main cause of death among children. Therefore, the dual commitment is to halve by 2015, the number of people whose income is less than one dollar per day. The level of extreme poverty decreased from 1/3 of world population in 1990 to 1/5 in 2004. If this trend will continue, the MDG poverty reduction target will be achieved at global and regional levels.

In the context of decreasing the share of population below the poverty line from 4.5% in 2006 to 4% in 2010 and 3.5% in 2015 our country has achieved impressive progress in fighting with extreme poverty, within which dropped to 0.3% in 2013. Comparing the extreme poverty level fixed in predetermined targets for 2010 and 2015 can be concluded that both targets have already been achieved. In this context, it is important do not allow the upward trend of this indicator, and to make all possible poverty eradication and hunger.

It should be mentioned that in the first National Report on the Development Objectives of the Millennium in the Republic Moldova elaborated in 2005, reflected the country's performance and identified the main problems in human development, relating that at that time poverty remained a multidimensional phenomenon in Moldova. The Second National Report on Millennium Development Goals in Moldova, elaborated by the Government with UN assistance in 2010, identified a progress in eradicating poverty process, by reducing child and maternal mortality, expanding of state protected areas and of information technologies development.

Such, after outlining of national development context, focusing on global turmoil and internal challenges, the authors of the Report emphasize that reducing of extreme poverty and hunger is a success, but meantime exists a deep concern regarding the equity. In the report is stipulated that despite of the accentuated decreasing of poverty, it is regrettable that more than half a million of Moldovan citizens still are qualified as being poor.

It should be related that despite the successes achieved by our country, the rural poverty remain still a worrying problem, thus, if in big cities the absolute poverty rate decreased between 2008 and 2012 more than doubled (from 10.9 to 4.3%), while in villages it was decreasing slower (from 34.6 to 22.8%). Therefore, there is an increasing gap between the levels of living in villages and cities: if in 2006, 75.7% of the poor population lived in villages; in 2012 this share was 79.1%.

Summary. At the moment, it was initiated a consultation process by the main actors, regarding the future of the Republic of Moldova and for its citizens after 2015. This document was entitled "Development Agenda post-2015", which contains a real picture of today's and future's concerns and aspirations of Moldovan population after the deadline of achieving the Millennium Development Goals by our country.

We can conclude that poverty is a very complex problem and for its total eradication just general solutions are not enough. In this context, it is necessary to elaborate and implement step by step a detailed Program and Action Plan post-2015, taking into consideration all national specific aspect in all fields and wide use of social innovations development.

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MODEL OF CLUSTER DEVELOPMENT IN THE MANAGEMENT OF WINERIES ENTERPRISES IN ATU GAGAUZIA

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Public policy support for cluster development of the industrial sector requires investment by enterprises in research and innovation. These processes are only possible by sharing existing capacities, effective knowledge sharing and technology transfer between companies within the same or related industries. The relevance of this article is dictated by the need to find new forms of co-operation of producers in frame of cluster formations. The purpose of this article is to develop a model of cluster-management for development of wineries in the region. When writing this article used the methods of empirical research: a survey, analysis, synthesis, processing documentation. Results. In order to increase the competitiveness of wine enterprises, the author proposed the development of the wine industry of ATU Gagauzia within the framework of the cluster policy of the Republic of Moldova. The author proposed organizational structure of the wine cluster of ATU Gagauzia, described benefits which get when entering in the cluster for its participants and for the overall region.

Keywords: *wine cluster, innovation, management model, competitiveness, synergistic effect.*

Politica de stat de sprijinire a dezvoltării grupurilor a sectorului industrial dicteaza necesitatea investiții de către întreprinderile în domeniul cercetării şi inovării. Aceste procese sunt posibile numai prin folosirea comuna capacităților existente, prin procesul efectiv al schimbului de cunoștințe și prin transfer de tehnologie între companiile din cadrul aceleași sau conexe industrii. Actualitatea acestui articol este dictată de necesitatea de a găsi noi forme de co-producători din cadrul formațiunilor de claster. Scopul acestui articol este de a dezvolta un model de management de dezvoltarea grupurilor întreprinderilor vinicole în regiune. La scrierea acestui articol sint folosite metode de cercetare empirice: anchetarea, analiza, sinteza, procesarea documentatiei. Rezultate. În scopul de a îmbunătăți competitivitatea vinării, autorul articolului ofera modalități a dezvoltarii a industriei de vin a Găgăuziei în cadrul politicii de grupuri a Moldovei. Rezultate. Autorul oferă structura organizatorică a clasterului de vin Găgăuziei, sint fundamentate beneficii ai membrilor și a întregii regiune primite dupa intrarea in claster.

Cuvinte-cheie: *grup vinicol, inovare, model de management, competitivitate, effect synergic.*

Государственная политика поддержки кластерного развития промышленного сектора диктует необходимость инвестирования предприятиями в исследования и инновации. Данные процессы возможны только посредством совместного использования существующего потенциала, эффективного процесса обмена знаниями и технологического трансфера между предприятиями в рамках одной или смежных отраслей. Актуальность данной статьи продиктована необходимостью поиска новых форм кооперирования производителей в рамках кластерных образований. Целью данной статьи является разработка модели кластерного управления развитием винодельческих предприятий региона. При написании статьи использовались методы эмпирического исследования: анкетирование, анализ, синтез, обработка документации. Результаты. В целях повышения конкурентоспособности винодельческих предприятий, автором предложены пути развития винодельческой отрасли АТО Гагаузия в рамках кластерной политики Республики Молдова. Автором предложена организационная структура винного кластера АТО Гагаузия, описаны получаемые при вхождении в кластер выгоды для его участников и в целом для региона.

Ключевые слова: *кластер виноделия, инновации, модель управления, конкурентоспособность, синергетический эффект.*

JEL Classification: L17, L32, L52, L66, O35.

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Introduction. The experience of the European Union shows that the Clustering processes serve as the foundation for economic growth, increase the competitiveness of certain industries and the overall economy, creating new businesses, and jobs, the development of regional development programs, more extensive and fruitful cooperation between the business sector and State educational environment, non-governmental organizations and others.

Even though the small size of the market of the Republic of Moldova, economists believe that the creation of clusters is not only possible but also necessary for the consolidation of small and medium enterprises [4, 5, 8]. In addition, the Republic of Moldova is located at the intersection of the main highways connecting the major markets. It can be an attractive factor, especially for investors from the EU and Ukraine CIS, and is a big advantage to domestic economic agents the prospect of their participation in international industrial clusters.

Formulation of the problem. Viniculture and winemaking are the main sectors of the Moldovan economy, accounting for about 15% of the annual budget of the Republic. The Moldovan wine industry plays an important role production wine in ATU Gagauzia. South of Moldova traditionally engaged in winemaking, which is the main branch of the economy. In the Gagauz Autonomy, consisting of 26 settlements, operates 14 wineries. The share of wine in total Gagauzia industrial production is about 60%. Such concentration of this type of production is not available anywhere else in the country. However, in recent years, it is impossible to note the progressive development of the industry. Total volume of produced wines in ATU Gagauzia, with its linear approximation clearly shown in Figure 1.

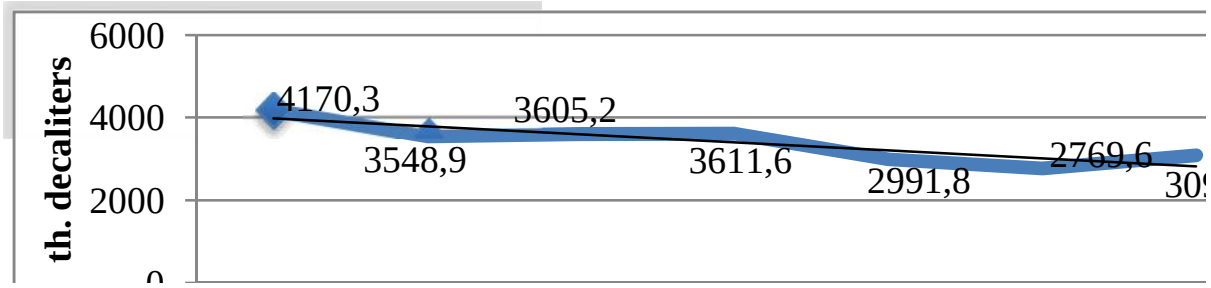


Fig. 1. Volume of wine production in ATU Gagauzia for 2008-2014 years (th.decaliters)
Source: Developed by the author according to the Main Department of Economy and Foreign Economic Relations of ATU Gagauzia

Linear approximation of volume of wine production in ATU Gagauzia for 2008-2014 years demonstrates the decline in production for the analyzed period. In comparison with 2008 to 2014 it produced 25.8% less wine production. Wine production in ATU Gagauzia in average annuallyis reduced by 4.46%. To change this trend in a priority dimensions of sustainable development of enterprises should be the wine industry systematization of their work, expressed in overcoming disunity and decision single concept of the wine industry in the Gagauzia.

The purpose of article. Propose the development of the wine industry in the ATU Gagauzia in the frame of cluster policy of Republic of Moldova.

The empirical base of the research has served the wine industry ATU Gagauzia, which consists of 13 operating companies.

Statement of the basic material. To ensure sustainable and long-term development, wineries of Gagauzia must be innovative. However, along with the introduction of process innovations, expressed in the introduction advanced technologies, purchase of new equipment, it is necessary to make changes and in business practices, workplace organization, in the development of external relations, ie, embed organizational innovation. For this kind of innovations are more frequent minor investments, the ability to combine and create new advantages and economies of synergistic effect resulting from the pooling of resources from different manufacturers. Also for organizational innovation is not so acute shortage effects of product and process innovations: imitation, obsolescence and others.

To the South of the Republic of Moldova is characterized by a low level of use in organizational innovation. This is evidenced by data provided in the Journal "Innobarometru 2014 pentru RM" – 12,3% of all surveyed companies, as well as the results of sociological research A.P. Levitskaya "Issues and Trends Innovative SME ATU Gagauzia" – 12% of all respondents [3;9].

In order to improve the development of wineries in Gagauzia part of organizational innovation, proposes the creation of regional wine cluster, which will push for the development and competitiveness the wine industry and the region as a whole.

The idea of clustering the economy has already been considered in the Republic of Moldova. Thus, for the early transition countries on the path of innovative development the Academy of Sciences of the Republic of Moldova in 2010 developed and proposed for public discussion the draft Concept of development of innovative business until the year 2020. Implementation of this concept should lead to restructuring Moldovan economy and accelerate the development of innovative entrepreneurship.

Between the years 2011-2012, the Ministry of Economy of the Republic of Moldova together with the Institute of Economy, Finance and Statistics developed the "Concept of the cluster development of industrial sector in the Republic of Moldova", approved by the Government on August 20, 2013 [1].

The concept of cluster development of the industrial sector of the Republic of Moldova is based on the international experience of cluster initiatives (EU, China, etc.), which are an important component of development industrial, regional and innovation policy advanced economies. The main goal of this concept is to determine the need for and the possibility of introducing and development of the mechanism of association of economic agent in the form of cluster efficiency and competitive development of the industrial sectors of the economy [1].

The index of specialization of regions of the Republic of Moldova, calculated Gutu K, study shows the main directions of development of the industry Cluster Networks. Thus, the share of products from Gagauzia, delivered to external markets in 2011 amounted to 67.7%. The leaders – the production of natural wine, manufacture of apparel, dressing and dyeing of fur. These directions, according Gutu K., primarily require an investigation to determine the cluster linkages [7].

Considering the wine industry of ATU Gagauzia as a base wine cluster of the South of the country, it is necessary to note the following conditions for its creation:

1. Favorable economic and geographical position of Gagauzia
2. The presence of favorable conditions for growing special grapes – the main raw material in the production of wine;
3. Qualified human resources;
4. The functioning of the Comrat State University that trains specialists in the field of wine-making;
5. Development of services of Innovation Incubator, the aim of which is to develop an economy based on innovation and transfer of new technologies by promotion and development of innovative SMEs;
6. The development of the scientific base of viticulture and winemaking;
7. Development of infrastructure in the region;
8. Supporting government;
9. High geographical concentration of wineries in a small area of Autonomy;
10. The administrative bodies and enterprises, which are able to enter the value-added chain.

In addition, the most viable clusters develop into sectors and regions where the entrepreneurs have already established cooperation between them already exists a certain degree of dialogue and trust. The form of this cooperation on the territory of ATU Gagauzia is the Association of Winemakers of Gagauzia „GAGAUZİAVİN" This Association was created to help its members in establishing mutually beneficial cooperation with domestic and foreign potential partners, to promote popularization and the promotion of wines from Gagauzia on the Republic of Moldova and abroad.

Figure 2 shows the organizational structure of the wine cluster in the ATO Gagauzia, recommended by the author.

From the above figure it is shown the role of the governing body of the cluster Winemakers Association of Gagauzia «GAGAUZİAVİN».

The main cluster members are directly involved in the cultivation, processing of grapes, bottling and storage of wine.

Operating cluster members facilitate the marketing of winemaking, sales of finished products, development of new markets, grace funding of processing enterprises, as well as the financing a cluster of special European funds etc.

The role of regional structures to support cluster policy with assistance in the implementation of resource- intensive technologies, achievements science and advanced experience, skills etc.

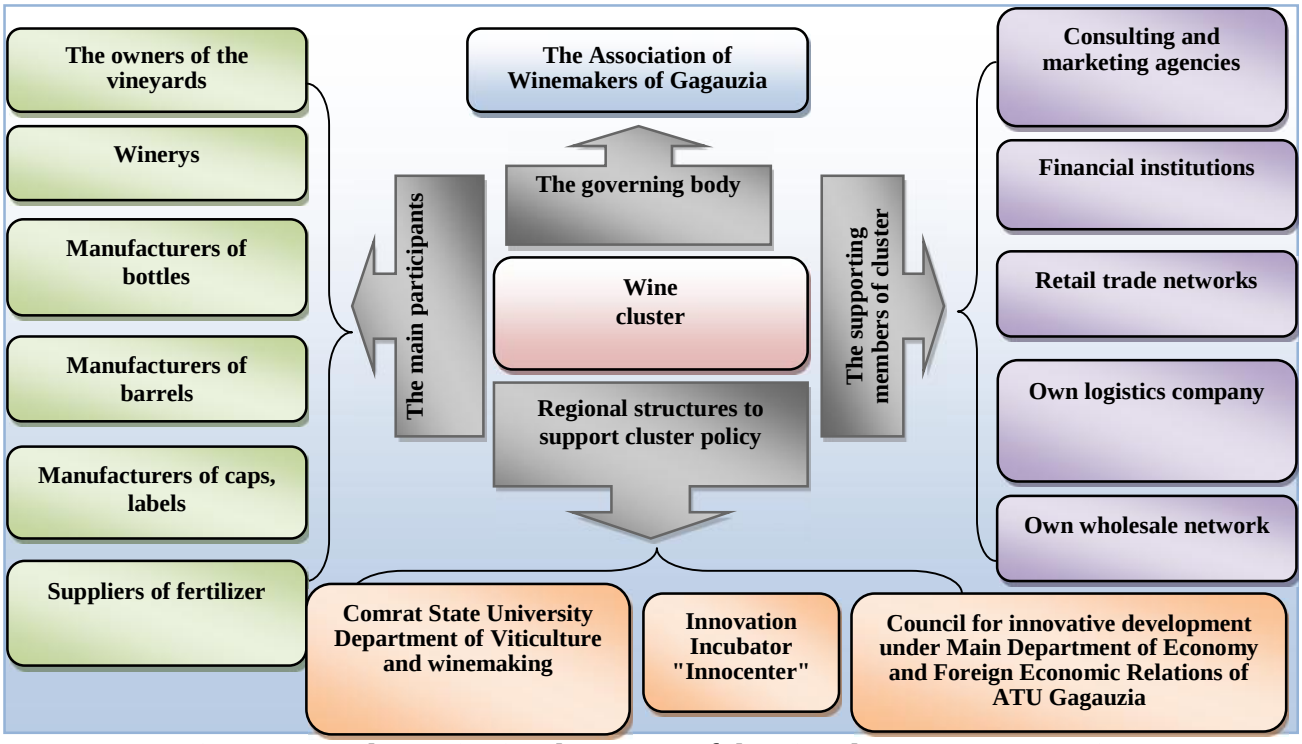


Fig. 2 Proposed organizational structure of the wine cluster ATU Gagauzia
Source: Compiled by the author.

We describe the benefits that will be able to get all the parties to the wine cluster in the ATU Gagauzia. These benefits will also be a highly motivating factor in making the decision to create the cluster and joining them.

The main participants in the cluster will be able to reduce transaction and transport costs by using its own fleet, which in turn will lead to lower production costs. Unified policy and the promotion of uniform quality standards for all participants will provide a guaranteed market and product recognition. In addition, small businesses will have access the results that are highly capital-intensive specialized studies, invested at the expense of all the cluster members.

The owners of vineyards (farms) will receive a consistent customer, which in turn is a risk of lack of insurance market and enables selection of the address.

Serving members receive regular consumers of their services the core cluster, and as a result of the guaranteed financial stability.

Regional structure of support cluster policy will be able to carry out targeted training and to conduct targeted research.

Regional authorities receive guaranteed returns of subsidies in viticulture, also an increase in the number of jobs and, consequently, an increase in revenues in the Regional budget. Inter a cluster competition forces each individual participant to improve their own competitive advantage, leading to the elimination of inefficient forms operation. Each participant through the development of their respective strengths, complementary underdeveloped functions of the other and thus, leads to the implementation of the principle of 5 complementarity between cluster members, also leading to an increase in the synergistic effect [2].

Besides these benefits for the cluster members it should also be noted that this occurs with the effect of synergy. This is due to the fact that the cluster as a stable Partnership that are interconnected with enterprises, institutions, organizations, and individuals. It may have a potential that is greater than the simple sum of the individual capacities components. This increment occurs as a result of cooperation and effective use of the capacity of partners in the long run, the combination of cooperation and competition [6].

Hasanov R.H. considers that the most important synergistic effects Cluster are [6]:

1) The effect of flow of knowledge within the cluster;

2) The effect of incremental cash flow by the addition of cash flows companies within the cluster

3) the effect of sharing infrastructure;

4) the effect of reducing transaction costs.

It should not be assumed that the synergistic effect is achieved within a cluster due to the disappearance of internal competition, on the other hand, competition between members of the cluster companies escalates. However, this does not preclude joint development and use of infrastructure, cooperation with suppliers, new markets under the brand name of the cluster etc.

Intracluster competition forces each individual participant to improve their own competitive advantage, leading to the elimination of inefficient forms operation. Each participant through the development of their respective strengths, complementary underdeveloped functions of the other and thus, leads to the implementation of the principle of complementarity between cluster members, also leading to an increase in the synergistic effect [2].

Conclusions. The cluster are the best public private entity partnership. As part of the cluster focuses on enhancing the competitiveness of not only individual enterprises, but also the entire production chain. Generally Regional wine cluster in ATU Gagauzia can play a key role in the creation favorable business environment, promote economic activity subjects, allowing to adapt to changing environmental conditions, and enhance the efficiency and competitiveness of the region.

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ROLE OF FINANCIAL INSTITUTIONS IN THE PUBLIC-PRIVATE PARTNERSHIPS DEVELOPMENT

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Public-Private Partnership represents institutional and organizational alliance of the state and business, consisting of financial actors interaction, legal, social and policy oriented joint public and private resources from different sources into a single complex to solve strategic socio-economic problems of country. The aim of the research is to demonstrate the importance of financial institutions in public-private partnership projects implementation. Research methodology – in order to achieve the expected results, author applied recognized methods and techniques applied as economic investigations: comparative method, statistical method, logical analysis method. The research results, expressed by knowledge through mentioned field can be applied to improve the process of attracting local and international financial institutions to ensure success in public-private partnerships projects in Republic of Moldova.

***Keywords**: Public-Private Partnership, bank, financial institution.*

Parteneriatul public-privat reprezintă o alianță instituțională și organizațională a statului și reprezentanții mediului de afaceri, formată din actorii financiari de interacțiune, resurse juridice, sociale și politice comune publice și private orientate din surse diferite într-un singur complex pentru a rezolva problemele socio-economice strategice ale țării. Scopul cercetării este de a demonstra importanța instituțiilor financiare în implmentarea proiectelor parteneriatelor public-private. Metodele de cercetare: în scopul de a obține rezultatele așteptate, autorul a aplicat metode și tehnici recunoscute ale investigațiilor economice: metoda comparativă, metodă statistică, metoda de analiză logică. Rezultatele cercetării, exprimate în cunoștințele în domeniul menționat, pot fi aplicate pentru a îmbunătăți procesul de atragere a instituțiilor financiare locale și internaționale pentru a asigura succesul proiectelor parteneriatelor public-private în Republica Moldova.

***Cuvinte-cheie:** Parteneriat Public-Privat, bancă, instituţie financiară.*

Государственно-частное партнерство представляет институциональный и организационный альянс государства и бизнеса, состоящий из финансовых субъектов взаимодействия, правовые, социальных и политических ориентированных совместных государственных и частных ресурсов из разных источников в единый комплекс, чтобы решать стратегические социально-экономические проблемы страны. Целью исследования является показать важность финансовых учреждений в реализации государственно-частного партнерства. Методология исследования – для достижения ожидаемых результатов, автор использовал признанные методы и приемы, применяемые в экономических исследованиях: сравнительный метод, статистический метод, метод логического анализа. Результаты исследований, выраженные в знаниях об указанной сфере, могут быть применены для улучшения процесса привлечения местных и международных финансовых учреждений для обеспечения успеха проектов государственно-частного партнерства в Республике Молдова.

***Ключевые слова:** государственно-частное партнерство, банк, финансовое учреждение*

JEL Classification: G18, G21, G23, G28, G34, G38.

Introduction. The term "Public Private Partnership" (still signed by the acronym PPP) is used in international practice towards any forms of collaboration of state authorities and private entities. Moldovan law treats PPP as a "long-term contract, concluded between the public and private partner for activities of public interest, on the capacities of each partner to distribute resources, risks and rewards" [1].

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Typically, for installation of control factors / effective management of possible risks that can be activated during the operational period of project, public entities tend to attract financial institutions in PPP projects participation in their role as financiers, which can be both autochthonous banks as international development institutions (IDI) and, in particular, development banks (eg. European Bank for Reconstruction and Development, International Finance Corporation, the Nordic Investment Bank, etc.) and/or structural funds. Contrary to export credit agencies, for international financial institutions participation the export is not mandatory.

A substantial contribution in the development of PPP in the world is brought by the Public-Private Infrastructure Advisory Facility (PPIAF) which is a multi-donor fund and provides technical assistance to governments in developing countries in support of the creation of a favorable environment environment to attract private investment, including governments consultation on the investment policy. PPIAF also supports governments to develop specific infrastructure projects to be later proposed for financing to private sector [6].

PPIAF's mission is to help poverty eliminating and urbanization achieving / sustainable development through the application of PPP mechanisms in public infrastructure. PPIAF was created in 1999 to act as a catalyst for private sector investment to increase participation in the development of emerging markets [5].

Funding awarded by PIAF increased from 12.9 million USD in 2013 to 16.9 million in 2014, ie an increase by 30 percent. The main share of financial support to PPIAF in 2014 was focused on Sub-Saharan Africa (46.0%), followed by countries in East Asia and Pacific (15.5%), Latin America and the Caribbean (13.0%) [4].

The role of international development banks (IDB). These are the institutions that provided financial support and consulting countries with developing economies and social development goals. Highlighting IDB in a separate group is not random, because they are a separate force, which play an essential role in stimulating economic development and carrying out reforms both within a particular country, and within a region.

To promote the strategy of funding and contributions within a particular infrastructure project, conducted in the format of PPP, IDB in their work can apply together with the public partner appointed or separately entire diversity of financial instruments highlighted in the financial modeling of success project-oriented.

The international practice of PPP projects implementation demonstrates that the most effective control over possible achievement, usually attracts only financial institution, which, along with grant funding, can perform functions of consultant. In most cases, this role is fulfilled by development institutions, including international development banks.

Basic tools of IDB funding are the following [9]:

- Consultation on successful principles of project launch (*„successful fee"* – paid by public or private partner after contract signing) on identification and structuring of PPP projects for the government of involved country and for a particular partner. Explaining government's tasks, IDB (using consultants – specialists from branch) perform due diligence of the project and estimate the interests of participants in order to determine optimal structure of the transaction. Further, bank assumes full responsibility for carrying out the transaction, from marketing strategy development to assist the evaluation of bids, determination of the winner of public tender and financing contracting.
- Long-term funding:
  - Grant award (IDB using mainly for technical assistance, advisory services and project development);
  - Loans (loans) long-term interest rates lower to the market, which are financed directly by donor governments. In this case, a requirement to the debtor of the bank is to grant third party guarantees (collateral securities of sovereign or other big banks) loans. If this assurance is not available in case of a negative financial result (risk), the likelihood of substantial losses in bank-funded projects is minimized. Last point is particularly important for situations when the bank directly assume project risks, given the economic, financial and techniques that satisfy early financing;
  - Investments in equity capital;
  - Leverage and applying various structured finance products;
  - Attracting commercial bank lending (international banking syndicates) at a market interest rate. To ensure financial resources for these loans IDB attract international capital markets means;

- Attracting export credit agencies;
- Providing guarantees of public and private sector commitments.

Considering that most of BID have high credit ratings, such insurance is accepted in determining project organization scheme.

Analysis of international development institutions and, in particular, development banks in the world practice of PPP projects realization, allows highlighting a number of advantages of participation in these institutions.

First, PPP projects usually occur in project financing, which is one of priority directions of IDB activity. In this connection, IDB have extensive experience and tools to conduct assistance and grant funding to PPP projects.

Secondly, they can be attracted at various stages of projects examination, in particular at early training and the competition, bid evaluation stade. In this case, IDI activity goes beyond simple supply limits of banking product in the classic sense. IDI participation at early stages allows maximal detailed examination of all aspects that can influence the value and timeliness of project and conduct monitoring throughout term of project.

At preparation and examination stage of project in most cases IDB are attracted by authorized body of the State as investment consultants.

In this context, it should be noted that often in PPP projects international development institutions are assigned dual role:

- from a hand, they exercise the functions of state consultants participating in project forming;
- from elsewhere as creditors of private partner giving him assistance in negotiations with State.

In such cases, we believe that there is a potential conflict of interest since IDB undertakes to conduct negotiations on subject of contract with all actors involved is identified until the contract. This philosophy should be avoided flawed from the start.

Thirdly, IDB are sources of cheap money for long term, which completely meet needs of PPP in terms of projects duration and, as a result, their financing structure.

And, finally, IDB have some special status, including economic and judicial immunities, tax and customs preferences, advantages, avoiding negative consequences from banking regulation amending legislation and participating countries.

All these give IDB possibility, if grant PPP projects, to cover risks that can become serious obstacles in the way ordinary banks. In addition, IDB warranties often have a higher rating to sovereign guarantees granted by participating countries.

Considering financing requirements for PPP, it can be concluded that IDB falls among financial institutions, which completely meet needs of PPP projects. But for IDB investment in PPP projects of interest under several causes, among which can be highlighted correspondence of mission, set goals and tasks of IDB and availability of financial instruments necessary for financing carrying out. However, the current trend of funding from IDI focuses on modeling bankable projects able to be financed from within.

The role of local financial institutions in PPP projects realization. An important role in strategic directions of economic policy of state achieving have local development banks. Development bank within law and statute is allowed to use profits to conduct certain measures of financial contribution or hedging. State guarantee enables these development banks' preference to undertake refinancing on capital market. Gaining the State support Development Bank should not compete with commercial banks, but to work with them on the basis of subsidiarity and division of of authority [7], [8].

For example, in Russia the core development financial institution is the State Corporation "Bank for Development and Foreign Economic Activity (Vnesheconombank)". This institution collaborates with other financial lending institutions to finance innovative projects in both common form of lending and granting guarantees and capital investments. In addition, Vnesheconombank to develop financing programs and assistance to regional and urban development projects [7].

In Moldova such a financial institution does not exist, but in our opinion, can be revived the idea of creating the Bank for Development and Investment of Moldova (BDIM), which was conceived as a legal entity joint stock company with State capital. For BDIM originally foreseen functions that can be connected to requirements of PPP projects implementing and related lending and consulting services in order to strengthen the national economy. This includes promoting investment to support small and medium enterprises development, public infrastructure development, expanding exports, privatizing state enterprises, reconstruction and renovation of dwellings, improvement of environment [2].

Given the fact that Moldovan central authorities do not have financial means to create BDIM is possible appeal to international financial institutions (eg PPIAF, EBRD, WB or IFC).

Domestic commercial banks could participate in PPP projects by crediting them. But in our opinion, in this context it may be just top financial institutions in banking rating: C.B. "Moldova-Agroindbank" J.S.C., C.B. "Moldindconbank" J.S.C. and C.B. "Victoriabank" JSC because they can mobilize sufficient financial resources for carrying out PPP program funding. They also may be associated and joint consortium to grant loans guaranteed by the State for capital investment projects which require social subsidizing by Government.

It also needs to take into account some important issues that may prevent the involvement of commercial banks in PPP financing:

- The existing legal and policy documents on PPP virtually ignores need for banks' participation in PPP implementing and basically do not foresee any incentives for it.
- PPP models requires lending in the medium (5-10 years) and long (10-25, 15-30 years) term, which creates problems banks viewfinder financial stability indicators.
- Major banks are addressing indigenous liquidation issues of failing banks, which requires a large volume of funds.
- Extremely low credibility of public-private relations and unfavorable state relations with international financial institutions, which can easily add political, economic and financial instability.

Proceeding from the above, domestic banks are not yet willing to include funding by PPP in their lending policy. Moreover, foreign banks present on the Moldovan market such as C.B. "Mobiasbanca" J.S.C. part of Société Générale which owns internationally an impressive portfolio of financing PPP projects, avoid further involvement in the financing of PPP programs established by the Government [3].

Conclusions. Financial institutions are the most important participants in the financing of PPP projects, with distinct place in creating financial model project development banks, attitude and quality of which depends on the participation of economic and financial success of PPP. At the same time, Government is solely responsible for streamlining funds-oriented public services and infrastructure development and financing PPPs own program. On the other hand, only involving financial institutions can be ensured a complex project financial modeling and risk locking solely of a pulic service in cases of premature termination of contracts, thus protecting the final consumer.

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THE BANKING SUPERVISION: CAN IT REDUCE THE RISK-TAKING AND, CONSEQUENTLY, STRENGTHEN THE STABILITY OF THE BANKING SECTOR IN MOLDOVA?

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Actuality: The empirical studies on the impact of the supervision on the stability of the banking sector are mitigated, varying depending on the particular characteristics of the bank and, in addition, the country's policy in which banks operate. This is why this study is important for the banking sector in Moldova. Purpose: The objective of this article is to studies the effects of the banking supervision on the risk-taking of banks and, consequently, the stability of the banking sector in Moldova. Methods: To order to achieve its purpose, the author applied the method of static panel data with random effect. Results: This empirical analysis reported the following results: increased restrictions on the activities of banks increases the stability of the banking sector. On the other hand, the power and independence of the supervisory authority have a negative impact on the stability of Moldovan banks. The increase of the capital level strengthens the stability of Moldovan banks and, at the same time, reduces the risk. Thus, capital regulations are an important pillar of the policy of the regulation of the banking sector of Moldova.

Keywords: *banking sector, banking supervision, risk-taking, stability, panel data, global index of regulations and supervisions, restrictions, power of supervisors and independence of the control authorities.*

Actualitate: Studiile empirice cu privire la impactul supravegherii asupra stabilității sectorului bancar sunt diverse, variind în funcție de caracteristicile particulare ale băncii și, în plus, de politica țării în care băncile funcționează. Astfel, pentru sectorul bancar din Moldova, cercetarea respectivă este importantă. Scop: Obiectivul acestui articol este de a studia impactul supravegherii bancare asupra asumării riscurilor de bănci și, în consecință, asupra stabilității sectorului bancar din Moldova. Metode: pentru a atinge scopul propus, autorul a aplicat metoda de date panel statice cu efect aleatoriu. Rezultate: În baza analizei empirice efectuate, se constată următoarele rezultate: majorarea restricțiilor asupra activităților băncilor crește stabilitatea sectorului bancar. Pe de altă parte, puterea și independența autorității de supraveghere au un impact negativ asupra stabilității băncilor din Moldova. Majorarea nivelului capitalului consolidează stabilitatea băncilor și, în același timp, reduce riscul asumat de acestea. Astfel, reglementările de capital reprezintă un pilon important al reglementării sectorului bancar al Moldovei.

Cuvinte-cheie: *sector bancar, supraveghere bancară, asumarea de riscuri, stabilitate, date panel, index global al reglementării și supravegherii, restricții, puterea și independența autorităților de control.*

Актуальность: Существуют различные эмпирические исследования о влиянии надзора на устойчивость банковского сектора, изменяясь в зависимости от конкретных характеристик банка и к тому же от политики страны, в которой банки работают. Именно поэтому данное исследование имеет значение для банковского сектора в Молдове. Цель настоящей статьи состоит в том, чтобы изучить влияние банковского надзора на принятие рисков банками и, как следствие, влияние на стабильность банковского сектора в Молдове. Методы: Для того, чтобы достичь своей цели автор применил метод статических групповых данных с произвольным эффектом. Результаты: Этот эмпирический анализ описывает следующие результаты: увеличение ограничения деятельности банков, повышая стабильность банковского сектора. С другой стороны, власть и независимость органа надзора оказывают негативное влияние на стабильность молдавских банков. Повышение уровня капитала усиливает стабильность

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молдавских банков и, в то же время, снижает риск. Таким образом, регулятивные нормы являются важным элементом регулирования банковского сектора Молдовы.

Ключевые слова: *банковский сектор, банковский надзор, принятие рисков, стабильность, анализ панельных данных, глобальный индекс норм и надзора, ограничения, власть инспекторов и независимость контролирующих органов.*

JEL Classification: G21, G28, G29, G33, G39.

Introduction. In order to ensure the soundness and stability of the banking sector, it is very important to apply the most appropriate banking supervision. Thus, in response to the recent financial crisis, with the purpose to stimulate and ensure the stability of the banking sector, the regulating authorities are in the process of rewriting the prudential rules. However, it should be noted that the implementation of these regulations requires complex steps, depending on the policies of each separate country and, in addition, the institutional environment in which the banks operate. Thus, these regulations could have different effects on the performance of banks from different banking sectors.

It is worth mentioning the fact that most of the analytical and empirical work on the analysis of the stability of the banking sector is concentrated in industrialized countries and, therefore, they do not take into account the imperfections of financial markets that developing middle-income countries typically have to face. Thus, in this research we propose to overcome the empirical failure of previous studies by testing the impact of the supervision on the stability of the banking sector of Moldova.

As part of this research, we will analyse the impact of supervision on the stability of the banks from the banking sector of Moldova. Our study consists of 14 commercial banks, for the period from 2000 to 2014. The data were collected from the Bankscope database of the Dauphine University (2015), data from the World Bank (2015), and the Financial Structure Database (2015). We especially paid attention to the temporal continuity of the data and, given the relatively small number of our samples, we had manually added the missing data.

1. Econometric models: the panel data

In our study, the author applied the method of static panel data with random effect, offering heterogeneity to the level of the data. The advantage of the panel data method is that it is characterized by a double dimension: individual and temporal. In addition, unlike the time series (based on a hypothesis of homogeneity of individuals (Pirotte, 2011)) or in cross section (prohibiting a dynamic approach of individual behaviours), this double dimension reflects simultaneously the dynamic of behaviours and their eventual heterogeneity, which equally allow to increase the number of observations and the degrees of freedom, as well as the coexistence of several variabilities (Pirotte, 2011).

The equations of the panel data are specified as follows:

Panel A: Stability: global index of regulations and supervisions, control variables specific for the bank and macroeconomic factors:

$$Stab_{i,t} = \sim_1 (IG_Superv)_{i,t} + \sim_2 (Buffer)_{i,t} + \sim_3 (Size)_{i,t} + \sim_4 (Growth_Assets)_{i,t} + \sim_5 (RLL_TL)_{i,t} + \sim_6 (NPL_TL)_{i,t} + \sim_7 (LiqAssets_TA)_{i,t} + \sim_8 (Depo_Assets)_{i,t} + \sim_9 (Gouv)_{i,t} + \sim_{10} (Infl)_{i,t} + \sim_{11} (Cycle)_{i,t} + £_{i,t}$$

Panel B: Stability: regulations, supervisions, capital buffer, factors specific for the bank and macroeconomic factors:

$$Stab_{i,t} = \sim_1 (Restr)_{i,t} + \sim_2 (Indep_AutCNT)_{i,t} + \sim_3 (Pow_Superv)_{i,t} + \sim_4 (Buffer)_{i,t} + \sim_5 (Size)_{i,t} + \sim_6 (Growth_Assets)_{i,t} + \sim_7 (RLL_TL)_{i,t} + \sim_8 (NPL_TL)_{i,t} + \sim_9 (LiqAssets_TA)_{i,t} + \sim_{10} (Depo_Assets)_{i,t} + \sim_{11} (Gouv)_{i,t} + \sim_{12} (Infl)_{i,t} + \sim_{13} (Cycle)_{i,t} + £_{i,t}$$

Where:

i – means the banks in our sample: i = 14;

t – the study period from 2000 to 2014: t = 15;

α i – represents the coefficients of the explanatory variables of the banking stability;

ε – is the error term.

2. The construction of the database

2.1. The dependent variable

The stability (STAB): In order to measure the stability of the banking sector of Moldova, we chose the most relevant proxy used in the literature (see for example: Lee and Hsieh, 2014). Therefore, the *"**STAB**"* variable represents a set of four dependent variables used to measure financial stability, namely:

- the Z-index for ROA (ZiA);
- the Z-index for ROE (ZiE);
- the volatility of the economic profitability (VOL_ROA);
- the volatility of the financial profitability (VOL_ROE).

In our research, with reference to the works of Fang (2014) and Lee and Hsieh (2014), we will use the Z-index as "*an inverse proxy for a bank's probability of failure*". Furthermore, because the Z-score is highly biased, we follow the works of the research of and Fang (2014) and use the natural logarithm of the Z-score, which is normally distributed.

1) The Z-index for ROA (***ZiA***) is defined by the following equation: [(return on assets + ratio of capital to assets) / standard deviation of the return on assets)].

2) Respectively, the Z-index for ROE (***ZiE***) = [(return on capital + ratio of capital to assets) / standard deviation of the return on capital)].

Furthermore, in order to assess the way in which the bank risk varies according to the banking regulation and supervision, we intend to understand the extent to which the differences between the stability of banks (Z-score) are attributable to differences in their economic profitability and their financial profitability. Consequently, in addition to the proxy Z-index, we will examine the volatility of the economic profitability of banks and the volatility of their financial profitability.

3) The volatility of the economic profitability (***VOL_ROA***): the standard deviation of ROA for every three years.

4) The volatility of the financial profitability (***VOL_ROE***): the standard deviation of ROE for every three years.

2.2. The explanatory variables

Supervision: Referring to the works of Barth et al. (2001; 2003; 2004; 2006; 2008; 2013), we divided the regulations and supervisions in three categories: restrictions on the bank activities (***Restr***), the power of supervisors (***Pow_Superv***) and the independence of the control authorities (***Indep.AutCNT***). Further, we created a global index of supervision ***(IG_Superv)***, which includes the three categories of supervision.

Capital buffers (Buffer): similar to the literature (Shim, 2013), we define the capital buffer of banks as the difference between the total risk weighted capital and the minimum ratio of capital required by the supervisory authority.

The size of the bank (Size): it is generally known that large banks are safer and better known on the market. At the same time, the size of a bank can play an important role in the risk-taking, stimulating "*the appetite for risk*" considering the possibilities of investment, diversification, as well as access to capital. Moreover, large banks could be covered by the phenomenon *"too-big-to-fail"* and, in an emergency they will be bailed out with the government's help. In our research, in order to measure the size of the bank, we will apply the log of total assets.

The growth of total assets (Growth_Assets): for this variable, we used as proxy the percentage variation of total assets compared with the value of the previous year. A high growth rate indicates a good risk management and, therefore, an increase of the viability and stability of banks.

Reserves for loan losses (RLL_TL): this indicator is measured by the ratio between reserves for loan losses and the total of gross loans. The reserves represent the amount that banks hold as sufficient to cover estimated losses on loan portfolios. Thus, the level of reserves that the bank holds reflects the quality of its loan portfolio, while the quality of the loan portfolio reflects the bank's stability.

Non-performing loans to total loans (NPL_TL): this indicator measures the credit risk in the banking sector. In fact, in order to represent the risk profile of the banks' assets, it is often used the ratio of risk-weighted assets compared to the total assets of the bank. Nevertheless, this formula for the risk weighting does not take into account the different risk levels among the specific assets of the portfolio. For example, for all commercial loans the same weight is assigned (100%), although the level of losses on loans to borrowers is different. Therefore, in order to overcome this problem, referring to the works of Shim (2013), we will measure the bank's credit risk using the ratio of non-performing loans to total loans.

Liquidity (LiqAssets_TA): the ratio of liquid assets to total assets, which measures the liquidity risk in the banking sector (Lee and Hsieh, 2014). In fact, the banks with a higher level of liquid assets (which can be easily converted into treasury) will have a greater capacity to meet their short-term financial obligations without resorting to the premature sale of investments or capital assets. In addition, the banks which will wish (or will be obliged) to hold a certain level of liquid assets might be less incited to engage in risky lending (Shim, 2013).

The ratio of deposits to total bank assets (Depo_Assets): this variable provides an indicator of funding choice, considering that the deposits collection activity has the most stabilizing effect on the income of the bank. Therefore, referring to the works of Lee et al. (2014), we included this variable in our econometric model that analyses the impact of the regulation and supervision on the stability of the banks from the banking sector of Moldova.

Governance (Gouv): a binary variable, proposed by the authors, which takes the value of 1 if the bank is controlled by the government and 0 if otherwise.

Inflation (Inlf): in order to measure the inflation, we will use as a proxy the inflation rate, until a negative relation between the stability and the inflation rate.

Economic cycle (Cycle): as a proxy for the indicator of the economic cycle we will use the real rate of GDP growth (Cycle), which is considered the most appropriate indicator of the business cycle (Shim, 2013).

3. Results and analyses

In general, according to the economic analysis, banking supervision is justified when market mechanisms present certain imperfections. The most striking example is the recent financial crisis. In addition, these dire consequences have clearly underlined the importance of strengthening the financial stability of a banking system. The strongest rational is that the costs associated with the recovery of the banks' financial situation are generally higher than those associated with an adequate banking supervision.

Moreover, as experience has shown, the financial crisis can quickly spread worldwide, its main characteritic being that it *"seldom respects national borders"* (Roubini and Mihm, 2010). Thus, as it was pointed out by Stiglitz (2010), even though the crisis may start anywhere in the world, it risks becoming global.

Regarding Moldova, the global economic crisis had hit this country in three ways: the decline in capital transfers of migrants living abroad; decline in foreign investment and decline in trade due to the deterioration of the situation in its partner countries. This has resulted in a deep recession: GDP falling by 6.5% in 2009, decline of the level of growth (3.5% in 2012 against 6.4% in 2011) and a deficit of 736 million USD in 2012 at the level of the balance of payments.

3.1. Stability of the banking sector in Moldova: global index of regulations and supervisions, variables specific for the bank and macroeconomic factors

Table 1

	(1)	(2)	(3)	(4)
	ZiA	**ZiE**	**VOL_ROE**	**VOL_ROA**
IG_SUPERV	-0.250***	-0.282***	2.364***	0.383***
	(-5.01)	(-7.19)	(3.88)	(3.81)
Buffer	0.0108**	0.0210***	-0.310**	-0.0102
	(3.01)	(6.43)	(-3.19)	(-1.16)
Size	0.185	0.646	-2.230	-0.705
	(0.69)	(1.51)	(-0.97)	(-1.59)
Growth_Assets	0.358	-0.386	16.52***	-0.372
	(0.84)	(-0.78)	(5.22)	(-0.50)
RLL_TL	-0.162***	-0.194***	2.296***	0.245***
	(-6.51)	(-5.99)	(3.81)	(4.45)
NPL_TL	-0.0925***	-0.102**	1.860**	0.271***
	(4.24)	(2.87)	(-3.06)	(-6.95)
LiqAssets_TA	0.198	0.660	-27.22**	-4.384**
	(0.21)	(0.56)	(-2.81)	(-2.61)
Depo_Assets	2.492***	2.907***	-100.7**	-6.858**
	(3.73)	(3.54)	(-2.98)	(-2.80)

Gouv	-1.296***	-1.056***	21.17**	2.327***
	(-7.09)	(-6.13)	(3.07)	(4.50)
Infl	-0.0831**	-0.0550	0.0614	-0.00291
	(-3.08)	(-1.17)	(0.12)	(-0.07)
Cycle	0.0918***	0.122**	-1.765***	-0.110***
	(3.44)	(2.97)	(-7.27)	(-3.50)
_cons	6.052***	2.457	53.47	4.045
	(5.35)	(1.50)	(1.63)	(1.25)
N	88	87	89	89
R-sq	0.505	0.506	0.619	0.662

* Significance at a level of 10%. ** Significance at a level of 5%. *** Significance at a level of 1%.

Table 1 presents the results of estimates of our static panel (1) with random effect, which measures the impact of the global index of supervision on the stability of banks from the Moldovan banking sector. Consequently, the global index of supervision (IG_Superv), which includes the power of supervisors (Pouv_Superv) and the independence of the supervisory authorities (Indep.AutCNT) is statistically significant at the 1% threshold of significance. This indicator is negatively related with the stability of the Moldovan banking sector (measured by the Z-index for economic profitability and the Z-index for financial profitability) and, at the same time, positively related with risk taking (measured by the volatility of the economic profitability (VOL_ROA) and volatility of financial profitability (VOL_ROE)). Our results indicate that strengthening the regulatory and supervisory policies decreases the stability of Moldovan banks while increasing the risk taking by their leaders.

The capital buffer (the difference between the total risk weighted capital and the minimum ratio of capital required) is statistically significant and positively related to the stability of the Moldovan banking sector and negatively related to the risk-taking. Thus, a high level of capital reinforces the stability of Moldovan banks and, at the same time, reduces the risk-taking of banks. In this context, Barth et al. (2013) have recently emphasized that capital regulations are an important pillar of the policy of the banking sector worldwide. Moreover, the buffer of capital is considered a regulatory measure of "protection" against the pro-cyclicality of financial systems (see, for e.g., Berger and Bouwman (2013); Athanasoglou et al. (2014)).

The indicators characterizing the quality of assets (RLL_TL: reserves for losses on loans/total loans and PNP_TOT: the ratio of non-performing bank loans in relation to the total loans) are statistically significant and negatively correlated with the stability of the Moldovan banking sector and positively associated with risk-taking. Our results confirm the results of Reinhart and Rogoff (2011), which demonstrated that the problems of banks result from a prolonged deterioration of asset quality and, therefore, a sharp increase in non-performing loans may mark the beginning of a banking crisis.

The asset growth is positively correlated with the risk-taking at the 1% threshold, given the fact that the bigger the bank, the more it adopts riskier strategies (Garcia and Marco Robles-Fernandez (2008). In the revenue boost, a greater bank will increase the assumed risk, this being consistent with the phenomenon *"too big to fail"* Moreover, it makes the control and supervision of large banks more complicated - known as the phenomenon *"too big to discipline"*.

On the other hand, a high level of liquid assets will have a negative impact on the risk-taking of banks, which can be explained by the fact that the assets are capitalized in cash and not in risky assets. Moreover, according to Shim (2013), the banks with a higher level of liquid assets tend to have a lower ratio of non-performing loans. It should be highlighted that the Moldovan banks are more cautious, more alert with taking risks and prefer to have a high level of liquidity.

Another feature of Moldovan banks is that they primarily perform traditional activities for banks: accept deposits and offer loans. In fact, the lending activity is the main income generating activity for Moldovan banks. This is due to the fact that the "deposits/total assets" (Depo-Assets) ratio has a positive impact on the stability of the banks from the banking sector of Moldova at the 1% threshold and a negative impact on the risk-taking at the 5% threshold.

The governance (the binary variable that takes the value of 1 if the bank is controlled by the government and 0 if otherwise) is statistically significant at the 1% threshold and negatively correlated with the stability of the Moldovan banking sector. Therefore, in case of Moldova, the banks that are not controlled by the government are more stable.

Regarding the macroeconomic factors, we found that inflation is statistically significant at the 5% threshold, having a negative impact on the stability of the Moldovan banking sector, which confirms our expectations. However, the economic cycle (the actual rate of GDP growth) has a positive impact on the stability of the Moldovan banking sector. Therefore, the risk level remains higher during the period of economic recession, while it is lower during the period of growth.

We conclude that the variables in our model are statistically significant in explaining the stability of Moldovan banks. Furthermore, we have a good adjustment of the model, because R2 ranges between 0.505 and 0.662.

Table 2

	(1)	(2)	(3)	(4)
	ZiA	**ZiE**	**VOL_ROE**	**VOL_ROA**
Restr	0.233*	0.559**	-3.963	-0.369
	(2.07)	(2.81)	(-1.27)	(-1.84)
Pouv_Superv	-0.263*	-0.418*	3.971	0.302
	(-2.25)	(-2.01)	(1.25)	(0.86)
Ind_AutCNT	-0.512*	-0.540	3.168	0.998
	(-2.01)	(-1.37)	(0.51)	(1.57)
Buffer	0.0119***	0.0233***	0.325***	-0.0131
	(3.65)	(10.37)	(-3.49)	(-1.63)
Size	0.270	0.807*	-3.381	-0.840
	(1.04)	(2.04)	(-1.31)	(-1.85)
Growth_Assets	0.446	-0.190	16.24***	-0.516
	(1.12)	(-0.43)	(5.20)	(-0.75)
RLL_TL	-0.136***	-0.150***	2.130**	0.222***
	(-5.01)	(-4.39)	(2.99)	(4.75)
NPL_TL	-0.0929***	-0.109**	2.050***	0.271***
	(4.92)	(2.68)	(-5.62)	(-5.44)
LiqAssets_TA	-0.141	0.194	-25.93	-3.490
	(-0.12)	(0.14)	(-1.61)	(-1.53)
Depo_Assets	2.428***	2.929***	-101.4**	-6.837**
	(3.63)	(3.76)	(-2.90)	(-2.68)
Gouv	-1.275***	-1.070***	21.68**	2.232***
	(-6.62)	(-5.19)	(2.59)	(3.39)
Infl	-0.0584*	0.00577	-0.552	-0.0272
	(-2.52)	(0.11)	(-0.99)	(-0.36)
Cycle	0.0613**	0.0594	-1.309***	-0.0704
	(3.02)	(1.61)	(-4.79)	(-1.86)
_cons	3.358**	-1.707	82.45*	8.810*
	(2.73)	(-1.45)	(2.46)	(2.48)
N	88	87	89	89
R-sq	0.526	0.551	0.633	0.667

* Significance at a level of 10%. ** Significance at a level of 5%. *** Significance at a level of 1%.

Table 2 presents the empirical results of the impact of different categories of regulations and supervisions on the stability of the banks from the banking sector of Moldova. Therefore, we notice that the restriction on banking activities (Restrict) promotes the stability of Moldovan banks. In contrast, the other variables of banking supervision: the supervisory power (Pow_Superv) and the independence of the supervisory authority (Ind_AutCN) are statistically significant and negatively associated with the stability of the Moldovan banking sector at the 10% threshold. Therefore, our results are in line with the results of Pasiouras et al. (2009), who argued that the empowerment of supervisors may be associated with corruption or other factors that hamper the operations of banks. Hence, bank supervisions may disadvantage the development of banks (Barth et al. 2003) and may have a negative impact on the stability of the banking sector as a whole (Pasiouras et al. 2006).

Our second empirical model also has a good adjustment, R2 varying between 0.526 and 0.667.

Conclusion. This research paper examines the impact of regulation and supervision exercised by the authority of control on the stability of the banking sector as a whole. We used data from 14 banks from Moldova (all banks in the Moldovan banking sector), over a period of 14 years: from 2000 to 2014. Our research question is: the banking supervision: can it reduce the risk-taking of banks and consequently ensure the stability of the banking sector?

The existing literature on the impact of banking regulation and supervision on stability and risk-taking remains ambiguous. The empirical results of our research on Moldova, a small, very open economy, vulnerable to external shocks, given its dependence on countries of the European Union (Romania, Germany, Italy), show the following: strengthening restrictions on the activities of banks increases the stability of the banking sector of Moldova. On the other hand, the power and independence of the supervisory authority does not promote the stability of Moldovan banks.

Moreover, the capital buffer (the difference between the total risk-weighted capital and the minimum ratio of capital required) ensures the stability of the banking sector and reduces the risk-taking of banks. Shim (2013) argues that excess capital acts as an insurance against costs that could arise from unexpected shocks to the capital and, moreover, against the difficulties in increasing the level of capital. Moreover, banks have an interest in maintaining a level of excess capital in order to avoid the costs associated with situations like, for example, violation of minimum requirements of regulatory capital, which triggers intervention of the supervisory authority and sometimes may even lead to the liquidation of the bank (see, for e.g. Furfine, 2001) and therefore the disruption of the banking sector as a whole.

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ANNEX 1

Definition and sources of variables

Variable	***Description***		***Source***
Dependent variable	ZiA	The natural logarithm of the Z-index for ROA. Z-index for ROA = [(return on assets + ratio of capital to assets) / standard deviation of the return on assets)]. A value of higher Z-score (Z-index) implies a lower probability of insolvency.	Bankscope Database (version 2015), authors' calculations
	ZiE	The natural logarithm of the Z-index for ROE. Z-index for ROE = [(return on capital + ratio of capital to assets) / standard deviation of the return on capital)]	Bankscope Database (version 2015), authors' calculations
	VOL_ROA	The volatility of economic profitability: the standard deviation of ROA for every three years.	Bankscope Database (version 2015), authors' calculations
	VOL_ROE	The volatility of financial profitability: the standard deviation of ROE for every three years.	Bankscope Database (version 2015), authors' calculations
Explanatory variables	Restr	The summation of the restriction values on banking activities: this index is composed of four items (securities, Insurance, real estate, nonfinancial firm ownership), and each item has four options that take the following values (Unrestricted (1); Permitted (2); Restricted (3) and Prohibited (4)).	Database of the regulation and supervision of the World Bank; Barth et al. (2013)
	Pow_Superv	The summation of the values of the power of supervisors. This index is calculated using the answers to these questions: (1) Does European central bank (ECB) supervises banks? (2) What body/agency supervises banks? (a) The central bank, (b) A single bank supervisory agency, (c) Multiple Bank supervisory agency. (3) Is there a single financial supervisory agency for all of the main financial institutions (insurance companies, contractual savings institutions, savings banks)? If yes, what is its name? (4) Is there a single financial supervisory agency for all of the activities in which commercial banks are allowed to do business? (5) Does your country adopt Basel II? (6) Is your country planning on adopting Basel III?	Database of the regulation and supervision of the World Bank; Barth et al. (2013)

	Indep. AutCNT	The summation of the values of the independence of supervisory authorities of political power, as well as of influence from large banks, this index is indicated and based on the following questions: (1) To whom are the supervisory bodies responsible or accountable?: (a) the Prime Minister, (b) the Finance Minister or other cabinet level official, (c) a legislative body, such as Parliament or Congress, (d) other. (2) How is the head of the supervisory agency (and other directors) appointed?: (a) the decision of the head of government (e.g. President, Prime Minister), (b) the decision of the Finance Minister or other cabinet level authority, (c) a simple majority of a legislative body (Parliament or Congress), (d) a supermajority (e.g. 60%,75%) of a legislative body, (e) other). (3) Does the head of the supervisory agency (and other directors) have a fixed term? (4) Can the head of the supervisory agency can be removed by: (a) the decision of the head of government (e.g. President, Prime Minister), (b) the decision of the Finance Minister or other cabinet level authority, (c) a simple majority of a legislative body (Parliament or Congress), (d) a supermajority (e.g. 60%, 75%) of a legislative body, (e) other).	Database of the regulation and supervision of the World Bank; Barth et al. (2013)
	IG_Superv	Global index of supervision = (Σ Restr * Σ Pouv_Superv * Σ Indep.AutCNT) = Restr+Pouv_Superv + Indep.AutCNT	Database of the regulation and supervision of the World Bank; Barth et al. (2001, 2004, 2006, 2008, 2013)
	Buffer	The difference between the total risk weighted capital and the minimum ratio of capital required.	Annual reports of banks of Moldova, (calculated)
	Size	The log of total assets.	Bankscope Database (version 2015), authors' calculations
	Growth_ Assets	The variation of total assets compared with the value of the previous year = (TotalActif t1 - TotalActif t0) / TotalActif t0.	Bankscope Database (version 2015), authors' calculations
	RLL_TL	Reserves for loan losses / gross loans.	Bankscope Database (version 2015)
	NPL_TL	Non-performing loans / total equity. A higher value indicates a more risky loan portfolio.	WDI, version 2015
	LiqAssets_TA	The ratio of liquid assets to total assets.	Bankscope (version 2015)
	Depo_Assets	The ratio of bank deposits to the bank's total assets.	Bankscope (version 2015)
	Gouv	Binary variable that takes the value of 1 if the bank is controlled by the government and 0 if otherwise.	Proposed by the authors
	Cycle	Real rate of GDP growth	WDI, version 2015
	Infl	The inflation rate	WDI, version 2015

Source: author

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