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REFLECTIONS ON THE NATIONAL ECONOMY DEVELOPMENT

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After twenty-four years of reforming the national economy by dismantling the centrally administered economic system and the establishment of market economy system, suppression of public and amplification of private property our country has reached an advanced level of poverty. In this process, national economy development passed through important changes not only in form, but also in fund. This situation requires intensification of concerns related to the national economy, which determines the actuality of this study. In the research, there were applied specific methods and techniques of economic investigations, based on the statistical yearbooks of the Republic of Moldova and Eurostat and other afferent publications. In the article, the authors reflect on the evolution of our country's economy and come up with some suggestions that would contribute to the sustainable development of the national economy.

Key words: *economy, policies, development, efficiency, mechanisms, market.*

În economia naţională, bazată pe relaţiile de piaţă şi deschisă faţă de lume, s-au produs, fără îndoială, mutaţii importante nu numai de formă, ci mai ales de fond. Chiar dacă despre ceea ce se întâmplă în economia naţională s-a discutat la diferite întruniri, s-a abordat la sesiuni ştiinţifice, în multiple publicaţii naţionale şi internaţionale, studiul rămâne a fi actual. Investigaţia s-a realizat în baza datelor Anuarelor Statistice ale Republicii Moldova şi Băncii Mondiale care au fost selectate şi prelucrate de autori. În cercetare s-au aplicat metode şi tehnici recunoscute şi folosite în investigaţiile economice. În materialul prezentat autorii meditează asupra factorilor ce au influenţat evoluţia economiei țării noastre și vin cu unele propuneri care ar contribui la dezvoltarea durabilă a economiei naţionale.

Cuvinte-cheie: *economie, politici, dezvoltare, eficienţă, mecanisme, piață.*

В национальной экономики, основанной на рыночных отношениях и открытой для мира, вне сомнений, произошли важные изменения не только по форме, но и по существу. Даже если то что происходит в национальной экономики обсуждалось на разных совещаниях и научных конференциях, освещается в многочисленных национальных и международных публикациях, исследование развития национальной экономики остаётся актуальной. В исследовании использованы данные Департамента Статистики Республики Молдова и Мирового Банка, которые были отобраны и обработаны авторами. При изучении развития национальной экономики обращались к методам и техническим приёмам известным и широко практикуемым в экономических исследованиях. В статье авторы изучают ситуацию в национальной экономики и на этой основе выдвигают ряд предложений которые будут способствовать эффективному и устойчивому развитию национальной экономики.

Ключевые слова: *экономика, политика, развитие, эффективность, механизмы, рынок.*

JEL Classification: F15; F42; G38.

Introduction. After twenty-four years of reforming the national economy by dismantling the centrally administered economic system and the establishment of market economy system, suppression of public and amplification of private property our country has reached an advanced level of poverty. Both public authorities and those engaged in research bring and "argue" many reasons, many of them being not accompanied by measures that would lead the national economy to a better level. Obviously, the study of economy development continues to be imperative.

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Knowledge level issue. The study of various aspects of the national economy has been conducted both in the country and abroad. However, even if this topic has been investigated before and discussed at various official meetings, approached at scientific sessions, exposed in various national and international publications, national economic development still needs to be investigated.

This situation urged us to think about the development process of the national economy, on the evolution of the national economy structure, the products that our country could submit to the Western market, the possible consequences of integration processes.

Material and method. National and international normative acts, textbooks, monographs and other publications specific to the theme can be found among the materials used in research. The study is performed on selected data and processed by the authors based on the statistical yearbooks of the Republic of Moldova and Eurostat, other publications that provided us pertinent meanings and explanations in relation to the phenomena and processes that happend or occurr now. In the research specific methods and techniques of economic investigations were applied.

Results and meditations

National economy: general characteristics

Our country's economy has undergone a difficult phase of changes initiated by the decision of Moldovan Parliament on July 25, 1990 which qualified "...the transition to a market economy as a model of management...". The transition to the economy based on market relations was frequently marked by dynamism, often by uncertainty and risk, sometimes even hostility. Gross domestic product (GDP), this macroeconomic aggregate representing the final result of production activity which is being calculated in prices of the year 2005, fell to $ 5.96 billion in 1990 (Table 1), a year to launch the economic reforms to $ 2.12 billion in 2000 or by 2.81 times, then slowly increased to $ 4.21 billion in 2014 or by 1.98 times.

Table 1

Evolution of gross domestic product

	1990	**1995**	**2000**	**2005**	**2010**	**2011**	**2012**	**2013**	**2014**
GDP, in prices 2005, $ billion	5.96	2.39	2.12	2.99	3.50	3.73	3.70	4.05	4.21
GDP per capita, $	1613	650	583	831	983	1047	1040	1138	1191
GDP, calculated by PPP, $ billion	23.8	9.54	8.47	11.93	13.98	14.88	14.77	16.16	16.91
GDP, calculated by PPP, per capita, $	6440	2596	2329	3518	3925	4179	4150	4542	4753
GNI, calculated by PPP, $ billion	15.38	6.84	6.83	11.90	14.84	16.08	16.78	18.51	19.50
GNI, calculated by PPP, per capita, $	4160	1860	1880	3310	4170	4580	4710	5200	5480

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

GDP calculated by purchasing power (PPP) of 2011, as well, decreased from $ 23.8 billion in 1990 to $ 8.47 billion in 2000 or by 2.81 times, then increased to $ 16.91 billion in 2014 or by 2 times. Basically, the same dynamic has GDP being calculated either in prices of 2005, or being expressed by purchasing power related to a resident of our country.

Thus, we find that after 24 years of dismantling the centralized managed economy and establishment of market economy system GDP in our country has not yet reached the level that it had at the beginning of economic reforms.

Gross national income (GNI) expressed by the purchasing power of 2011 declined from $ 15.38 billion in 1990 to $ 6.83 billion or by 2.25 times in 2000, then increased to $ 19.50 billion in 2014 or by 2.85 times. GNI is characterized by similar dynamic expressed by purchasing power, being reported to an inhabitant of our country.

Even if in the years 1990-2000 GNI decreased faster in relation to GDP, then in 2011 it already exceeded the level of 1990, increasing in the last three years with 21.26 percent. The fact that the GDP evolution differs than the GNI is mainly due to the divergence of their calculation method.

Table 2

Contribution of the main economic activities in the gross domestic product, %

	1990	1995	2000	2005	2010	2011	2012	2013	2014
Gross domestic product, *including:*	100	100	100	100	100	100	100	100	100
- agriculture	36.14	33.02	29.03	19.53	14.45	14.26	13.43	14.29	15.23
- industry	36.65	32.15	21.72	16.34	15.91	16.84	16.71	17.11	16.69
- services	27.21	34.83	49.25	64.13	69.64	68.90	69.86	68.60	68.08

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

Both the dynamics of gross domestic product and gross national income were considerably influenced by the ratio of the main economic activities contribution for their formation. The share of goods production decreases from 72.79% in 1990 (Table 2) to 31.92 percent in 2014 and by 2.3 times. The services share in the gross domestic product significantly increased by 2.5 times.

Both the contribution and dynamic of agricultural and industrial goods is practically identical. Agriculture's contribution is reduced from 36.14% in 1990 to 15.23 percent in 2014.

After the declaration of independence, the contribution of branches to the total agricultural production has undergone major changes. During 1995-2013 in the structure of agricultural production from our country dominates the crop production, which share fluctuates between 61.5% in 2012 (Table 3) and 72.3% in 2013. Cereals are highlighted among the vegetable products, which in the reference years account from 17.9% in 2912 to 28.8% in 2013.

Table 3

Agricultural production structure in all categories of households, %

	1995	2000	2005	2010	2011	2012	2013
Total crop production, *including:*	100	100	100	100	100	100	100
vegetable production, *of which:*	70.0	69.0	68.9	66.2	71.7	61.5	72.3
- cereal crops	19.0	25.0	22.9	18.8	28.0	17.9	28.8
- vegetables	7.0	5.0	7.3	7.4	8.1	6.0	5.5
- fruits, nuts, berries	7.0	3.0	4.4	3.9	6.8	6.7	5.4
- grapes	9.0	12.0	12.8	12.1	6.1	10.4	9.0
- **animal production**, *of which:*	30.0	31.0	31.1	33.8	27.9	38.5	27.7
- cattle and poultry production	16.0	14.0	14.8	18.9	14.5	21.5	15.4
- milk	10.0	13.0	10.9	10.2	10.0	11.1	8.0
- eggs	3.0	4.0	4.4	4.0	3.3	4.2	3.0

Source: Elaborated by authors based on the statistical yearbooks of the Republic of Moldova.

If in the '90s of last century, it was up to 17% to fruit, in the years 2000-2013 their share ranges from 3.0% in 2000 to 6.8 percent, being in full compliance with the specific sequence to fruits a fruitful year followed by a less fruitful year. In the less productive years, the summary weight of vegetables, fruits, nuts, berries and grapes is lower than of cereals.

In the animal production structure, which is ranging from 27.7% in 2013 to 38.5% in 2012, the production of livestock and poultry dominates by 14% in 2000 and 21.5 in 2012.

This situation proves, on the one hand, that agriculture as activity is sufficiently preserved, and on the other hand, that the structure of agricultural production is not formed only under the influence of decision makers.

Mutations that occurred in the structure of agricultural production indicate a trend to decrease the share of intensive crops such as grapes, fruits, vegetables, tobacco etc. and the increase of the share of products requiring small amount of capital such as wheat, corn, sunflower and others.

In the industrial production structure, the manufacturing industry dominates categorically, whose share varies from 81.0% in 2010 (Table 4) to 87.5 in 2005.

Table 4

The structure of industrial production by types of activities, %

	1995	**2000**	**2005**	**2010**	**2011**	**2012**	**2013**
Industry, **total**, *including:*	100	100	100	100	100	100	100
- extractive	0.8	0.8	1.4	1.6	1.7	1.6	1.9
- manufacturing, *of which:*	83.6	82.1	87.5	81.0	82.6	82.9	84.0
- wine production,	10.8	16.9	20.0	7.2	6.1	6.4	6.9
- fruit and vegetables processing	6.7	5.1	3.4	3.7	5.3	4.4	4.5
- chemical	0.8	1.4	1.1	2.7	2.6	2.6	2.8
- furniture production	2.1	0.9	1.8	2.2	2.1	2.0	2.2

Source: Elaborated by authors based on the statistical yearbooks of the Republic of Moldova.

The economic activity of any country, including Moldova, requires the exchange of goods produced with both goods and other necessary resources. The exchange takes place through the market and primarily the internal market.

Internal market of Moldova is limited by consumers who on January 1, 2013 amounted to 3.5578 million and is subjected to their purchasing power. Even if the average monthly disposable income relative to the average value of the minimum subsistence per person increased from 46.1% in 1995 to 104.3% in 2013, it still remains insufficient. Moreover, the national economy does not have sufficient resources, especially energy, to ensure continuous production of goods. It is obvious that the national economy is doomed to trade relations with other countries.

Exports of goods and services as a share of GDP increased steadily from 48.2% in 1990 (Table 5) to 59.2% in 2010, then it reduced sharply reaching 45.0% in 2011 or at the level below than that of 1990 and steadily decreased to 42.5% in 2014. We also mention that the share of high technology exports is very low ranging from 2.36% in 2013 to 8.26% of production exported in 2010.

Table 5

Export and import of goods and services

	1990	**1995**	**2000**	**2005**	**2010**	**2011**	**2012**	**2013**	**2014**
Exports of goods and services in relation to GDP, %	48.2	49.3	49.8	51.1	59.2	45.0	43.5	43.3	42.5
Exports of technologies, in % of exports of goods and services	-	3.79	3.01	3.96	8.26	6.31	4.78	2.36	-
Imports of goods and services in relation to GDP, %	50.6	58.0	75.4	91.7	78.5	85.8	83.9	80.6	78.9
The balance of imports and exports in relation to GDP, %	-2.4	-8.7	-25.6	-40.6	-19.3	-40.8	-40.4	-37.3	36.4

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

Imports of goods and services in relation to GDP increased from 50.6% in 1990 to 91.7% in 2005, than slightly reduces oscillating between 78.5% in 2010 to 85.8 in 2011. The import of goods and services exceeds their exports, reaching a difference 40.6% of GDP.

The value of exported industrial production decreased from $ 210.3 million in 1996 (Table 6) to $ 182.2 million in 2000 or with 13.4 percent, then increases to $ 508.2 million in 2005 or approximately by 2.8 times. During 2005-2013 the value of exported industrial products increased by 2.78 times.

The value of imported industrial production of our country was reduced from $ 929.4 million in 1996 to $ 666.7 million in 2000 or with 28.3 percent, then increased to $ 2042.7 million in 2005 or by 3.06 times. In 2005-2013 the value of industrial goods increased by 2.3 times. Virtually, all trade deficit was generated by import and export of industrial products.

The export of food products decreased from $ 584.7 million in 1996 to $ 291.0 million in 2000 then increased to $ 582.9 million in 2005. In the years 2005-2013 the value of food products increased by 2.8 times. If in 1996 food products dominated (by 77.6%), being followed by vegetable products (11.6%), animals and animal products (10.3%), then in 2013 the largest share (49.9%) has the plant products, followed by food products (42.1%), alcoholic and soft drinks (24.8%).

Table 6

The national external trade, million $

	1996	2000	2005	2010	2011	2012	2013
Total: - Export	795.0	471.5	1090.9	1541.5	2216.8	2161.9	2428.3
- Import	1072.3	776.4	2292.3	3855.3	5191.3	5212.9	5492.4
- Trade balance	-277.3	-304.9	-1201.4	-2313.8	-2974.5	-3051.0	-3064.1
a. industrial products - Export	210.3	182.2	508.2	788.1	1299.7	1283.0	1412.8
- Import	929.4	666.7	2042.7	3263.7	4503.4	4469.6	4708.6
- Trade balance	-719.1	-484.5	-1534.5	-2475.6	-3203.7	-3186.6	-3295.8
b. agro-food products - Export	584.7	291.0	582.9	732.2	917.1	878.9	1015.5
- Import	142.9	109.6	279.6	591.4	687.8	743.3	783.8
- Trade balance	+441.8	+181.4	+303.3	+140.8	+229.3	+135.6	+231.7

Source: Elaborated by authors based on selected information from http/www.statistica.md.

The share of agro-food production exported in total national export is reduced from 73.55% in 1996 to 61.4% in 2000, 53.42% in 2005 and 41.82% in 2013, but the trade balance of agro-food products over the years remains positive.

National economy development is influenced by available resources, primarily by the ***natural potential*** which, as stated by P. Bran [1, 20] participates with "the force of its laws and with its "goodies", substance (s), energy (e) and information (i), goodies which are in their natural state, "manufactured" by the physical movement, chemical and biological material". We believe that climatic conditions, land fund, variable configuration of the landscape, water, flora, and fauna are sufficiently favourable for the development of national economy.

A. Smith's formula [5] that human activity creates the weight of goods requires the study of human potential that undoubtedly contributes to the national economic development.

The total population decreased from 3.604 million in 1995 (Table 7) to 3.535 million in 2013 or about 2%. Only in 1995 and 2012 the number of births exceeded the deaths.

Table 7

Population distribution by participation in economic activity in Moldova, thousand persons

	1995	2000	2005	2010	2011	2012	2013
Population, **total**	3604	3639	3595	3582	3560	3560	3559
natural movement of population: - births	56.4	38.9	37.7	40.5	39.2	39.4	37.9
- deaths	53.0	41.2	44.7	43.6	39.2	38.6	38.1
including: economically active population	1696	1655	1422	1235	1258	1215	1236
activity rate, %	47.1	45.4	39.5	34.7	36.3	34.1	34.7
of which employed population in economy	1673	1515	1319	1143	1173	1147	1173
employment rate, %	46.5	41.2	36.6	32.1	33.0	32.2	32.9
including employment in agriculture	710	765	537	315	323	303	338
employment in agriculture, %	42.8	50.5	40.7	27.5	27.5	26.4	28.8
The number of persons who left the country	5432	9128	6827	4714	3920	3062	2585

Source: Elaborated by authors based on the statistical yearbooks of the Republic of Moldova.

The number of active persons decreased from 1696 ths in 1995 to 1236 ths in 2013 or with 27.13 percent. The activity rate decreases respectively from 47.1% in 1995 to 34.7% in 2013, or with 12.4 percentage points. The number of persons employed in the economy dropped from 1673 ths in 1995 to 1173 in 2013 or with 29.9 percent, which is very dangerous for the national economy. The number of people employed in agriculture fell categorically from 711 ths in 1995 to 338 ths in 2013 or by 2.1 times. The employment rate in agriculture decreased from 42.8% in 1995 to 28.8% in 2013.

The number of persons who left the country has increased from 5432 in 1995 to 9128 persons in 2000, than steadily decreased reaching 2585 people in 2013.

For any public authority, for any entrepreneurial administration identifying the resources necessary for financing of working capital and ensuring investment for regeneration and growth assets is a mandatory dimension.

Financial possibilities of companies are modest and do not provide funding. Tax revenues, even if they have reached 18.64% of GDP in 2012 (Table 8), remain insufficient to provide the necessary support to the national economy.

Table 8

General characteristics of the national economy financing

	1995	2000	2005	2010	2011	2012	2013	2014
Tax revenues,% of GDP	-	14.72	18.48	18.19	18.28	18.64	-	-
Personal remittances, $ mil.	1.02	178.6	915.1	1351.4	1600.4	1793.3	1984.9	2074.6
Domestic credit,% of GDP	23.72	25.21	31.52	36.34	39.05	43.46	45.83	39.00
Official development assistance and official aid received, $ mil.	68.5	122.5	169.1	470.4	469.1	473.1	374.4	-
Foreign direct investment, $ mil.	25.9	127.5	190.7	212.0	301.4	204.9	249.0	353.1

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

Remittances have increased from $ 1.02 million in 1995 to $ 2074.6 million in 2014, but primarily are used for consumption. The share of domestic credit to GDP rose from 23.72% in 1995 to 45.83 in 2013, then decreased to 39 percent in 2014 and will continue to shrink as the recent Board of the National Bank of Moldova decided to increase the base rate from 15.5 to 17.5 percent annually. Thus, not inadvertently, the official assistance for development and official received aid increases from $ 68.5 million in 1995 to $ 473.1 million in 2012 or by 6.9 times than it reduced to $ 374.4 million in 2013 or with 20.9 percent. Practically, in the programs of all governments is specified the need to attract foreign investments, even if they increased from $ 25.9 million in 1995 to $ 353.1 million in 2014 or by 13.6 times, they do not cover the demand.

Generalizing the above, we find that to amplify and deepen the knowledge of the national economy it is required to conduct a comparative study.

Valences of the national economy: comparative study

Gross domestic product, corresponding to the goods and services for final consumption is calculated in prices of 2005 and reported to a resident of the Republic of Moldova made up $ 650 (Table 9) in 1995 and formed 50.9% of that of Ukraine, 18.5% of the Romania and 13.0% of that of Estonia. Even if GDP compared to an inhabitant of our country has increased from $ 650 in 1995 to $ 831 in 2005, compared to Ukraine's amounted only 45.2%, or less than 5.7 percentage points, to that of Romania – 17.8% or 0.7 percentage point less, to Estonia – 8.0%, or with 5 percentage points less. Subsequently, it increases almost constantly up to $ 1,191 in 2014 when it made 57.2% of Ukraine, 19.2% of Romania's and 9.8% of that of Estonia.

Table 9

The evolution of gross domestic product per capita in 2005 prices, $

	1990	1995	2000	2005	2010	2011	2012	2013	2014
Estonia		4995	7102	10336	10364	11255	11821	12056	12348
Latvia		3601	4822	7634	8058	8617	9146	9636	9974
Lithuania				7864	8941	9705	10213	10653	11074
Romania	3820	3509	3327	4652	5635	5793	5840	6067	6196
Moldova	1613	650	583	831	983	1047	1040	1138	1191
Ukraine	2641	1277	1211	1839	1975	2085	2094	2099	2081
Russian Federation	5685	3529	3870	5323	6365	6631	6846	6923	6844

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

Thus, we conclude that the results of efforts to develop the national economy are very modest compared with neighbouring countries and the Baltic countries.

If the contribution of assets to the gross domestic product of our country was reduced from 72.79% in 1990 to 50.75% in 2000 and with 31.92% in 2014, then in Romania it is respectively from 73.68% to 45.50% and 32.63%, in Estonia – from 38.19% in 1995 to 32.64% in 2000 and 31.84% in 2014, in other words more slowly. In 2014, the contribution of assets to the GDP was nearly equalized.

Contribution of agriculture to the gross domestic product of our country declined from 36.14% in 1990 (Table 10) to 14.45% in 2010, remaining at that level thereafter. In Romania, for example it reduces continuously from 23.74% in 1990 to 5.36% in 2014, when it gets close to the European Union member countries.

Table 10

The contribution of agriculture to gross domestic product, %

	1990	1995	2000	2005	2010	2011	2012	2013	2014
Estonia	-	5.84	4.84	3.50	3.19	3.95	4.07	3.59	3.67
Latvia	-	8.93	5.19	4.32	4.49	3.92	3.71	3.64	3.45
Lithuania	-	-	-	4.78	3.29	3.81	4.38	3.78	3.46
Romania	23.74	21.42	12.06	9.52	6.41	7.48	6.01	6.35	5.36
Moldova	36.14	33.02	29.03	19.53	14.45	14.26	13.43	14.29	15.23
Ukraine	25.57	15.40	17.08	10.40	8.27	9.49	9.05	10.16	11.79
Russian Federation	16.61	7.16	6.43	4.97	3.87	4.37	3.93	3.95	-

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

Thus, in 2014 the contribution of agriculture to GDP (the 6th part), by 2.9 times higher than in Romania and about 4.4 higher than in the Baltic countries, given that the agriculture has relatively the lowest added value.

Industry contribution to the national gross domestic product decreased from 36.65 percent in 1990 (Table 11) to 16.34% in 2005, remaining at that level until 2014, Romania has decreased from 49.94% in 1990 to 33.44% in 2000, then after 2010 is maintained at 42-43% and decreased to 27.27 in 2014.

Table 11

Industry contribution to gross domestic product, %

	1990	1995	2000	2005	2010	2011	2012	2013	2014
Estonia	-	32.35	27.80	29.78	27.98	29.19	28.96	28.95	28.17
Latvia	-	25.87	20.10	16.47	19.01	18.13	17.69	16.95	16.37
Lithuania	-	-	-	24.92	23.25	24.59	24.82	24.17	23.59
Romania	49.94	42.74	33.44	35.89	42.09	42.78	42.34	43.25	27.27
Moldova	36.65	32.15	21.72	16.34	15.91	16.84	16.71	17.11	16.69
Ukraine	44.57	42.68	36.32	32.45	31.34	29.08	28.42	26.22	25.39
Russian Federation	48.35	36.96	37.95	38.08	34.70	37.43	36.85	36.27	-

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

Less oscillates industry's contribution to the GDP in the Baltic countries. For example, in Estonia, except 1995 (32.35%) it is maintained at level of 28-29 percent.

Of course, the structure of goods and services contributing to the GDP affects their exports. Exports of goods and services in our country, as a share of GDP, increase slowly from 48.2% in 1990 (Table 12) to 59.2% in 2010, then decreases to 42.5% in 2014. In Romania, although exports of goods and services to GDP is lower than in Moldova increases practically steadily from 16.73% to 41.13% in 1990 to 2014.

Table 12

Exports of goods and services to GDP, %

	1990	1995	2000	2005	2010	2011	2012	2013	2014
Estonia	-	49.60	61.64	65.92	75.12	87.93	88.39	86.09	84.73
Latvia	-	34.68	37.27	43.15	52.98	57.83	60.87	59.40	58.02
Lithuania	-	-	-	53.92	65.40	75.06	81.71	84.07	81.76
Romania	16.73	27.63	32.83	33.08	35.42	40.03	40.00	41.98	41.13
Moldova	48.2	49.3	49.8	51.1	59.2	45.0	43.5	43.3	42.5
Ukraine	27.64	47.07	62.44	51.48	50.75	49.82	47.72	42.96	49.15
Russian Federation	18.16	29.29	44.06	35.20	29.22	30.27	29.61	28.61	-

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

In Estonia exports of goods and services increased from 49.60% in 1995 to 88.39% in 2012, and then slightly decreased to 84.73% in 2014.

For the economy of any country it is extremely important that export of goods and services to exceed their import. Imports of goods and services in our country has increased from 50.6% in 1990 (Table 13) to 91.7% in 2005 and decreases from 85.8% in 2011 to 78.9% in 2014. During those years, import exceeded export.

Table 13

Imports of goods and services to GDP, %

	1990	1995	2000	2005	2010	2011	2012	2013	2014
Estonia	-	55.64	64.88	71.02	68.76	82.11	87.40	84.64	82.11
Latvia	-	39.44	45.35	57.63	54.44	62.81	65.29	62.31	60.88
Lithuania	-	-	-	61.10	67.28	77.61	80.85	82.82	81.64
Romania	26.18	33.21	38.13	43.25	41.15	45.37	45.15	42.54	41.01
Moldova	50.6	58.0	75.4	91.7	78.5	85.8	83.9	80.6	78.9
Ukraine	28.72	50.16	57.41	50.64	53.56	56.43	56.37	52.11	53.24
Russian Federation	17.94	25.89	24.63	21.51	21.14	21.73	22.27	22.68	-

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

In Romania, imports exceed exports in the years 1990-2010, than imports remain lower then exports. The situation is the same for Estonia. In 2014 trade deficit made MDL 41 billion, and namely 36.4% of GDP. For comparison, Romania's trade deficit in 2014 was 0.12% of GDP, i.e. 303 times less. In Estonia and Lithuania exports of goods and services exceeded their imports, and the deficit in Latvia formed 2.86% of GDP or with 12.7 less than in Moldova. Comments are superfluous.

In order to develop the economy there are needed financial resources. Economic agents in our country do not have their own financial resources and are forced to turn to domestic credit, the share of which in national GDP rose from 23.72% in 1995 to 45.83% in 2013, then slightly decreased to 39% in 2014.

Table 14

Domestic credit, % of GDP

	1990	1995	2000	2005	2010	2011	2012	2013	2014
Estonia	-	11.19	34.50	68.00	96.53	83.80	76.59	71.82	72.00
Latvia	-	11.74	18.47	67.46	128.88	79.63	62.94	59.02	52.92
Lithuania	-	-	-	42.81	63.83	57.02	52.00	50.92	45.63
Romania	79.73	23.56	13.88	20.71	53.84	54.12	54.27	51.97	48.24
Moldova	-	23.72	25.21	31.52	36.34	39.05	43.46	45.83	39.00
Ukraine	-	15.51	23.82	33.24	93.89	87.27	87.86	95.02	96.55
Russian Federation	-	25.46	24.93	20.81	37.72	39.59	42.75	48.70	52.37

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

In 2014, the share of domestic credit to Moldova's GDP was lower by 9.24 percentage points than in Romania and by 33 percentage points than in Estonia.

Acquisition, creation and reproduction of fixed assets need investments. The possibilities of any state, including our country are insufficient to provide the necessary investment, which requires attracting foreign investments. Foreign direct investments in our country have increased from $ 267 million in 1995 (Table 15) to $ 353.1 million in 2014 or by 13.6 times. But in 2013 direct investments in our country were by 3.5 times lower than in Estonia and by 16.5 times lower than in Romania.

The forecasts are also gloomy for 2015. So, according to Ruslan Piontkivsky, senior economist of the World Bank for Moldova, the year will be characterized with recession of 2 percent. Moldovan economy will be contracted with 1 percent in 2015 compared to the previous year, estimated the International Monetary Fund in the World Economic Outlook report. EBRD estimates an economic decline of up to half a percent. The Ministry of Economy forecasts a fall of the economy in 2015 by 1 percent.

Table 15

Foreign direct investments, $ mil.

	1990	1995	2000	2005	2010	2011	2012	2013	2014
Estonia	-	201	387	3127	2053	511	1592	884	1597
Latvia	-	180	412	812	433	1502	1076	990	782
Lithuania	-	73	379	1189	865	1538	576	708	375
Romania	10	419	1037	6866	3204	2557	2629	4108	-
Moldova	-	25.9	127.5	190.7	212.0	301.4	204.9	249.0	353.1
Ukraine	-	267	595	7808	6451	7207	8175	4509	847
Russian Federation	-	20650	27142	15508	43168	55084	50588	69219	20958

Source: Elaborated by authors based on selected information from http://data.worldbank.org/indicator.

What is to be done?

The answer to this question is found in the Association Agreement between the Republic of Moldova, on the one hand, and the European Union and the European Atomic Energy Community and its Member States, on the other hand. According to paragraph 1, Article 24, this Agreement provides that "Cooperation between the Parties aims to promote economic policies relevant to functioning market economies, as well as the development and implementation of these economic policies".

Paragraph 2 of the same article specifies "Moldova is working towards establishing a functioning market economy and making gradually closer ties of its policies to those of the EU, in accordance with the guiding principles of some fiscal and solid macroeconomic policies, including the central bank independence and stability prices, strong public finances and a sustainable balance of payments".

Liberalization of our citizens' movement in the European Union area, the formation of a free trade area, causes new conditions for our country's economy. For the establishment and development of national economy we consider appropriate:

1. To change the structure of gross domestic product by:

- Increasing the share of industry, intensifying the development of chemical industry, including natural based pharmaceuticals, cosmetics and perfumery products, goods and services;
- Increasing the share of agriculture, judiciously choosing agro-food products with which our country would be successful, especially in markets that demonstrate a more constant stability, as for example the EU Common Agricultural Market. It is recommended to considerably expand the plantation area of vineyards and orchards and to adjust the structure of sorts to the Western market requirements.

2. To intensify the implementation of mechanisms and economic instruments that can ensure sustainable development of the national economy such as:

- Practicing the *indicative pricing, in other words orientation prices, intervention prices* that trigger mechanism to support farmers and *the threshold price* which is the minimum level at which the imported products can accede on the domestic market.
- Taking over by the public authorities from agricultural producers the excess products at prices, which cover expenses for their storage and sale in the situation when the market acts in favour of the request.
- Stimulating exports of goods and services by increasing the exchange rate with 5-10 percent compared with the current value of goods and exported services.
- Renouncing in agriculture to *ex ante* support/before obtaining the production/which is usually inefficient and *ex post* state intervention/after which the production was performed, stimulating farmers to produce what is needed on the market and particularly on the external one. *Ex post* support may be offered through *two mechanisms*:

a. The state subsidizes a part of the market price covering the production costs;
b. The state buys production at the negotiated price but higher than the cost. The production is then sold, including to the processing industry at a price that may be lower than that paid to farmers not to affect the purchasing power of the population.

- Stimulating lending to farmers by financial institutions, particularly for planting orchards and vineyards, to extend the irrigated areas, to procure the means of production and to everything that would help to streamline this sector of the national economy.

3. To form the mentality of people employed in the economy endowing them with innovative qualities, performance and power to take decisions, to act adequately to the market economy.

Many of those involved in the establishment and development of national economy are from the generation that found itself in an independent country, coming from the USSR where during the ‘50s they had a patriarchal childhood, they were caught in the school, where in the ‘60s even the laws of physics were acting as indicated by the party, in the ‘70s being at the university studying how happy they will live under communism, being employed at work in the 80s during the “bright” stagnation where nepotism flourished and corruption rooted, and in ‘90s they were entrusted with reforming the national economy.

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THE SOCIOECONOMIC STATUS OF THE ELDERLY

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Actuality of the study is to extend knowledge on the key issues facing older people. The purpose of the research is to establish the socio-economic position of the elderly, level of respect of their rights in various areas and their vulnerability. The study methodology includes a combination of quantitative and qualitative methods. First, by using the method of social survey based on questionnaire on two target-groups samples (one for people aged 60 and over (1096 respondents) and another for employable people aged 20-55 (500 respondents)). Second, by conducting individual 10 in-depth interviews with experts and three focus group with elderly (aged 60 and over) that live in their own household/housing (38 elderly). The study allowed identifying the main problems faced by older people in various social areas, to identify cases of discrimination, as well as to develop a series of recommendations to improve the situation.

Key words: *elderly, population ageing, living standard, discrimination, healthcare services, welfare.*

Actualitatea studiului constă în aprofundarea cunoştinţelor cu privire la problemele principale cu care se confruntă persoanele vârstnice, scopul cercetării fiind stabilirea poziţiei socioeconomice a vârstnicilor, gradului de respectare a drepturilor în diferite domenii, dar şi vulnerabilitatea lor. Metodologia studiului prezintă o combinare a metodelor cantitative, prin aplicarea anchetei sociologice pe bază de chestionar, elaborat pe două eşantioane reprezentative la nivel naţional (persoane de 60 ani şi peste (N-1096) şi persoane de 20-55 ani (N-500)) şi a metodelor calitative, prin realizarea interviurilor aprofundate cu 10 experţi în domeniu şi a trei discuţii focus-grup cu vârstnici (de 60 ani şi peste), care locuiesc în propria gospodărie/locuinţă (38 de vârstnici). Rezultatele studiului au permis delimitarea problemelor majore cu care se confruntă persoanele în vârstă în diferite sfere sociale, determinarea cazurilor de discriminare a vârstnicilor, dar şi dezvoltarea unor recomandări de ameliorare a nivelului de trai al acestora.

Cuvinte-cheie: *vârstnici, îmbătrânirea populaţiei, standard de viaţă, discriminare, servicii medicale, bunăstare.*

Актуальность исследования заключается в углубление знаний по ключевым проблемам, стоящим перед пожилыми людьми. Цель исследования: анализ ситуации по соблюдению прав пожилых людей в основных сферах жизнедеятельности, выявление распространённости случаев плохого обращения и насилия над пожилыми людьми. Исследование было проведено на национальном уровне с использованием количественных и качественных методов, разных источников информации/целевых групп. Социологический опрос основывался на двух национальных репрезентативных выборках: население в возрасте от 60 лет и старше (1096 респондентов) и население в трудоспособном возрасте 20-55 лет (500 респондентов). Качественное исследование основано на 10 глубинных интервью с экспертами и трех фокус-группах с пожилыми (возраста 60 лет и старше, 38 человек). Результаты исследования позволили определить основные проблемы, с которыми сталкиваются пожилые люди в различных социальных сферах, выявить случаи дискриминации, а также выработать ряд рекомендаций по улучшению ситуации.

Ключевые слова: *пожилые люди, старение населения, уровень жизни, дискриминация, медицинские услуги, благополучие.*

JEL Classification: I19; I31; J14.

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Introduction. In the Republic of Moldova, the rapid population ageing process has been recognized as a problem of national importance that endangers the national security of the country. Thus, a set of strategic documents on the integration of population ageing issues was adopted in development policies. However, the current socio-economic situation, the insufficient financial resources for implementing concrete measures in this area, hampers the development of some economic and social conditions that could give equal opportunity for all to age in safety and dignity.

Evaluation of the standard of living and quality of life of the elderly represents an important component in researches on population ageing [1]. According to Global AgeWatch Index, in 2014, the Republic of Moldova was on 74th place of 96 countries in the annual rating of quality of life for people aged over 60 [2]. Among neighbouring countries, Moldova is exceeded by Romania (position 41) and Russia (position 65), and precede Ukraine (position 82).

Welfare *versus* ***vulnerability of the elderly in the Republic of Moldova***. The objective estimates of the welfare are important, but the living standard of the elderly may be also emphasized through the representations of individuals about their own quality of life, identification of the problems they face in their everyday life [3]. This article is based on the sociological research "Discrimination, abuse and violence against older people"[1] and proposes the analysis of the socio-economic situation of older people and determines measures for improvement.

More than half (53.8%) of the respondents affirm that their income is insufficient to cover even the basic needs, the situation is significantly different for the elderly from rural areas (57.7%) than for those from urban areas (48.6%). Covering the basic needs (food, housekeeping activities and health) is only possible for 30% of the respondents. The lack of financial difficulties is a specific reality for a very small number of old people – only 3%.

With age, the financial situation becomes more difficult, the share of the elderly who have no financial sources to cover their basic expenses is increasing (48.3% for those aged 60-64 and about 61% for those aged 80 and over). However, the reality shows a clear gender gap, the number of elderly women is exceeding the number of men and the large share of widows places elderly on the breadline, increasing their vulnerability to discrimination and different forms of abuse.

Low income is one of the most important factors that influence the level of vulnerability of the elderly, particularly the accessibility to different services, including medical (availability of financial means for moving to the district centre, purchasing medications, special care etc.), nutrition in accordance with age, fulfilling of other basic needs.

According to the self-assessment of the needs, most of the older respondents expressed their imminent need for a financial aid (63.4%), purchase of medications (51.2%) and assistance regarding obtainment of medical services (35%). At the same time, every fifth marked the need for food products, and every tenth person has indicated the need for a moral support and help in performing housekeeping activities, especially in rural areas.

Approaching the needs and necessary help for the elderly are the most sensitive topics. The most pressing issues the elderly face and the needs they have, confirmed by the interviewed experts, are firstly the financial difficulties, which deprive them of all the other needs that assure their survival (Figure 1). For the elderly, for which the only source of income is pension, the hardest and the most difficult moments are the heating costs in the cold season that can rarely be integrally paid, or with deprivation of other important needs, such as purchasing medications and nutrition. The transport, but also the lack of conditions for personal hygiene such as centralized water systems, lavatory inside the house, bathroom or shower, especially for those in rural areas, are expound as very necessary for the elderly.

It was noticed that the economic situation of the elderly generates a continuous and closed chain of their rights deprivation, including the integration and participation in social life, with obvious risks of isolation, discrimination and stigmatization.

Extending the working life is an important factor, which contributes to the maintenance of the financial independence of older people and emphasizes their potential, work experience and positive emotional state. At the same time, retirement strengthens the stereotypes about age-related changes,

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[1] ***The research was carried out in 2014, by the Centre for Demographic Research (CDR) in collaboration with Help Age International and with the financial support of UN Population Fund.***

feelings of loneliness and hopelessness (38.5%) emerge, the development of the emotional ageing accelerates, and the vulnerability of older people and social distance from other age groups is increasing.

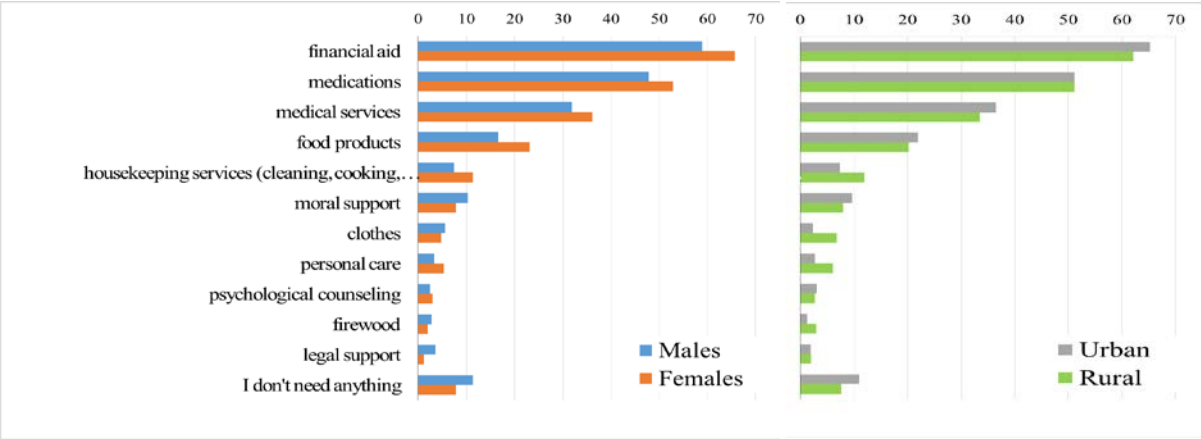

Fig. 1. Necessary assistance for the elderly (self-assessment), by sex and residence (%)
Source: Calculated by authors based on sociological study "Discrimination, abuse and violence against older people in Moldova", 2014.

Currently, there is a low rate of involvement in the economic activity of the elderly population. After reaching the retirement age, the share of employed people is reduced twice, about 21% of men and 18.4% of women.

The opportunity to remain employed after retirement is especially possible for those from urban areas and people who had a less physically and emotionally demanding job. Moreover, the results of the current study confirm the poor state of health of the elderly. A great share of people that are at the retirement age (about 40%) indicate the *worsening health* as a barrier to the continuation of their work.

The problem becomes more complex in our country's conditions, where the alternative for extending the work activity is the "passive retirement" in the family circle and housekeeping: childcare (31%), helping relatives, friends, neighbours (about 19%), and home care of ill or disabled people (approximately 6%). Many older people do not engage in activities outside the house – about 60% of older respondents, regardless of the place of residence. Although, our qualitative research has registered the significant progress on solving these issues of older people in areas where the active groups of elderly volunteers exist. The experience of other countries shows [4] a strong and positive correlation between volunteering and mental health of older people, the life satisfaction, happiness, increased self-esteem and reduced stress level [5]. Elderly describe the "post retirement" period as very stressful from both financial and psycho-emotional point of view.

Health is an essential component of the quality of life of the elderly. According to its condition, the elderly carry out their activities, live a full life and consider themselves as active members of the society. Low standards of living conditions have an influence on all the aspects of life of the elderly, including the state of health. Lack of financial means, poor nutrition, poor housing conditions, lack of access to basic hygiene conditions, as well as poor working conditions throughout life, and the lack of social organization (careless attitude towards their own health, unhealthy life styles, lack of health culture and education) – all these are the causes of poor health of the elderly.

The elderly determine the health problem as a predominant one, and the lack of financial sources to maintain it and to assure the availability of medical services have turned out to be a very sensitive topic. Individual characteristics, such as those related to age, status (training), sex etc., influence the perception of health. Less than 1/5 of the elderly assess their health as very good or good for their age, with significant differences between elderly from the cities (18.9%) and those from the villages (13.3%). With age, the share of positive assessments of health is becoming increasingly insignificant. The incidence of long-term chronic diseases and of a degree of disability is specific for at least every second interviewed elderly. Regardless of age, the share of women who face health problems (52.3%) is much higher than that registered among men (38.9%). Mobility difficulties and blood pressure issues are mentioned by the majority of the interviewed male population, and practically by every woman.

Despite the fact that pensioners benefit from free compulsory medical insurance, the existence of some problems regarding accessibility of medical services among the elderly are very important. Only 72.6% of the respondents mentioned that they received medical care when they needed it. In the top of the obstacles regarding affordability of the profile services and their outcome is the high cost of the required medicines. Thus, every third older person (35%) of those who did not receive medical assistance indicated this reason. Physical impossibility to go to the medical institutions, the distance towards them, and the high cost of transportation are the barriers mentioned by every tenth person, in case when no medical assistance was delivered at the required time or on request.

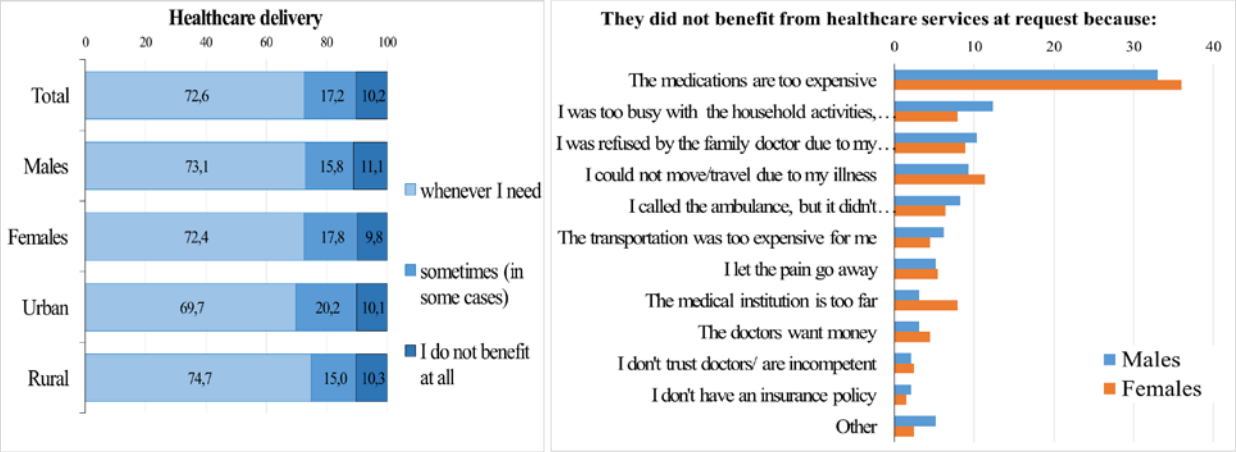

Fig. 2. Access of the elderly to healthcare services (%)

Source: Calculated by authors based on sociological study "Discrimination, abuse and violence against older people in Moldova", 2014.

Discrimination on grounds of age is a common phenomenon in medical institutions, age often influenced the person's access to medicines, treatment, diagnosis and long-term care. The existence of these situations is demonstrated by the denial to deliver services due to age. This fact was confirmed by 9.3% of victims, and in the absence of the insurance policy (about 2%). The emergency medical service has not reached its destination or timely in 7% of cases of questioned pensioners. The mistrust of doctors and the request of unofficial payments (6.3%) were indicated by the vast majority of the elderly participated at the group discussions as another reason that prevents the older population to ask for help when they need it.

According to the results of the study, for 23% of the elderly, mostly represented by dwellers from rural areas and small towns, the access to quality healthcare services is not provided due to the shortage of medical personnel, obsolete medical equipment and inadequate medical infrastructure. Another category is the elderly from large and medium cities, where the range of quality medical services is wider. The fact is that in both categories, there are many people who lack the financial means, practically every second. The problems concern the medicines that must be purchased and are expensive (only 48.1% benefit from compensated medicines), the cost of transportation to the medical centre, but also unofficial payments.

Discussions with the elderly through qualitative study outlines gaps of the compulsory health insurance system, and low flexibility of the health services intended to elderly. In general, older people express their dissatisfaction with the functioning of medical assistance service, increased costs of the medical treatment, functional inefficiency of the insurance policy and the presence of unofficial payments, discriminatory attitudes of health workers towards elderly etc.

In the context of poor conditions and standard of living of the elderly, the social assistance delivery, expressed through compensations, allowances and material aids given to the elders in need, although considered small, are usually considered as being very necessary. The most frequently support elderly received in the last 12 months preceding the research was: subsidies for medicines and medical services (24.1%), compensation for transportation (20.3%), aid for the cold period (19.2%) and material support (15.6%). The access to these forms of social protection was very different depending on the residence: those in cities benefited more and easier than the elderly in the villages.

Although a small number of the elderly benefited from community and personal (social home care) social assistance (4.4% and 3.7%, respectively), these services have played an important role for the

elderly, especially for those from rural areas. The social worker who delivers home care service is usually the first person who is called in case of necessity. However, there are situations when social services remain reluctant to the needs of older people or these are not represented in the area enough due to the lack of community social workers or a great number of beneficiaries.

The social canteens, considered as very necessary by most of the elderly who cannot afford the strictly necessary food, remain without authenticity and functionality due to their reduced mobility, and many older respondents mention their physical impossibility to reach them.

The current system of support services for the elderly relies mostly on intervention services rather than on prevention ones and it does not cover all the disadvantaged older population groups. Many pensioners do not benefit from the existing social provisions because they are not eligible according to the defined criteria.

The family remains the first pillar on which the elders can rely on, when they are in need or have a problem. More than half of the respondents (54.1%) receive the necessary support from a family member other than a spouse, and in 3 out of 10 cases, the partner provides this support. Rarely, if necessary, the elderly ask for help their neighbours (17%) and friends (6.5%), and a significant number of the elderly (over 12%) do not have someone to rely on.

Respondents' attitudes to their responsibility for the care of the elderly demonstrate the existence of similar responses among persons aged 20-55 years old and those aged 60 years and above, where 3 out of 4 people claim that the family has the leading role regarding this aspect. However, there is a high share of those convinced that responsibility for the elderly must be taken by the state. Among the young and adult respondents (aged 20 to 55), the share of followers of this idea has a higher proportion (15.2%), than among older respondents (12%). In the case of the elderly, however, the number of those who pass the care of the elderly to local public authorities is higher (about 10% compared to 3%).

Today, the contemporary families are increasingly less able to burden themselves with the elderly care, the fact which is confirmed by most older responders presented at the discussions, as well as by the interviewed experts. The causes are determined by the decrease of the number of people who form a household, the fact that children live away from their parents and their financial means are modest. Thus, 2 out of 5 elderly are not helped by their families because of the lack of economic resources, including for meeting their own needs, and 1 out of 5 – because the family members are very busy and have no time to pay attention to the elderly.

Conclusions and recommendations. Status of the elderly in Moldova is determined by the previous status and depends on several factors: education level, marital status, income, residence, position in the socio-professional structure before retirement, social status and prestige. Among the main causes of decrease of the social status of older people are the discontinuance of the work activity, low pensions, lack of other sources of income and modest help from relatives because of low-incomes, the high cost of utilities and medical care, poor adaptability to new living conditions, lack of demand for elderly on the labour market, poor health.

A complex of interrelated factors, both social and individual ones, is determining the improvement of the status of the elderly and the extension of the active ageing. In this context, it is necessary to promote active and long-term policies in economic and social fields, aimed at creating development opportunities at all stages of life, and increasing social protection and social assistance to vulnerable people.

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THE POLICY OF ECONOMIC RELATIONS BETWEEN TURKEY AND THE EUROPEAN UNION

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A Customs Union came into force on 31 December 1995. The Customs Union covers all industrial goods but does not address agriculture (except processed agricultural products), services or public procurement. Bilateral trade concessions are applied to agricultural products. In addition to providing for a common external tariff for the products covered, the Customs Union foresees that Turkey is to align to the acquis communautaire in several essential internal market areas, notably with regard to industrial standards. Following the Commission's proposal on "extending and deepening" the Customs Union, in November 1996 the Council agreed to negotiating guidelines on the liberalisation of services and public procurement between the EU and Turkey. Negotiations were, however, suspended in 2002. The main characteristic of this very dense and complex relationship is the fact that it is handled through a multitude of different modes, forums, and procedures without much consistency among them. And the difficulties encountered in the EU accession process, which is currently stalled, have tended to poison the relationship in other domains. Now, facing a number of shared challenges, the two have a major opportunity to move their relationship to a higher level by working together to deal with short- and long-term issues that are of vital importance for both. As Europe's political and economic weight declines and Turkey is consolidated as a regional power, cooperation on economic issues will be increasingly supplemented by cooperation in other areas in order to maintain a geopolitical balance in the region and limit the presence of external players.

Key words: *economic relations, economic growth, cooperation, economic colaboration, customs union, the benefits of cooperation in the region.*

Uniunea Vamală UE-Turcia a intrat în vigoare la 31 decembrie 1995. Ca urmare a propunerii Comisiei privind „extinderea și aprofundarea" Uniunii Vamale, în noiembrie 1996, Consiliul a fost de acord să negocieze orientările privind liberalizarea serviciilor și achizițiile publice între UE și Turcia. Cu toate acestea, negocierile au fost suspendate în 2002. Principala caracteristică a acestei relații foarte complexe este manipulată printr-o multitudine de moduri, forumuri și proceduri. La momentul actual, relațiile UE-Turcia se confruntă cu o serie de provocări comune, cele două ţări au oportunități majore de a transfera relația lor la un nivel superior de lucru pentru a rezolva problemele pe termen scurt și lung, care sunt de o importanță vitală pentru ambele spații.

Cuvinte-cheie: *relații economice, creştere economică, cooperare, colaborare economică, uniune vamală, beneficii ale cooperării în regiune.*

Таможенный союз ЕС-Турция вступил в силу 31 декабря 1995 года. Таможенный союз охватывает все промышленные товары, но не распространяется на продукцию сельского хозяйства, услуг и государственных закупок. Двусторонние торговые уступки применяются к сельскохозяйственной продукции. В дополнение к предоставлению общего внешнего тарифа для товаров, подпадающих, при условии, что Турция в Таможенном союзе действует, чтобы примкнет к требованиям Сообщества в нескольких ключевых областях внутреннего рынка, особенно в отношении отраслевых стандартов. По предложению Комиссии по «расширению и углублению» Таможенного союза, в ноябре 1996 года Совет согласился на переговоры по либерализации услуг и государственных закупок между ЕС и Турцией. Переговоры были приостановлены, однако в 2002 году. Главная особенность этих отношений очень насыщенны и

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сложны, однако сотрудничество будет развиваться различными способами, на форумах и процедурах, ходя без видимых подвижек между ними. И трудности в процессе вступления в ЕС, которые в настоящее время заблокированы, несколько отравили отношения и в других областях. Теперь они сталкивается с рядом общих проблем, хотя оба имеют важную возможность для продвижения их отношения на более высокий уровень вместе, чтобы решить проблемы в краткосрочном и долгосрочном периоде, которые имеют жизненно важное значение для обеих сторон. Значимость политических и экономических отношений Европы и Турция консолидируется в качестве региональных игроков, сотрудничество по экономическим вопросам будет более дополнены сотрудничеством в других областях, для того, чтобы поддерживать геополитический баланс в регионе и ограничить присутствие иностранных игроков.

Ключевые слова: *экономические отношения, экономический рост, кооперация, экономическое сотрудничество, таможенный союз, преимущества сотрудничества в регионе.*

JEL Classification: F50; F51; F60; F68; O19.

Introduction. Europe is the common house around which gathered the principles of values, standardized. As a member of the European family, Turkey has influenced not only the political, economic and socio-cultural continent, but was itself influenced by these developments. A complete analysis of the history of Europe cannot be done without taking into account the important role played by Turkey on this continent. As in the past, Turkey and other European countries destinies are interlinked. We face a future together. In this context, Turkey's EU membership is a strategic choice. Turkey's EU accession will increase the size of the European internal market and strengthen the EU's competitiveness relative capacity in the global economy. Turkey will be a real asset for the EU, with its geostrategic position, its economic potential, its educated population, dynamic and multidimensional foreign policy. Turkey's membership will add value to the EU, and will not be a burden. Advancing this relationship with the ultimate goal of accession – is of an strategic importance for Turkey and the EU.

Turkey continues to progress with decisive steps to become a full member. Development with democracy and human rights, institutionalization of free market economy and establishing standards in all areas of modern life are among the fundamental dynamics of policy strategies vis-à-vis the EU. Relations between Turkey and EU began by association agreements under the Ankara's agreement, which was signed with the European Economic Community on 12 of September 1963 and entered into force on December 1, 1964.

Ankara's agreement foresees three steps for Turkey's integration into the EU: a preparatory stage, a transitional stage and a final stage. The establishment of the Customs Union has been scheduled for the end of the transitional phase. At the end of the preparatory phase under the agreement, provisions and obligations of the parties during the transition phase were determined Additional Protocol signed on 13 of November 1970 and entered into force in 1973. The Ankara's agreement also explicitly stated that the partnership arrangements world facilitate Turkey's EU accession.

Customs Union:

After completion of the transition phase, the Customs Union is an important step for Turkey's integration into the EU, and came into force on the first of January 1996.

The level of integration Turkey-EU with the Customs Union reached an advanced point, the next effort is the advancement of Turkey Accession to the objective indicated in the Ankara's agreement (article 28). The Customs Union continues to be a fundamental dimension of our relations with the EU. The main organs of the Association consist of the Association Council, the Association Committee, the Customs Cooperation Committee and the Joint Customs Cooperation Committee.

On the other hand, bilateral free trade agreements have gradually spread worldwide and deepening their content is in order to cover all aspects of commerce. Similar free trade agreements have been concluded by the EU with the countries such as South Korea, Canada and Singapore. Further strengthen trade relations between Turkey and the EU has become a necessity. Considering all the experience gained in the customs union, we note the existence of positive effects regarding the harmonization of legislation that contained a candidate country for accession to the EU, the improving of the business relations between Turkey and EU, as some of the most important trading partners. We also believe that such a development will bring mutual economic benefits for both sides, will also accelerate the process of Turkey's accession to the EU.

In this spirit, Turkey will continue the negotiations with the European Commission on methods to follow to update the customs union and the trade based on mutual benefit.

The summit from the Helsinki, the recording of the "candidate status" and the opening of the accession negotiations:

A new period began in the relations between Turkey and EU, with the registration of the "candidate status" at the Summit of the Heads of the State and the government of the EU in Helsinki, held on 10-11 of December 1999. At the summit of the heads of the state and the government of the EU which took place on the 17 of December 2004, in Brussels, the decisions took previously in Helsinki in 1999 was reaffirmed by the Council, noting that Turkey sufficiently fulfils the political criteria, being decided to negotiate the accession of Turkey on the 3 of October 2005.

The negotiations process:

In the accession process, the negotiations have been conducted on 14 chapters till now ("4-Free Movement of Capital", "6-Company law", "7-Intellectual Property", "10-Information society and media", "12-Policy veterinary, phytosanitary and food safety", "16-Taxation", "18-Statistics", "20-Policy enterprise and industrial policy", "22-Regional Policy and coordination of structural instruments", "21-Networks Trans", "25-Science and research", "27-Media", "28-Consumer and health", "32-Financial control").

An official statement was made stating explicitly that Turkey did not recognize "the Greek Cypriot administration of Southern Cyprus" by signing the Additional Protocol.

With the European Councils decision from the December 2006, the negotiations on the eight chapters have not been achieved ("1-Free movement of goods", "3-Establishing free society of performance", "9-Financial Services", "11-Agriculture and rural development", "13-Fishing", "14-Transport policy", "29-Customs Union" and "30-External relations") and other items, which Turkey has not assumed any responsibility.

From the other hand, France does not agree to start the negotiations only with 5 chapters ("11-Agriculture and rural development" (one of the eight chapters are blocked by the Protocol Association) "17-Economic and Monetary Policy", "22-Regional policy and structural instruments coordination", "33-Financial and budgetary provisions", "34-Institutions"), it seems directly related to the accession process. Then France lifted the blockade in February 2013. This chapter was opened for negotiations in the Intergovernmental Conference in Brussels on the 5 of November 2013 by Mr. Hollande, the French president, who said during his visit in Turkey on 27 to 28 of January 2014, that France is open to the negotiation process.

Moreover, following the European Council meeting in December 2009, the Greek Cypriot administration of Southern Cyprus unilaterally declared that it would block the opening of six chapters ("2-Free movement of workers", "15-Energy", "23-Judiciary and fundamental rights", "24-Justice, Freedom and Security", "26-Education and Culture", "31-Foreign, Security and Defence Policy").

In fact, to continue negotiations on chapters only on the basis of the acquits is an EU commitment. Both the EU institutional contacts and contacts with representatives of the Member States, stressed that the technical negotiation process should not be slowed due to political reasons and are made ongoing efforts to revive the process of negotiations.

The new EU Strategy for Turkey and the Action Plan for EU:

The reform efforts are conducted in parallel with the expectations of the Turkish people and the harmonization of working with the acquis Community. In these sense, in September 2014 "The new EU Strategy for Turkey", announced that aims to establish new communication channels between Turkey and the EU to accelerate the reform process. This strategy was based on the determination, durability and efficiency on three principles: "political reform", "socio-economic transformation process", "EU communication strategy".

The national dimension of the communication strategy of the EU is ready to provide the support in the formation of public opinion regarding the relations between Turkey and the EU for Turkey's EU membership; in October 2014 it was announced that there is intended to build the confidence of the Turkish people in the process of EU membership as a project of modernization and democratization, bringing living standards in all areas and strengthening support for reforms. The external dimension of the communication strategy is to ensure the consistency facts and the perception of Turkey by the European citizens, to restore the mutual trust and to demonstrate the confidence in their forces in the EU accession process.

The national plan for the EU membership was based on that strategy. This action plan is like a roadmap outlining the priorities and the actions to adopt for maintaining and to strengthen the political reforms in Turkey and the transforming of socio-economic existence. The first phase of the action plan covering work was performed in the period of November 2014-June 2015. The second phase will be carried out during the period of 2015-2019.

Along with the monitoring reports on each candidate and potential candidates, the Commission also published a strategy document for enlargement, including the assessment enlargement agenda.

The Positive Agenda:

The European Commission has proposed to develop a positive agenda between Turkey and the EU; in its strategy of expending, the European Commission identified a range of areas, elements of "intensifying dialogue and cooperation on political reforms", "ease visa", "Mobility and Migration", "energy", "fighting terrorism", "efficient participation of Turkey in Community programs", "cities twinning", "customs union and trade" and "support efforts and harmonization alignment to the acquis community including chapters for accession negotiations". This proposal was adopted by Turkey, providing that it is a tool for supporting the negotiation process with the EU.

In the framework of Agenda, the working groups have been established for eight chapters ("6-Company law", "10-Information society and media", "18-Statistics", "23-The judiciary and fundamental rights", "24-Justice, freedom and security", "28-Consumer protection and health" and "32-Financial control").

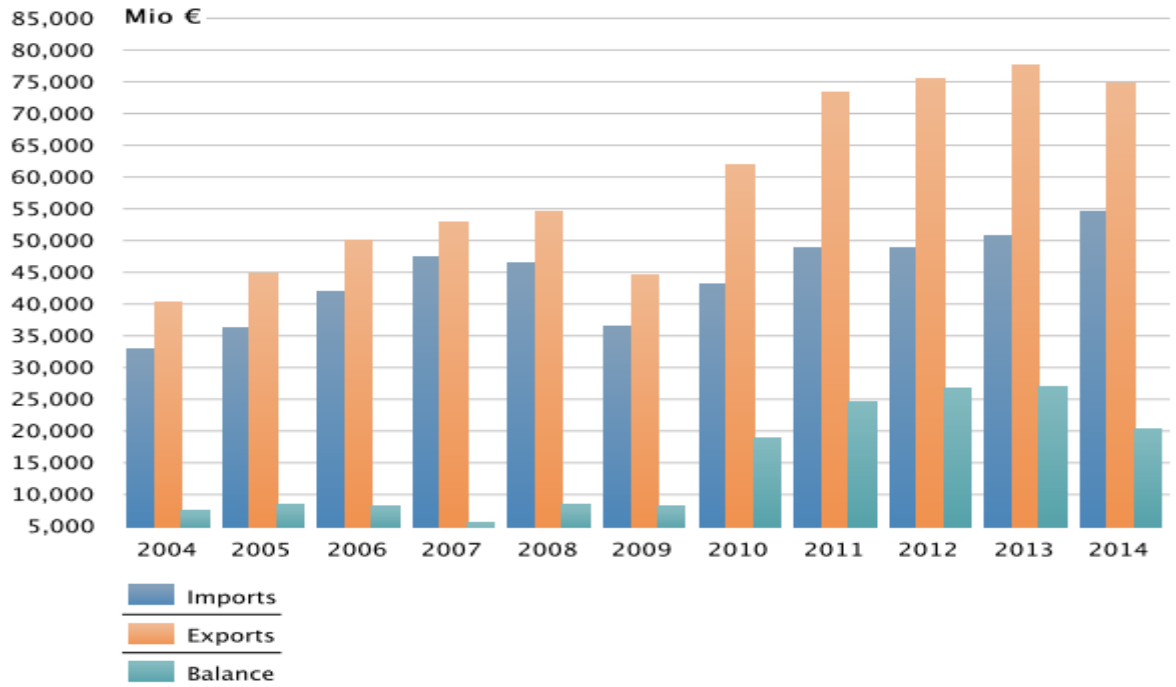

Fig. 1. Total goods: EU Trade flows and balance, annual data 2005-2014

Source: Based on http: //trade .ec.europa .eu/doclib/docs/2006/september/tradoc_113456.pdf

The current state of economic and trade relations:

Turkey is the sixth largest economy in Europe. At the same time, Turkey has vast trade relations with the EU. EU is the largest trading and investment partner. About 40% of Turkey's exteriors and trade was conducted with the EU in 2014. These figures have increased by 42% in the first half of 2015. The 64% of FDI in Turkey comes from the EU.

Conclusions. Turkey's contributions to EU operations and missions

Turkey contributes to the EU civilian and military operations. In this context, Turkey's contribution is due to its status as a candidate for EU membership, but also as an element of its foreign policy to support multilateral international and the regional peace and stability. Turkey has contributed to the new EU operations and missions in total so far.

The accord with the EU will signify that the EU has agreed to update the customs union as requested by Turkey. Negotiations between the EU and Turkey on revising the customs union will commence at the beginning of 2016. These negotiations are expected to be finalized in six months, before the TTIP goes into effect.

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ECONOMIC AND ENERGETICAL ANALYSIS OF IMPROVED WASTE UTILIZATION PLASMA TECHNOLOGY

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Purpose. Energy and economic evaluation of the improved plasma waste utilization technological process, as well as an expediency substantiation of the use of improved plasma technology by comparing its energy consumption with other thermal methods of utilization. Methodology. Analysis of existing modern and advanced methods of waste management and its impact on environmental safety. Considering of energy and monetary costs to implement two different waste management technologies. Results. Studies have shown regular gasification ensure greater heating value due to differences, a significant amount of nitrogen than for plasma gasification. From the point of view of minimizing energy and monetary costs and environmental safety more promising is to offer advanced technology for plasma waste. To carry out the energy assessment of the appropriateness of the considered technologies-comparative calculation was carried out at the standard conditions. This is because in the processing of waste produced useful products, such as liquefied methane, synthetic gas (94% methane) and a fuel gas for heating, suitable for sale that provides cost-effectiveness of this technology. Originality. Shown and evaluated ecological and economic efficiency of proposed improved plasma waste utilization technology compared with other thermal techniques. Practical value. Considered and grounded of energy and monetary costs to implement two different waste management technologies, namely ordinary gasification and using plasma generators. Proposed plasma waste utilization technology allows to obtain useful products, such as liquefied methane, synthetic gas and a fuel gas for heating, which are suitable for sale. Plant for improved plasma waste utilization technological process allows to compensate the daily and seasonal electricity and heat consumption fluctuations by allowing the storage of obtained fuel products.

Key words: *waste, pyrolysis, gasification, plasma utilization, synthesis-gas, energy parameters, economic parameters.*

Scopul. Evaluarea energetică și economică a procesului de eliminare a deșeurilor de plasmă, precum și argumentele pentru utilizarea tehnologiei cu plasmă prin compararea energiei și indicatorilor economici cu alte metode termice de eliminare. Metode. Analiza metodelor moderne existente de gestionare a deșeurilor și impactul acestora asupra mediului ambiant. Evaluarea cheltuielilor energetice și financiare pentru a introduce două tehnologii diferite de gestionare a deșeurilor. Rezultate. Studiile au arătat că gazificarea regulată asigură o putere mai mare calorifică datorită prezenței unor cantități semnificative de azot decât gazificarea cu plasmă. Din punctul de vedere al energiei și al minimizării costurilor materiale și al siguranței mediului, prezintă interes tehnologia modernă a deșeurilor de plasmă, care este mai reușită pentru viitor. Cu scopul de a realiza evaluarea energetică a caracterului adecvat al tehnologiilor avansate, a fost făcut un calcul comparativ conform condițiilor standarde, ceea ce se explică prin faptul că în procesul de prelucrare a deșeurilor se obțin produse utile, cum ar fi: metan lichefiat, gaz sintetic (94% metan) și gaz combustibil pentru încălzire, potrivite pentru implementare, care asigură eficacitate economică acestei tehnologii. Noutatea științifică constă în evaluarea eficienței ecologice și economice a utilizării tehnologiei avansate cu plasmă în comparație cu alte tehnologii termice. Semnificația practică. Au fost estimate și argumentate costurile energetice și materialele pentru realizarea a două tehnologii diferite de gestionare a deșeurilor și, anume, gazificarea convențională și utilizarea generatorului de plasmă. Tehnologia propusă a deșeurilor de plasmă oferă o destinație-țintă: metan lichefiat, gaz sintetic (94% metan) și gaz combustibil pentru încălzire, necesare pentru aplicare. Instalarea tehnologiei avansate a deșeurilor de plasmă permite echilibrarea consumului zilnic și sezonier de energie electrică și termică, datorită asigurării capacității de depozitare a produselor obținute de combustibil.

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Cuvinte-cheie: *deşeuri, piroliză, gazificare, utilizare de plasmă, gaz sintetic, indicatori energetici, indicatori economici.*

Цель. Энергетическая и экономическая оценка технологического процесса плазменной утилизации отходов, а также обоснование целесообразности применения усовершенствованной плазменной технологии путем сравнения энергетических и экономических показателей с другими термическими методами утилизации. Методы. Анализ существующих современных и усовершенствованных методов управления отходами и их влиянием на безопасность окружающей среды. Оценка энергетических и денежных затрат на внедрение двух разных технологий управления отходами. Результаты. Исследования показали, обычная газификация обеспечила большую теплотворную способность вследствие наличия значительного количества азота, чем при плазменной газификации. С точки зрения минимизации энергетических и материальных затрат и обеспечения экологической безопасности более перспективной является предложенная усовершенствованная технология плазменной утилизации отходов. Для проведения энергетической оценки целесообразности применения рассматриваемых технологий сравнительный расчет проводился из стандартных условий. Это объясняется тем, что в процессе обработки отходов получают полезные продукты, такие как сжиженный метан, синтетический газ (94% метана) и топливный газ для отопления, пригодные для реализации, что обеспечивает экономическую эффективность этой технологии. Научная новизна. Показана и оценена экологическая и экономическая эффективность предложенной усовершенствованной плазменной технологии утилизации отходов в сравнении с другими термическими технологиями. Практическое значение. Оценена и обоснована энергетические и материальные затраты на реализацию двух различных технологий управления отходами, а именно обычная газификация и с использованием генератора плазмы. Предложенная технология плазменной утилизации отходов позволяет получить продукцию целевого назначения, сжиженный метан, синтетический газ (94% метана) и топливный газ для отопления, пригодные для реализации. Установка усовершенствованной технологии плазменной утилизации отходов позволяет компенсировать суточные и сезонные неравномерности потребления электроэнергии и тепла за счет обеспечения возможности хранения полученных топливных продуктов.

Ключевые слова: *отходы, пиролиз, газификация, плазменная утилизация, синтез-газ, энергетические показатели, экономические показатели.*

JEL Classification: L0; L1; Q40; Q0.

Introduction. Wastes are the of environmental hazards formation sources, and therefore must be utilized. Their quantity is large and the choice of technology utilization is a responsible stage. Firstly, it is connected by that the implementation of some of the utilization technologies can reduce the level of ecological safety, which is unacceptable. Second, the selected utilization technology may be energy or economically effective. Countries that intend to avoid the landfilling of waste unsuitable for recycling, give preference to thermal methods for decontamination and disposal, such as incineration, pyrolysis and gasification.

Their use allows obtaining synthesis gas, in which structure except for the carbon monoxide (CO) and hydrogen (H_2), there are components such as carbon dioxide (CO_2), nitrogen oxides (NO_x), a small amount of methane (CH_4), ethylene (C_2H_4) and etc. The obtained low-calorie gas is used for direct combustion to produce heat for domestic needs and generate electricity. Thus, the use of thermal processes waste utilization reduces their quantity and allows to obtain useful products in the form of electricity and heat. At the same time, the plants implementing these methods of waste utilization and recycling has not ensure ecological safety, leading to the need for additional processing exhaust gases and solid residues (dross).

An alternative to the above manner is a plasma technology, which is based in the decomposition of high-toxic substances (dioxins and furans) into simpler molecules at extremely high temperatures and in the absence of free oxygen. At the plasma jet temperature completely destroyed any organic and biological materials, assured destroyed most toxic materials are melted and vaporized most refractory inorganic compounds. Plasma gasification process provides an ecologically pure waste utilization without the formation of tar and dioxins. The products of plasma gasification are a high-calorie combustible gas and a neutral solid residue as a glassy slag that does not require additional treatment.

Analysis of published data and problem statement

Experience in the use of plasma technology for the processing and decontamination of solid municipal, industrial and medical waste is described by many authors, including those in S.V. Petrov, S.G. Bondarenko, E.G. Didyk, G.S. Marinsky, A.V. Chernets, V.N. Korzhik, M.N. Bernadiner, A.L. Mosse, V.V. Savchin, A.V. Lozhechnik, Pragnesh N Dave, Asim Joshi, Hua Zhang, Liming Shao. Waste utilization plasma technology involves large amounts of electricity, in contrast to the high temperature pyrolysis or gasification processes, that are used as fuel obtained gas. From the authors A.V. Artemov, A.V. Pereslavtsev, Y. Krutikov, V.V. Vambol, V.N. Kobrin, N.V. Nechiporuk, Nickolas J. Themelis, Marco J. Castaldi denoted that the main factors that hinder the widespread industrial use of plasma technology for the processing of waste are not large enough resource of low-temperature plasma generators, as well as the fact that the plasma arc discharge is a relatively local source of heating.

On the other hand, it was proved experimentally that the synthesis gas produced during the plasma technology utilizes more calories than in conventional gasification. In the article V.M. Batenin, V.I. Kovbasyuk, L.G. Kretova, Y.V. Medvedev compared the energy efficiency of processes of plasma and autothermal gasification at 1400 K for waste utilization. It is shown that an additional energy output from the synthesis gas, is achieved through the use of plasma generators, with the existing methods of energy conversion can't cover the real costs of consumed electricity.

In [1], [2], the authors proposed an advanced technology of plasma waste disposal, which includes the following processes: thermochemical gasification, plasma post-combustion of the resulting gases, their sharp cooling, preliminary cleaning, methanation, final purification of gases and cryogenic separation of synthesis gas for fuel products.

Object, purpose and problem of research

Object of research – energy and economic indicators of improved plasma waste utilization technology. Purpose of research is energy and economic evaluation of plasma waste utilization technologic process and also grounding of application expediency of improved plasma technology by the way of comparison of its energy and economic indicators with other thermal waste utilization methods. For achieving of setting research purpose solved the following problems:

- evaluation of plasma waste utilization application energy efficiency from point of view of its energy costs minimization in comparison with other thermal methods;
- evaluation of plasma waste utilization application economic expediency from point of view of its recoupment period in comparison with other technologies;
- evaluation of usability of fuel products obtained during utilization process for energy and monetary costs reducing.

1. Material and results of energy and economic indicators of improved plasma waste utilization technology researching.

1.1. Evaluation of energy indicators. It is proposed to carry out a comparative assessment of waste utilization energy costs for the conventional gasification technology ("Technology 1"), and improved plasma utilization technology ("Technology 2"). In the improved plasma waste utilization technology [1] the reactor made up of two chambers, one of which is the gasification reactor, and the other – the plasma reactor, Figure 1. In the gasificator carried out the process of high temperature waste gasification and then the its resulting products – steam-gas mixture (synthesis gas) and slag – are processed in the plasma jet. Such stepwise waste treatment reduces energy consumption, due to the fact that in a plasma reactor there are not processed all raw materials, but only a portion (about 20%).

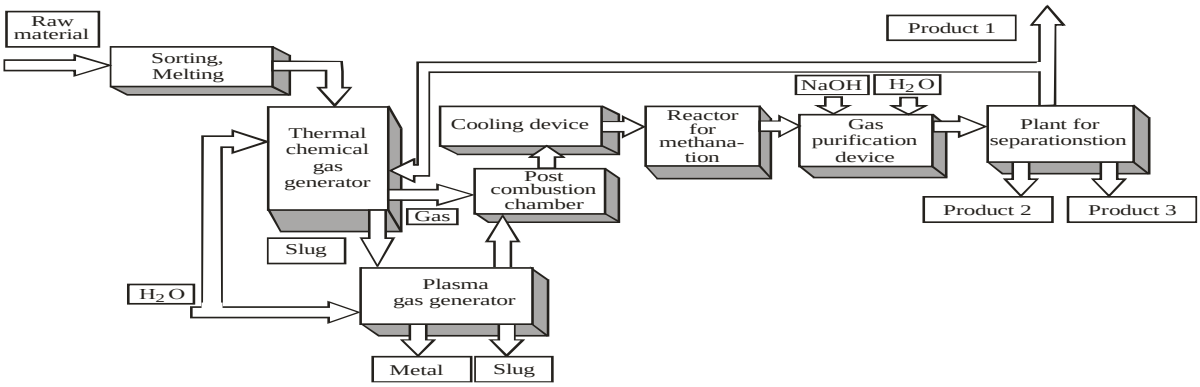

Fig. 1. Scheme of waste utilization plant

Source: [1].

During afterburning process in a plasma reactor, the slag is converted into an ecologically safe glassy mass and synthesis gas contains mainly carbon monoxide and hydrogen. This gas can be used as a fuel instead of methane for heating and maintaining the gasification process. The “Technology 2” also suggests further methane-enriching of obtained synthesis gas by implementing the process of methanation [3], [4] and further its purification and low-temperature separation to produce fuel products suitable for sale [5]. Thus, the products of waste processing by “Technology 2” in contrast to “Technology 1” are, in addition to heat and electricity, liquefied or gaseous methane and synthesis gas containing methane, to compensate unevenness daily and annual energy consumption by stockpiling.

To carry out the energy assessment of the appropriateness of “Technology 2” a comparative calculation was made at the standard conditions, and namely has been chosen the most typical variant and type of waste – processing of municipal solid waste with productivity of 1.6 tons/day (66.8 kg/h, 529 t/year). Initial data and results of comparative calculations are presented in Table 1.

Table 1

Comparing evaluation of Technologies by amount of produced energy

Indicators	**Technology 1**	**Technology 2**
Amount of raw materials kg/hour	66.80	66.80
Amount of raw materials tons/day	1.60	1.60
Amount of raw materials tons/year	529.06	529.06
Yield of products per hour		
methane liquefied, kg/day		16.80
synthetic gas (94% methane), kg/hour		6.20
fuel gas for heating, kg/hour	60	37.10
slug, kg/hour	6.8	6.68
Yield of products per hour (330 days)		
methane liquefied, tons/year		133.06
synthetic gas (94% methane), tons/year		49.10
fuel gas for heating, tons/year	380.16	235.07
Composition, %		
N_2	3	20.6
CH_4	11	0.1
H_2	31	31.14
CO	23	48.16
C_2H_4	4	
CO_2	28	
Net calorific value, kJ/м^3	12584	9467
density, kg/м^3	0.96	0.827
Net calorific value, kJ/kg	12081	7829
Net calorific value, kW·h/kg	3.36	2.17
Efficiency factor of steam generator	0.9	0.9
Heat energy, kW·h/h	181.21	72.62
Heat energy, kW·h/year	1435180	575123
Efficiency factor of steam cycle	0.3200	0.3200
Electric energy in steam cycle, kW·h/year	459258	184039
or Efficiency factor of gas turbine cycle	0.45	0.45
Electric energy in gas turbine cycle, kW·h/year	645831	258805
slug, tons/year	53.86	52.91
Recalculation to 1 tons of raw materials		
Products tons per 1 ton of raw materials		
methane liquefied, tons/ton of raw		0.25
synthetic gas (94% methane), tons/ton of raw		0.09
fuel gas for heating, tons/ton of raw		0.44
Heat energy, kW·h/ton of raw	2713	1087
Electric energy in gas turbine cycle, kW·h/ton of raw	868.07	347.86
or **Electric energy in gas turbine cycle**, kW·h/ton of raw	1220.72	489.18
slug, tons/ton of raw	0.10	0.10

Source: [3, 4].

As a result, waste disposal by "Technology 1" is formed of 60 kg/h of fuel gas and 6.8 kg/h of slag. The products of this technology are heat or electricity. When implementing the "Technology 2" we obtain the following products: liquefied or gaseous methane at a pressure of 25 MPa – 16,8 kg/day, liquefied or gaseous synthesis gas (94% methane) – 6.2 kg/h, the fuel gas – 37.1 kg/h, slag – 6.8 kg/h.

To compare the two technologies the amount of heat we expressed in an amount of equivalent electricity. To determine the amount of electricity and heat, which can be obtained from the fuel gas, it is necessary to set the calorific value which is determined by the composition of the gas. For "Technology 1" typical composition of the synthesis gas which is produced during the gasification of municipal solid waste includes components: N_2 – 3%, CH_4 – 11%, H_2 – 31%, CO – 23%, C_2H_4 – 4%, CO_2 – 28%. The "Technology 2" accepted the worst scenario, when as a plasma gas used air, because in this case formed much amount of nitrogen which is ballasted fuel gas and reduce its heating value. More appropriate variant is the use of water vapor because in this case nitrogen and its oxides virtually absent. Composition of fuel gas obtained by "Technology 2" after the separation of useful product in the form of methane and synthesis-gas: N_2 – 20,6%, CH_4 – 0.1%, H_2 – 31,14%, CO – 48,16%. Net calorific value of the fuel additive function is a defined as the amount of calorific values of combustible components, constituting the fuel:

$$Q_n = Q_n^{CH_4} \cdot \mathrm{r}^{CH_4} + Q_n^{H_2} \cdot \mathrm{r}^{H_2} + Q_n^{CO} \cdot \mathrm{r}^{CO} + Q_n^{C_2H_4} \cdot \mathrm{r}^{C_2H_4},$$

where: Q_n^i – net calorific value of the *i*-th component; r^i – volume fraction of the *i*-th component.

Net calorific value of 1 kg of fuel is equal:

$$Q_{nm} = Q_n / \rho,$$

where: ρ – density of fuel that equal to amount of density portions of fuel components. Their values are given in Table 1.

The calculation results show that the net calorific value of gas obtained by "Technology 1" is 12584 kJ/m^3 (12081 kJ/kg), and obtained by "Technology 2" – 9467 kJ/m^3 (7829 kJ/kg). Conventional gasification provide more calorific value due to the presence of significant amounts of nitrogen in the plasma gasification process.

Fuel gas is sent to a steam generator for burning in the combustion chamber and further to the turbine to produce electricity. Energy comparison is made of the equivalent number of electric power produced by the fuel gas. We consider production of electricity in the steam cycle and at direct fuel combustion using a gas turbine. In the calculation of the steam cycle is accepted that the efficiency factor of the steam generator is equal to 90%, the efficiency factor of the steam cycle is 32%, then the amount of obtained of electricity is given by follow formula:

$$E_{EP} = \mathrm{Q_n} \cdot \eta_{SG} \cdot \eta_{\mathrm{SC}},$$

where: $\mathrm{Q_n}$ – net calorific value of fuel (synthesis) gas; η_{SG} – efficiency factor of steam generator; η_{SC} – efficiency factor of steam cycle.

Upon receipt of electric power on gas turbine plant it is assumed that thermal energy loss is 10%, and the efficiency of the gas turbine plant is 50%. The amount of obtained electricity is equal to:

$$E_{EP} = 0{,}9\,\mathrm{Q_n} \cdot \eta_{GTC},$$

where: η_{GTC} – efficiency factor of gas turbine cycle.

Calculations showed that the electricity produced in "Technology 1" in the steam cycle amounts to 868 kW·h/ton of raw materials, in a gas turbine cycle – 1221 kW·h/ton of raw materials. In the "Technology 2" electricity amounts to – 348 kW·h/ton of raw materials and 489 kW·h/ton of raw material respectively.

1.2. Evaluation of economic indicators. Products of waste utilization by "Technology 1" are electricity and for "Technology 2" – electricity, liquefied methane and liquefied synthesis gas. The wholesale price of the products obtained was chosen based on the prices listed in the Internet resources. The price of products for technology 1 is determined by the cost of electricity and equivalent amounts to $ 0.11 per 1 kW/h for 2 technology – accepted the same price for all products – $ 400 per ton. In addition to both technologies have a solid residue – slag.

The total annual income we define as the sum of products of product price and the quantity of the produced product of this denomination per ton of raw material. All calculations are carried out in US

dollars, and assess the effectiveness per ton of processed raw materials. When assessing the cost of electricity based on the received steam-gas cycle because it gives less income than the gas turbine cycle. In addition, income includes revenues from the payment of municipal services for waste treatment. Then, the total annual income of "Technology 1" will be $ 84,961, and in "Technology 2" – 127,550 $. The increase in annual income is ensured by an additional product – liquid methane.

Plants made for the implementation of "Technology 1" and "Technology 2" are different first of all by capital investment. Plant for "Technology 2" has a larger capital investments than for "Technology 1". This is attributed with presences in the plant for implementing "Technology 2" two additional blocks: for methanation and for gas separation. Furthermore, plasma generators require powerful power sources and control system. The results of calculations of profit and payback period of plants using both technologies are presented in Table 2. The results of calculations (columns 2 and 3 of Table 2) are shown taking into account the capital investments required for the manufacture of a particular plant with setting performance in processed raw material. Capital investments of serial processing plant waste using plasma was determined by compiling a cost calculations based on current prices for completing parts, manufacturing of non-standard equipment, salaries and other expenses in view of VAT. To plant for conventional gasification to produce synthesis gas for power generation capital investments accepted by 1.5 times smaller. Accordingly, the construction and assembly works and pre-production costs are accepted by value in 2 times more, as associated with a lot of equipment.

Total capital investment in the use of "Technology 1" amount to 108,000, "Technology 2" – 176,000 $, that 1.63 times greater. Subjects to amortization cost are of equipment and construction and installation works.

Table 2

Compurgation of economic indicators for two Technologies

Indicators	**Technology 1**	**Technology 2**	**Technology 1**	**Technology 2**
1	**2**	**3**	**4**	**5**
Product wholesale price				
methane liquefied, $/ton of raw		400,00		400,00
synthetic gas liquefied (94% methane), $/ton of raw		400,00		400,00
electricity, $/kW·h	0,11	0,11	0,11	0,11
slug, $/ton of raw	1,00	1,00	1,00	1,00
Product quantity				
methane liquefied, $/ton of raw		100,60		100,60
synthetic gas liquefied (94% methane), $/ton of raw		37,13		37,13
electricity, $/ton of raw (steam-gas cycle)	95,49	38,26	95,49	38,26
or electricity, $/ton of raw (gas turbine cycle)	134,28	53,81	134,28	53,81
slug, $/ton of raw	0,10	0,10	0,10	0,10
metal, $/ton of raw		0,00		0,00
Proceeds of waste treatment, $/ton of raw	65,00	65,00	65,00	65,00
Income of products sale, $/ton of raw	160,59	241,09	160,59	241,09
Total annual income, $	84961	127550	84961	127550
Capital investments				
cost of equipment, 1000 $	80	120,00	31,74	40,63
construction and installation works, 1000 $	16	32,00	16	32,00
pre-production costs, 1000 $	12	24,00	12	24,00
Total capital investments, 1000 $	108,00	176,00	59,74	96,63
subject to amortization, 1000 $	96,00	152,00	47,74	72,63
Operational costs, 1000 $				
amortization expense (10%), 1000 $	9,60	15,20	4,77	7,26
capital repairs (5%), 1000 $	4,80	7,60	2,39	3,63
current repair (1,6%), 1000 $	1,54	2,43	0,76	1,16

Indicators	Technology 1	Technology 2	Technology 1	Technology 2
1	2	3	4	5
Electricity consumption				
plasma generators, kW·h/ton		240,00		240,00
separation bloc and other consumers, kW·h/ton	50	246,00	50	246,00
Sum of consumption electricity, kW·h/ton	50,00	486,00	50,00	486,00
Electricity tariff, $/kW·h	0,11	0,11	0,11	0,11
Electricity costs, 1000 $	2,91	28,28	2,91	28,28
Salaries, 1000 $	36,00	36,00	36,00	36,00
Accruals for salaries (37,5%), 1000 $	13,50	13,50	13,50	13,50
Additional costs, 1000 $, *including:*	4,0	4,0	4,0	4,0
innovation fund, 1000 $	1,3	1,3	1,3	1,3
allocations for road maintenance, 1000 $	1,2	1,2	1,2	1,2
other, 1000 $	1,5	1,5	1,5	1,5
Total operational costs, 1000 $	72,3	107,0	64,3	93,8
Profit, $/ton of raw	12615,0	20534,5	20625,6	33709,7
Recoupment, year	8,6	8,6	2,9	2,9

Source: [3, 4].

Operating expenses include: depreciation charges, 10% of the capital investments subject to amortization, the cost of capital repairs – 5%, costs of minor repairs – 1.6%, the cost of electricity. Electricity consumption in the use of "Technology 2" is much larger. This takes into account the power consumption of the plasma generators, gas separation unit and other consumers. In the "Technology 2" of plasma generators electricity consumption is accepted on the basis of experimental data for plants of "Europlasma" – 240 kW·h/ton of raw material.

Electricity consumption in the separation unit together with other consumers (the plasma gas compressor) is determined on the basis of calculation and amounted to 246 kW·h/ton of raw material. The total electricity power consumption is about 486 kW·h/ton of raw material. In the "Technology 1" power consumption assumed to be equal 50 kW·h/ton of raw material, which is almost 10 times less. Accordingly, the cost of electricity is also 10 times less than in plasma process.

Salaries accepted the same for both technologies. Maintenance staff consists of 6 people, working for 12 months with an average salary of 500 $ per month. Accruals for salaries is 37.5% in both cases. Additional costs associated with payments to the Innovation Fund, the cost of roads maintaining and other costs taken the same.

Total operating expenses amounted to 72,300 $ for "Technology 1" and 107,000 $ for "Technology 2". Thus, capital investment and operating costs for the implementation of "Technology 2" (plasma technology) significantly higher than for the "Technology 1" (conventional gasification).

Profit *P* is calculated by the formula:

$$P = D - E,$$

where: D – year profit; E – maintain costs.

The payback period is calculated by the formula:

$$T = \text{КВ}_{\text{o}} / \text{P},$$

where: КВ_{o} – total investment; *P* – profit.

Comparison of the two techniques indicates that in a conventional gasification "Technology 1" profit is $ 12615, in "Technology 2" – 20,534.5 $, which is 1.6 times higher. Payback period, calculated according to the above formula, is 8.6 years.

To verify the obtained results carried out additional calculations of economic indicators (columns 4 and 5, Table 2). In this case, the assessment of capital investments made on the basis of Nickolas J. Themelis, Marco J. Castaldi, according to which the capital investment for a conventional gasification technology is 60 $/ton of raw materials and for plasma technology – 96.63 $/ton of raw material, which is 1.6 times higher compared with a conventional gasification technology, and 1.8 times less than that taken earlier for plasma technology. Total investments were lower than in the first case, since it does not take into account the increase in their performance decreases. All other payments are made in accordance with the above data and formulas. Payback period in this case amounted to 2.9 years.

Conclusions:

1. Based on analysis of research in this field shows the ecological efficiency of the plasma waste utilization technology as compared with other thermal techniques.
2. The proposed improved plasma waste utilization technology more promising from the viewpoint of minimizing energy consumption, due to the fact that in a plasma reactor there are processed not all raw materials but only part of it (20%).
3. When implementing improved plasma waste utilization technology, quantity of received electric power is less than “Technology 1”. However, during the waste treatment by “Technology 2”, unlike “Technology 1”, the useful products, such as liquefied methane, synthetic gas (94% methane) and fuel for heating gas suitable for sale.
4. The calculation results showed that the payback period is the same in both cases, however, the profit in the implementation of improved plasma waste utilization technology is higher due to producing fuel products.
5. Plant for improved plasma waste utilization technology allows to compensate the daily and seasonal fluctuations of electricity and heat consumption by creating fuel products suitable for storage and subsequent implementation.

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INCLUSION OF CHILDREN WITH SPECIAL EDUCATIONAL NEEDS IN REGULAR SCHOOLS: STUDENTS ATTITUDES AND PERCEPTIONS

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The Republic of Moldova started the process of deinstitutionalization of children with disabilities/and special educational needs and their inclusion in biological families and mainstream community based services. Alongside with the deinstitutionalization, inclusion of children with special educational needs in regular community schools became a strategic direction of the educational policies in Moldova.

In 2014, the Alliance of NGOs in the field of Social Protection of Family and Child conducted a research on assessment of inclusive education models implemented in pilot schools with the aim to identify positive practices, learned lessons and challenges in developing policies in the field of evidence-based education[2] *The research was conducted in 20 pilot schools from 12 counties. There were interviewed 200 teachers, 20 school managers, 360 students (162 pupils with SEN, 112 students studying in classes with children with SEN and 86 children studying in classes with no students having SEN). 10 focus group discussions with caregivers, students, teachers, parents (all in total 100 participants) and 6 interviews with the general directorates of education and mayors were conducted.*

The article is focused on comparative analysis of perceptions, attitudes and behaviors of students with SEN and typical students regarding the inclusion of children with SEN in regular schools. The author concluded that the implementation of inclusive education resulted in rather positive changes in respective schools: provision with materials, modern devices, improvement of teaching quality and methods, change in the behaviors of children with SEN and in typical children; the typical children have positive attitudes and perceptions regarding the inclusion of children with SEN in their regular community schools; the level of school satisfaction of both: children with SEN and typical children is pretty high; the social and learning environment in pilot schools is friendly and started to be adapted to children individual needs; the both: children with SEN and typical children have high level of self-esteem and confidence. However, there are still some differences in attitudes and perceptions as regarding the inclusive education of children with SEN: in focus group discussions some of typical children claim that sometimes the children with SEN feel uncomfortable at school because they are discriminated/ignored by their classmates; some of children with SEN have disruptive behaviors and disturb the attention of other children in classes. The children with SEN are less involved than their typical peers in classes and in extra-curricular activities and have less friends in schools and outside the schools.

Key words: *education, mainstreaming, integration, inclusion, children with special educational needs, educational support services, attitudes, knowledge and behaviors.*

Republica Moldova a început procesul de dezinstituționalizare a copiilor cu dizabilități/și cerințe educaționale speciale (CES) și incluziunea lor în familiile biologice și în serviciile sociale din comunitate. În acest context, incluziunea copiilor cu CES în școlile din comunitate a devenit o direcție strategică a politicilor educaționale din Republica Moldova.

În anul 2014, Alianța ONG-urilor din domeniul Protecției Sociale a Familiei și Copilului a efectuat o cercetare în vederea evaluării modelelor de educație incluzivă implementate în școlile-pilot cu scopul identificării practicilor pozitive, a lecțiilor învățate și a provocărilor pentru dezvoltarea politicilor educaționale bazate pe dovezi[3]*. Cercetarea a fost efectuată în 20 de școli-pilot din 12 raioane. Au fost intervievați 200 de pedagogi, 20 de manageri școlari, 360 de elevi (inclusiv 162 elevi cu CES, 112 elevi tipici din clasele în care învață elevi cu CES și 86 de elevi tipici din clasele în care nu învață elevi cu CES). Au fost organizate 10 focus-grupuri cu părinții, studenții, pedagogii (în total 100 de persoane) și 6 interviuri cu reprezentanții Departamentelor Educație din raioane și cu primari.*

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[2] ***The research was conducted with the financial support of EFA Global Partnership for education and SOIR Moldova.***
[3] ***Cercetarea a fost efectuată cu suportul financiar al EPT Parteneriat Global pentru educație și SOIR Moldova.***

Articolul analizează percepțiile, atitudinile și comportamentele elevilor cu CES și cele ale elevilor tipici referitor la incluziunea educațională a elevilor cu CES în școlile din comunitate. Autorul conchide următoarele: implementarea educației inclusive a condus la schimbări pozitive în școlile respective, și anume: asigurarea cu material didactic și echipament modern, îmbunătățirea metodelor de predare și a calității predării, îmbunătățirea comportamentului copiilor cu CES și al copiilor tipici; elevii tipici manifestă atitudini și percepții pozitive privind incluziunea educațională a copiilor cu CES în școlile comunitare; gradul de satisfacție de școală a elevilor cu CES și a elevilor tipici de școală este destul de înalt; mediul social și de învățare în școlile-pilot este prietenos și în continuă adaptare în funcție de nevoile individualizate ale elevilor; ambele grupuri de copii – cu CES și tipici – au un nivel înalt de autoapreciere și încredere în forțele proprii.

Cu toate acestea, continuă să existe anumite diferențe în atitudinile și percepțiile elevilor referitor la incluziunea educațională a copiilor cu CES în școlile din comunitate: unii elevi tipici au menționat în focus-grupuri că uneori elevii cu CES nu se simt confortabil la școală, deoarece sunt discriminați de către colegi; unii elevi cu CES manifestă un comportament deviant la orele de clasă și întrerup lecțiile. Cercetarea, de asemenea, a evidențiat faptul că elevii cu CES sunt implicați mai puțin la lecții, precum și în activitățile extracurriculare și au mai puțini prieteni în școală și în comunitate.

Cuvinte-cheie: *educație, integrare, incluziune, copii cu cerințe educaționale speciale, servicii de suport educațional, atitudini, cunoștințe, comportamente.*

Республика Молдова начала процесс де-институционализации детей с ограниченными возможностями/и особыми образовательными потребностями (ООП) и их включения в биологические семьи и основные услуги на уровне сообщества. Наряду с де-институционализацией, включение детей с особыми образовательными потребностями в обычных школах стало стратегическим направлением образовательной политики в Республике Молдова.

В 2014 году Альянс НПО в области социальной защиты семьи и ребенка провел исследование по оценке моделей инклюзивного образования, реализуемых в пилотных школах с целью выявления положительных практик, извлечения уроков и выявления проблем для разработки политики в области образования на основе доказательств. Исследование было проведено в 20 пилотных школах с 12 районов. Были опрошены 200 преподавателей, 20 руководителей школ, 360 студентов (162 учеников с ООП, 112 студентов, обучающихся в классах с детьми с ООП и 86 детей, обучающихся в классах без студентов с ООП). Были проведены 10 фокус-групп с учениками, учителями, родителями (всего – 100 участников) и 6 интервью с представителями районных отделов образования и мэрами, мэров.

Автор анализирует восприятия, отношения и поведения учащихся с ООП и типичных учеников относительно включения детей с ООП в обычных школах. На основе анализа, автор пришел к выводу что реализация инклюзивного образования привело к довольно позитивным изменениям в соответствующих школах, включительно: обеспечение нужными дидактическими материалами и современными устройствами, улучшение качества и методов преподавания, изменение поведения детей с ООП и обычных детей. Типичные дети относятся и воспринимают положительно включение детей с ООП в обычные школы. Дети с ООП и обычные дети имеют довольно высокий уровень удовлетворенности школой. Пилотные школы характеризуются дружественной социальной и образовательной средой; в пилотных школах начался процесс адаптации образовательной среды к индивидуальным потребностям детей. Дети с ООП и обычные детей имеют высокий уровень самооценки и уверенности в себе, что касается достижения высоких результатов в учебе.

Вместе с тем, автор доказывает, что еще существуют некоторые различия в восприятиях относительно инклюзивного образования детей с ООП. Некоторые типичные дети высказались во время фокус групп, что иногда дети с ООП чувствуют себя некомфортно в школе, потому что они подвергаются дискриминации, игнорированы своими одноклассниками. Некоторые дети с ООП имеют разрушительное поведение и нарушают дисциплину на уроках, мешают работать другим ученикам. Дети с ООП меньше вовлечены на уроках и во время внеклассных мероприятий и имеют меньше друзей в школах и вне школы.

Ключевые слова: *образование, интеграция, инклюзия, дети с особыми образовательными потребностями, услуги в области инклюзивного образования, отношения, знания, поведение.*

JEL Classification: I28; I21; N3; J0.

Introduction. Mainstreaming, integration or inclusion. There are different opinions regarding the meaning of the words: mainstreaming, integration and inclusion. Nevertheless, all of them support the idea of differences in the meanings of terms when it comes to education. As per the literature review, **mainstreaming** is "associated primarily with the physical assimilation of students with disabilities with their non-disabled peers. This may be more a matter of "connotative baggage" rather than intent. Nevertheless, mainstreaming assumes that students with disabilities may share the same physical space (classroom, playground etc.) with those who have no disabilities only when they are able to do the same activities as everyone else with minimal modifications. Further, the primary responsibility for these students' education remains with their special education teacher" [4]. **Integration** means the placement of children with disabilities/or of those with special educational needs (SEN) in mainstream education settings "with some adaptations and resources, but on condition that the disabled person and/or the learner with "Special Educational Needs" labels can fit in with pre-existing structures, attitudes and an unaltered environment" [4]. **Inclusion** is considered a step ahead comparatively with the integration. Thus, according to Harman, "the biggest clue for determining whether a school is integrating or including students is in the language that is being used. If school personnel talk about extra adaptations or services to help the child fit into a classroom, it is integration. References to overcoming problems, acquiring functional abilities and support worker for the child will be used. Look at the Individual Education Plan (IEP). If the IEP focuses on strategies to help a child fit into a classroom, this is integration. Inclusive schools and classrooms talk about helping everyone. School personnel will emphasize how the classroom/school will be changed to support the success of a child. The talk will be about how the extra adaptations and services will benefit everyone. Celebrating diversity, helping everyone and having a support worker for the class are key. When looking at the IEP, strategies will be used to adapt and improve the classroom so that all students achieve success. Inclusion is about helping everyone" [3].

"Children with special educational needs have a right to education. *In June 1994 representatives of 92 governments and 25 international organizations formed the World Conference on Special Needs Education, held in Salamanca, Spain. They agreed a new Statementon the education of all disabled children, which called for inclusion to be the norm. The Conference adopted a new Framework for Action, the guiding principle of which is that ordinary schools should accommodate all children, regardless of their physical, intellectual, social, emotional, linguistic or other conditions. All educational policies, says the Framework, should stipulate that disabled children attend the neighborhood school that would be attended if the child did not have a disability" [6].*

Articles 28 of the UN Convention on the Rights of the Child cover the right of children with Special educational needs to education. It states that "States Parties recognize the right of the child to education, and with a view to achieving this right progressively and on the basis of equal opportunity, they shall, in particular: a) make primary education compulsory and available free to all; b) encourage the development of different forms of secondary education, including general and vocational education, make them available and accessible to every child, and take appropriate measures such as the introduction of free education and offering financial assistance in case of need; c) make higher education accessible to all on the basis of capacity by every appropriate means; d) make educational and vocational information and guidance available and accessible to *all* children; e) take measures to encourage regular attendance at schools and the reduction of drop-out rates…" [8].

The right to inclusive education is enshrined in article 24 of the UN Convention on Rights of Persons with Disabilities: "(1) States Parties recognize the right of persons with disabilities to education. (2) In realizing this right, States Parties shall ensure that: a) persons with disabilities are not excluded from the general education system on the basis of disability, and that children with disabilities are not excluded from free and compulsory primary education, or from secondary education, on the basis of disability; b) persons with disabilities can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the communities in which they live; c) reasonable accommodation of the individual's requirements is provided; d) persons with disabilities receive the support required, within the general education system, to facilitate their effective education; e)effective individualized support measures are provided in environments that maximize academic and social development, consistent with the goal of full inclusion" [7].

Moving toward inclusive education in the Republic of Moldova. *Being a former soviet country, the children with special educational needs in the Republic of Moldova were segregated in separate educational environments for many decades. Despite the fact that in 2004 the Education for All National Strategy and Action Plan were approved and the key purpose of the documents was to assure the access of all children to quality education, in 2006, around 12000 children with special educational needs were still studying in boarding schools.*

The real movement toward the inclusive education of children with special educational needs started alongside with the process of deinstitutionalization in 2007, after the approval of the National strategy on reforming the residential institutions. Several NGOs (Lumos, Every Child, CCF Moldova, Keystone Moldova, Speranta, Femeia si copilul – protective si sprijin) started to work closely with the Ministry of Education on implementation of the strategy by supporting the families to deinstitutionalize the children and to move them in regular community schools. Several models of inclusive education were developed and approved by the Ministry of Education. The models included the following stages: evaluation of children educational needs and development of plan of interventions to support those needs, development of school physical and teaching environment, development of educational support services, capacity building of parents and teachers and changing discriminatory attitudes and behaviors of typical children and other community members toward inclusive education of children with SEN. The NGOs piloted the models of inclusive education in 60 communities' schools, covering more than 50% of the districts of Moldova.

Alongside with the deinstitutionalization and educational inclusion of children with SEN, the NGOs supported the Government of Moldova to make the sustainable reforms, by advocating for the development of the legal framework related to inclusiveness of children with disabilities in communities and in regular educational institutions. In this regards, the Government of Moldova ratified the Convention on Rights of Persons with Disabilities (2010); approved the Law on Social Inclusion of Persons with Disabilities (2012), the National Program for Inclusive Education (2011-2020), the Law on Equal Opportunities (2012) and the new Code of Education (2014). The institutional structures and support services for inclusive education were developed and established nationwide as a consequence of developed legislation and NGO advocacy. The National Center for Psycho-Pedagogical Assistance was established under the Ministry of Education with the scope of promotion and supporting the process of inclusive education of children with SEN nationwide. The Psycho-Pedagogical Assistance services were developed in all districts of the Republic of Moldova. The purpose of those services is to assess the educational needs of children with SEN and to make recommendations for development of Individual Educational Plans for those children. The new inclusive education support services, like Resource centers for inclusive education, pedagogical support staff, and extracurricular mediation hours were introduced in all schools as needed. Starting with 2012, the Government of Moldova made available public financial resources for inclusive education[1].

The reforms made in the field of deinstitutionalization and social inclusion of children with SEN contributed to decreasing of number of children with SEN in special schools from 3550 in 2009 to 1807 in 2013. According to the data of the National Department of Statistics, 66% of children with SEBN were studying in regular communities' schools and 34% - in special schools in 2013-2014 school year.

Attitudes and perceptions of students toward inclusive education

Schools satisfaction. According to the survey, the majority of students show a high degree of satisfaction with the school. The share of students who said they like school very much is 86% higher than the percentage of those who disagreed with this statement. The proportion of pupils who said they cannot wait to go to school in the morning is 69% higher than of those who did not agree with this statement. Per groups of students, the share of students highly satisfied with the school is higher among both groups of typical students (from classes with and without pupils with SEN) and is lower in pupils with SEN.

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[1] ***In 2012, the state allocated 1.6 million MDL for development of inclusive education in three districts (Criuleni, Floresti and Ialoveni). In 2013, the Government of Moldova allocated 89.3 million MDL for inclusive education and in 2014 – 67.5 million MDL.***

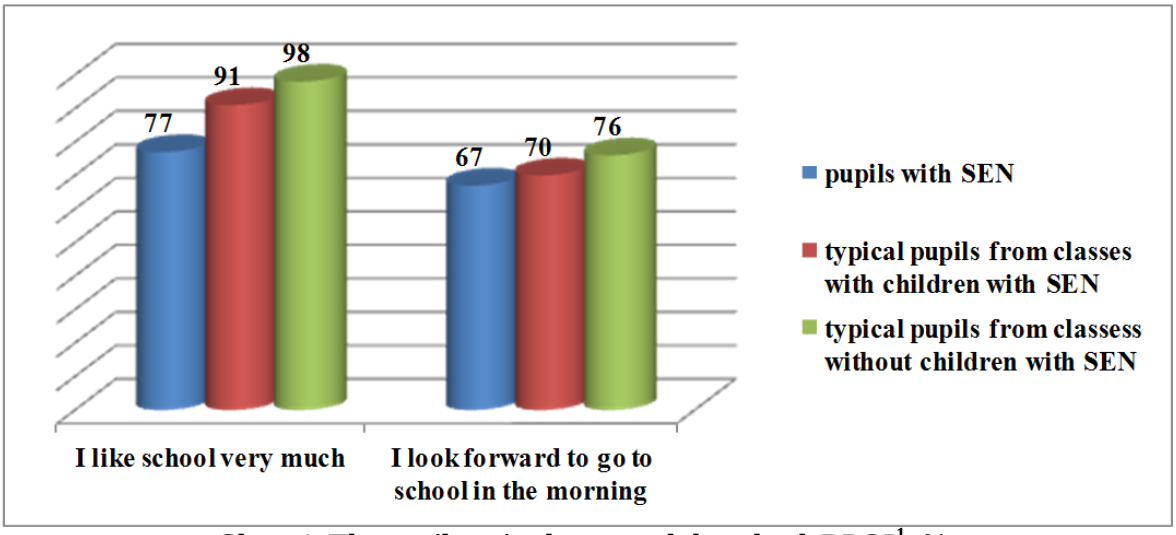

Chart 1. The pupils attitudes toward the school, DPOI[1], %

The students involved in focus group discussions said that the high level of satisfaction with the school is determined by the changes occurred at the school level alongside with inclusive education processes: "renovation of some classes", "equipment of classes with modern technologies and furniture", "improvement of quality of teaching", "diversification of teaching methodologies", "improvement of attitudes and behaviours of both typical children and children with SEN". They like to go to school, because they "learn new things', "get new abilities', "are preparing for their carrier", "interact with friends", "play with friends' afterschool" etc. Some of the students said that they are acquainted with the situations, when some of the children with SEN do not go regularly to the school due to "lack of their parents support", "limited understanding of of school attending benefits by their parents", "poverty and limitations in daily life", "bad attitudes of their peers and of teachers" etc. All of them agreed with the need to support the children with SEN to go regularly to schools through prevention of discriminatory attitudes, improvement of teaching methodologies, especially when involving the children with SEN, developing positive school environment for all children, supporting the children and their families to overcome poverty" etc.

Social environment in the schools. Research has revealed that the social environment is quite friendly in pilot inclusive schools. Thus, the share of students who said they have many friends in the school (DPOI = 74%), that they feel difficult to say good bye to their friends at the end of classes (DPOI = 42%), that they are invited often by peers during the recreations to play (DPOI = 49%), that they are invited by colleagues to participate in various extra-curricular activities (DPOI = 62%), that they like to participate in various extra-curricular activities (DPOI = 78%) is higher than of those who disagree with those statements. Per groups of students, the situation is different. The percentage of pupils with SEN who have positive views about the social environment in the school is 1.5-2.0 lower than in case of typical students, both in classes with and without students with SEN.

Some typical pupils believe that students with SEN do not feel good in school due to the fact that "some of them are forced to come to school by parents or teachers", "sometimes the regular students discriminate them, they laugh on them, they pay no attention and even encourage other children to behave in the same way". The discriminatory attitudes of typical students towards students with SEN are due to their families' high level of poverty: they cannot always afford to buy good clothes and more expensive things for their children and are not always careful enough. Some students said their peers "are afraid of students with SEN, especially of those who have aggressive behavior". They said that pupils with SEN "should be kept under control".

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[1] ***Dominant Personal Opinion Index (DPOI) determines the rate of dominant opinions regarding certain phenomena, processes and is calculated according to the formula (p-n)X (100-ne):100, where p is the rate of positive opinions, n is the rate of negative opinions and ne – the rate of neuter opinions. The Index ranges on a scale from -100 to +100. The closer to 100 the index is, the more positive opinions/perceptions/attitudes there are.***

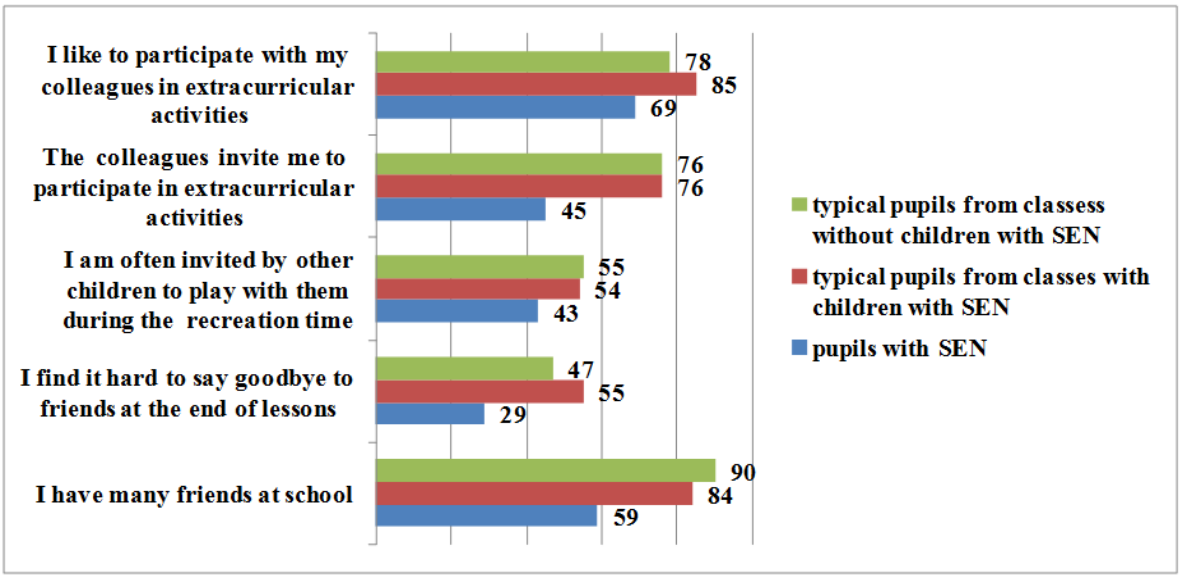

Chart 2. Pupils perceptions regarding the social environment in the schools, DPOI, %

Teaching-learning environment. Most of the children believe that the teaching-learning-evaluation process in the school mostly corresponds to the requirements of the inclusive education**.** Thus, the rate of students who agreed with the statement that teaching activities during the classes are very interesting (DPOI=86%), that they work together with other classmates during the classes (DPOI=72%), that teachers encourage them to learn according to their capacities (DPOI=78%), that they may ask questions and receive answers during the classes (DPOI=74%), and that they often share their opinions about school and studies (DPOI=62%), that teachers and students in their school respect each other (DPOI=82%), that teachers speak well about all the children (DPOI=69%) is much higher than the rate of those who think otherwise.

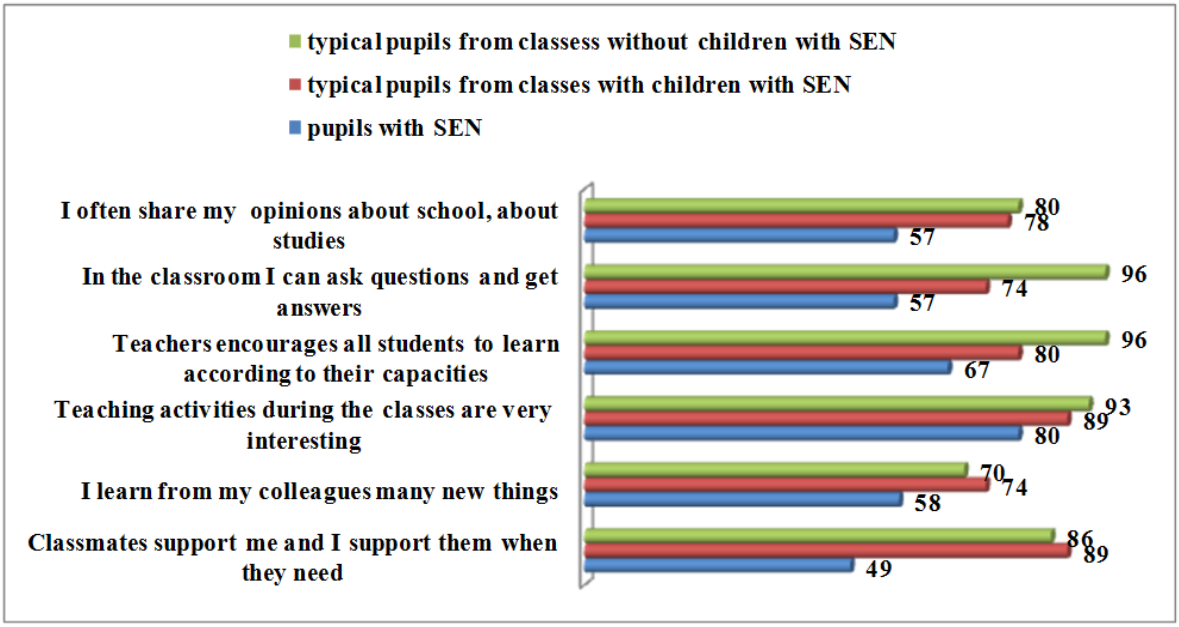

Chart 3. The students' perceptions regarding the content and the organization of classes, DPOI, %

Per group of children, we notice differences in the opinions. In case of typical children from classes with students having SEN and of students with SEN, the rate of those who support positive statements decreases and the rate of those who have contrary opinions increases.

The share of students in the pilot schools who believes that teachers help students who have learning disabilities is 86% higher than that of students who have an opposite opinion. The share of

students who believe that teachers fully support them is 68% higher than of those who think differently. Per groups of students, the percentage of students who said the teachers help students with learning problems; communicate with them and help them learn; ask if students need additional help; fully support them is higher among typical students and lower in pupils with SEN.

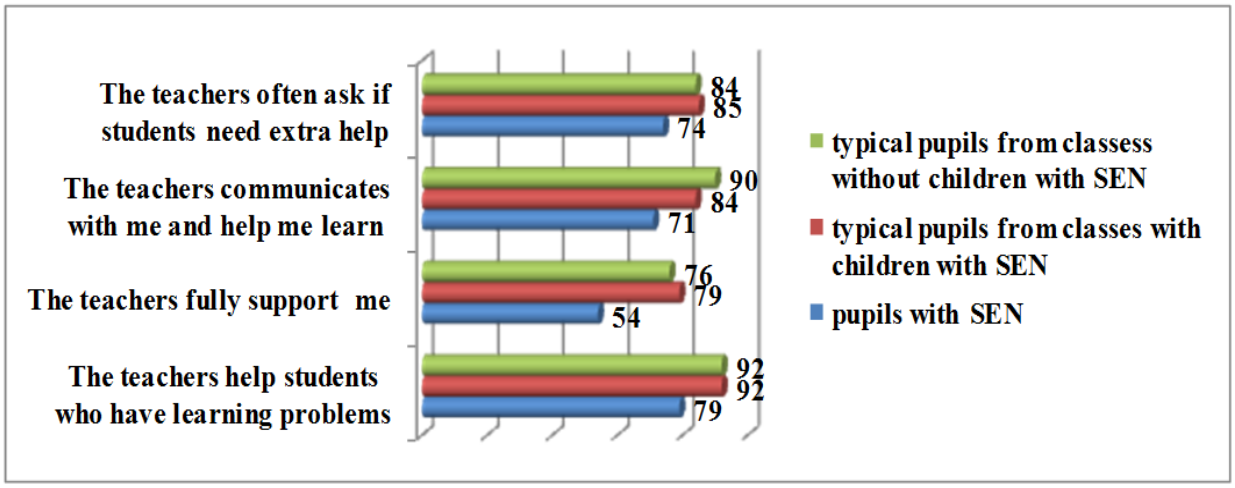

Chart 4. The pupils perceptions regarding the teachers support, DPOI, %

Discussions held in focus groups **revealed certain issues/aspects related to the learning environment that requires a special attention.** Thus, students mentioned that certain teachers focus during the classes on other activities than teaching activities; they tend to use only the method of children reading and writing, they repeat the same task for several lessons. Many children stressed the fact that teachers do not always evaluate them objectively and that their relation with the teacher influences the marks they get. Students have also mentioned that even if they are allowed to state their opinions during the lessons, teachers do not always accept such opinions and that, sometimes, accepting students' opinions depends on the teacher's mood. Speaking about teachers' attitude towards students with SEN, participants in focus groups had split opinions: some of them believe teachers' pay less attention to them and focus more on the students who study well; others stated that teachers pay too much attention to students with SEN, which, they think, is disadvantaging typical students.

Students' self-esteem and self-confidence. The survey revealed that students in pilot schools have a **high level of self-esteem and enough self-confidence**. Thus, the rate of children who believe the things they study at school are useful (DPOI=90%), they are able to obtain good school results if they prepare their homework (DPOI=78%), they can study in different ways (70%) is higher than the rate of those who believe otherwise. Per groups of children, the rate of children that have self-esteem and self-confidence is higher in typical children, both in classes that have students with SEN and in classes that do not have students with SEN and is lower in students with SEN.

Pupils' participation in social life. According to the survey, most students said that for them is very important to have many friends (DPOI = 82%), that they have good relationships with the children in the yard, slums (DPOI = 86%) and that they have many friends outside of school (DPOI = 70%). Per groups of children, the share of pupils with SEN who agreed with the above statement is lower than the share of typical students.

To see the intensity of student participation in community life, they were asked about the frequency of their participation at various events in the community, visits with relatives ,visits at various museums, theaters etc. Research has revealed that the social life of students is reduced mostly to visits to relatives (DPOI = 65%), and less – in participation at various community events (DPOI = 32%) and visits to museums, theaters, zoo etc. (DPOI = 38%). Per groups of children, the share of pupils with SEN visiting relatives (DPOI = 51%) is 1.5 times lower than in case of typical students (DPOI = 75% DPOI = 80%). The share of pupils with SEN taking part in local events is about two times lower (DPOI = 19%) than in case typical students (DPOI = 45% DPOI = 39%). The share of pupils with SEN visiting museums, theaters, exhibitions in the city is 8-10 times lower than in case or typical students (DPOI = 77% DPOI = 54%).

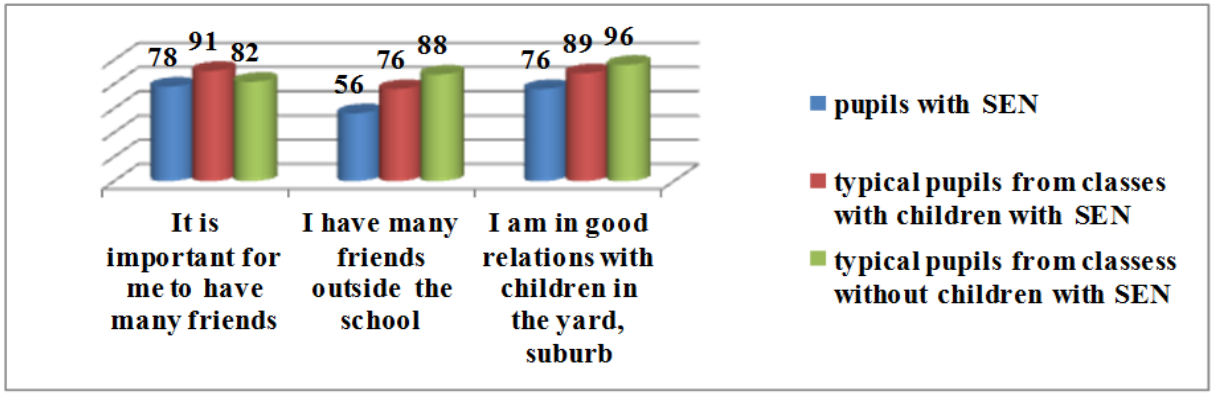

Chart 5. Pupils perceptions regarding the friendships, DPOI, %

Results and conclusions. Both: the typical children and the hildren with SEN from pilot inclusive schools feel comfortable at school and have high level of school satisfaction. The majority of typical students show positive attitudes and perceptions toward inclusion of children with SEN in regular schools. As per their perceptions, the implementation of inclusive education resulted in rather positive changes in respective schools: provision with materials, modern devices, improvement of teaching quality and methods, change in the behaviors of children with SEN and in typical children. The social and learning environment in pilot schools is friendly and started to be adapted to children individual needs. The both: children with SEN and typical children have high level of self-esteem and confidence. They believe the things they study at school are useful and they are able to obtain good learning results if they prepare their homework.

However, in focus group discussions with typical children, some of them claim that sometimes the children with SEN feel uncomfortable at school because they are discriminated/ignored by their classmates. The discrimination is caused mostly by the high level of poverty of children with SEN families and less possibilities to have nice modern clothes, mobile devices etc. Some of typical children said that some of children with SEN have disruptive behaviors and disturb the attention of other children in classes. The research showed that children with SEN are less involved than their typical peers in classes and in extra-curricular activities and have less friends in schools and outside the schools.

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THE RELATION BETWEEN EMOTIONAL LABOR, JOB BURNOUT AND INTENTION TO TURNOVER: A RESEARCH ON TRAVEL AGENCY WORKERS

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The aim of this study is to show the relation between emotional labor, job burnout and intention to turnover of travel agency workers, and to develop appropriate suggestions in the light of obtained findings. For this aim, a survey is applied to travel agency workers which is one of the emotional labor-intensive jobs. According to the results of this research, emotional labor behaviors of travel agency workers influence job burnout negatively and their level of job burnout influences intention to turnover positively. However, any relation between emotional labor and intention to turnover was not found.

Key words: *emotional labor, job burnout, intention to turnover, hotel employees.*

Scopul acestui studiu este de a prezenta relația dintre impactul emoțional al muncii, epuizarea la locul de muncă și intenția de schimbare a locului de muncă a lucrătorilor agențiilor de turism și de a dezvolta propuneri adecvate în lumina constatărilor obținute. De aceea, a fost aplicat un sondaj pentru lucrătorii agențiilor de turism, care reprezintă un loc de lucru cu impact emoțional de intensitate mare. Conform rezultatelor acestei cercetări, comportamentul în urma impactului emoțional al muncii asupra lucrătorilor agențiilor de turism, influențează în mod negativ gradul de epuizare la locul de muncă, iar gradul de epuizare la locul de muncă influențează în mod pozitiv intenția de schimbare a locului de muncă. Cu toate acestea, o relație între impactul emoțional și intenția de schimbare a locului de muncă nu a fost stabilită.

Cuvinte-cheie: *impact emoțional al muncii, epuizare la locul de muncă, intenție de schimbare a locului de muncă, angajați ai hotelului.*

Цель данного исследования – показать связь между эмоциональным трудом, истощения на работе и намерения поменять работу, и разрабатывать соответствующие предложения с учетом полученных результатов. Для этой цели применяется опрос в турагентствах по сотрудникам, работой которых считается одной из эмоциональных и трудоёмких. Согласно результатам этого исследования, эмоциональное трудовое поведение работников турагентств влияет над уровнем истощения на работе отрицательно, а уровень истощения на работе влияет над намерением поменять работу положительно. Однако какой-либо связи между эмоциональным трудом и намерение поменять работу не найдено.

Ключевые слова: *эмоциональный труд, истощение на работе, намерение поменять работу, сотрудники гостиницы.*

JEL Classification: L83; L84.

Introduction. Previously, emotions were not seen as an important factor in the researchs regarding organizational citizenship. Most of the organization theories tend to trivialize or marginalize the re-invention of emotions [34] and a large number of organizational studies were based on the assumption

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that human-beings are creatures whose inefficient irrationality cannot be trusted [25]. However, recently it is possible to see various studies which introduce the importance of emotions in working life by putting forward their positive and negative effects in workplace [10], [36], [46].

Additionally, unconditional customer satisfaction plays an important role for the concept of total quality which is introduced by global competition in service sector [17]. For this, many employers determine the appropriate attitude toward customers and make the emotional labor behaviors which needs to be displayed obligatory for personnel through in-company trainings. Whether employees display these behaviours sincerely or they pretend through masking may end up with job satisfaction and job burnout [23], [44].

Therefore, the general aim of this study is to show the relation between emotional labor, job burnout and intention to turnover and to develop appropriate suggestions in the light of obtained findings. For this aim, the variables of emotinal labor process of travel agency workers, which is one of the emotional labor-intensive jobs, and their opinions on job satisfaction are tried to be determined.

The aims of study:

1. Do emotional labor behaviors of participants vary according to demographical variables?
2. Does level of job burnout of participants vary according to demographical variables?
3. Does participants' intention to turnover vary according to demographical variables?
4. Is there a significant relation between participants' emotional labor behaviors and their level of job burnout?
5. Is there a significant relation between participants' emotional labor behaviors and their intention to turnover?
6. Is participants' level of job burnout affected by their emotional labor behaviors?
7. Is participants' intention to turnover affected by their emotional labor behaviors?
8. Does the effect of emotional labor behavior on that participants' intention to turnover is affected by their level of job burnout?

Literature Review

The Concepts of Emotion and Emotional Labor in Companies

Although previously emotion was not a widely used phenomenon, it has been an area on which various studies were conducted and various remarks was made since late 1800s. Because examining feelings and emotional conditions of human-beings and making predictions about their effects have a position which draws attraction in literature, it is possible to see various biological, psychological, social and cultural explanations of feelings and emotions. Especially since 1980s, the existence of emotions in working life, their forms of expression and their role in organizational success are started to be discussed increasingly [54]. From past to present, researchers have discusses the concept of emotion through different point of views. Whereas in past it is emphasized that emotions affect the process of rational reasoning negatively, many researches which is made nowadays suggest that emotions actullay lead people to realist thinking [47]. In a manner of speaking, contary to rationalist approaches, emotions are moods which mobilize and energize people. Likewise, "motus anima" which refers to emotion in Latin means "mobilizing soul" [13]. Therefore, emotions which are experienced in daily life have a strong influence on human behavior.

"Emotional labor is a form of labor which workers have to perform in order to meet job's requirements in jobs which necessitates intimate relationship, and it includes transforming emotions" [53]. The concept of emotional labor has been described in different ways by authors. According to Özkaplan, emotional labor is "a part of the package which companies sell to customer". According to her, whereas industrial worker sells his/her manual labor and information technology worker sells his/her intellectual labor, emotional worker sell his/her "smiles" [38]. According to Ashforth and Humphrey who examine emotional labor through the perspective of the theory of social identity, emotional labor is expressed as the action of displaying appropriate emotion [4].

In the light of these descriptions, the concept of emotional labor can be stated as that employees control their emotions to create positive relationships with customers in order to guarantee customer satisfaction and they display emotions which company wants to be displayed instead of their own emotions [29].

Dimensions of Emotional Labor

One of the important points regarding the phenomenon of emotional labor is about in which form employees display emotions toward customers. In this context, emotional labor behaviors have various dimensions in literature. Surface acting as one of these dimensions is to pretend that actually nonexistent emotions exist [23]; in other words it refers to that one represses his/her emotions through emotional masking and pretends by displaying fake emotions [15]. A worker who pretends by superficially displaying emotional labor behaviors toward customers, actually acts as if he/she feels the emotions that his/her job requires while he/she is working even if he/she feels different emotions [7]. It is stated that in surface acting employee experiences emotional contradiction in a great level [24], [30]. Hence, the dimension of surface acting is also referred as emotional contradiction in relevant literature [27], [32], [60].

Considering emotional effort (which is also called deep acting in literature) as another dimension of emotinal labor, one tries to synchronize his/her actual emotions with expected behaviors. According to Kruml and Geddes [32], this dimension is the basis of the phenomenon of emotional labor. For employee, it requires too much effort to emphatize with customer, to make customer pleased with service which he/she buys, and to approach with positive emotions by understanding the conditions which make customer difficult/aggressive [23]. In addition to that employee does not perform his/her own emotions either in emotional contradiction which includes the display of surface acting or in emotional effort, it is possible to say that there is a difference between these two forms emotinal acting. In surface acting, employee does not feel, but only acts. On the contrary, in emotional effort, employee tries to actually feel emotions he/she reflects. This situation is examplified as an actor/actress who loses himself/herself in his/her role [33]. According to this, in surface acting, displaying emotinal labor rules which are determined by the organization is an externally imposed obligation; in emotinal effort, it is a necessity based on internal motivation. Because behaviors are supported by actual emotions in emotional effort, this situation may make customer relations more sincere. However, at this point, it is necessary to indicate one more time that in both situations of emotional labor, acting within the rules determined by employer or administration is the situation [43].

Another dimension of emotional labor is the expression of genuine emotion. Ashforth and Humprey (1993: 33) mention that in addition to surface acting and emotional effort there might be situations in which workers genuinely experience expected emotion; and they refer this type of acting as the expression of genuine emotion. The employee who displays his/her emotions through this way does not pretend toward customer, and acts in this way because he/she is ready to help and experiences positive emotions [16]. On the other hand, Morris and Feldman tries to bring a holistic approach to the issue. According to them, either surface acting or emotional effort or expression of genuine emotions, all of them require effort in a certain extent; because the aim of all behaviors is to fulfill the requirements of emotional behavior rules determined by the organization [37].

Intention to Turnover

Intention to turnover is destructive and active actions made by employees in situations they feel unsatisfied about the working conditions [49]. There is a widespread opinion that intention to turnover affects organizational effectiveness. By detecting the factors which influence intention to turnover, researchers can predict and explain turnover behaviors in advance and managers can take precautions in order to avoid possible turnovers [26]. In many researches, job satisfction is pointed out as the most significant factor among factors which affect intention to turnover.

Intention to turover is an early indication for actual absenteeism and it brings costs in a significant extent. In literature, there are theoretical and empirical findings for that there is a negative relation between intention to turnover and job satisfaction [28], [50], [52].

Employees' intention to turnover causes several practical problems such as loss of skills, additional staff and increase in managerial costs. Environmental factors which influence employees' intention to turnover are organizational culture and values of organization, relationships with coworkers, demands and expectations regarding job/role, and opportunities for career development and reward structures such as

autonomy [52]. Factors which avoid turnover are job satisfaction, investments on job, alternative job opportunities and organizational rewards.

Job Burnout

The concept of burnout was firstly described by Freudenberger in 1974 as failure, exhaustion, loss of energy and power as a result of overloading or exhaustion in individual's internal resources and energy as a result of unsatisfied desires.

Among psychological, behavioral and physical problems caused by organizational stress, some different reactions were observed in 1970s and they were denominated as burnout. The feature of burnout which distinguishes it from other reactions caused by organizational sources of stress is that it appears as a result of employees' frequent and intense interactions with people they encounter as a part o their job (Torun, 1997).

In order to detect levels of burnout, Burnout Inventory designed by Maslach was used. According to Maslach, burnout is described as the situation which is experienced subjectively, is derived from working in environments with intense emotional expectations for a long time, and is accompanied by indications such as physical exhaustion, desperation, hopelessness, disappointment, development of a negative self-conception, development of negative attitudes toward job, workplace, employees and life (Çokluk, 2000). Emotional exhaustion is the dimension of burnout related with stress and refers to the decrease in individual's emotional and physical sources. The most important sources for this process are being overloaded by work and interpersonal conflicts in workplace. Employees, at this stage, feel that they "get thin" and "get emptied" like they cannot be "refilled" (Solmuş, 2004:103). Desensitization manifests in the forms that the service or product one provides causes contradiction in the eyes of buyers, that one ignores the features which make service/product quality, that one embraces a humiliating approach toward people, that one categorizes people and that one keeps his/her distance with people who he/she provides service (Maslach et al., 2001: 403; Leiter and Maslach, 1988: 297). Low sense of personal success causes depression about employee's feeling of ineligibility and not being able to sufficiently handle the work stress. Additionally, it gets deeper through lack of social support and unrecognized occupational development opportunities (Maslach, 1998; Maslach, Schaufeli and Leiter, 2001). As a result of individuals' negative self-evaluation, an unsuccessfulness in job and relationships with people who one encounters as a part of his/her job and a decrease in feeling of competence are seen. These people, who think that they can't make progress in their jobs and even they drop behind, feel guilty (Dilsiz, 2006: 14).

In accomodation establishments, service provision to customers occurs in an integrated way with the products they buy. Customers who enjoy accomodation establishments pay attention to this point. Customers generally decide whether the physical standards of accomodation establishments meet their expectations before they decide in which place they will be for their vacation. After they decide, they compare the service qualities. For consumers, it becomes easier because of raising awareness of consumers who buy touristic products, of easier access to information and of existence of information regarding quality of product and service of accomodation establishments on the internet. Because of the raising awareness and opportunities of consumers and because professionals in the sector care about service quality and customer satisfaction, it became inevitable to care about the human factor who produces service [56].

Studies on Emotional Labor and Business Behavior

Emotional labor became a part of the literature after it is described as selling emotions in return of wage in Hochscilds's (1983) study. Emotional labor is studied mostly on service sector employees; these studies are mostly focused on customer service representatives [1], [11], call center employees [22], [48], (Özkan, 2011), healtcare workers (Mikolajczak, Menil & Luminet, 2007; Çaldağ, 2010), [31], shopping center workers [8], [16], [45], education workers [55], (Kaya, 2009), finance workers [37], [42], Diamond, 2005).

Among studies on emotional labor, employees in tourism establishments and tourism workers are started to be studied. Even if it is a quite new concept in tourism area, there are many qualitative and quantitative researches about emotional labor [12], [21], [24], [27], [30], [57], [58]. For instance, Seymour (2000) conducted interviews with employees in traditional silver service restaurants and employees in fast-food restarutants in order to measure the levels of emotional labor in food and beverage establishments with two different styles of service delivery; he detected that intensity of emotional labor in traditional establishments is higher. Kim (2008) examined the priorities and results of two strategies of emotional labor (surface and deep acting) in accomodation industry. The study showed that employees

who display surface acting get more exhausted than employees who display deep acting. Zapf and Holz (2006), in their study on hotel establishments, food and beverage establishments and call centers in Germany, found that there is a close relation between emotional labor and burnout syndrome (Avcı and Kılıç, 2010: 293). Chen et al. (2009), tried to identify how students' will to work and emotional awareness during thire period of internship affect their job satisfaction; they detected that emotional awareness and will to work affect job satisfaction positively.

In Turkey's literature, Avcı and Boylu (2010) made validation for the level of measurement developed by Chu and Murmann (2006) through a research on undergraduate anad graduate tourism students. Avcı and Kılıç (2010), with same level of measurement, tried to identify in which degree emotional labor behaviors of employees in accomodation sector differ. In this research, emotional labor behaviors discussed in terms of "emotional effort" and "emotional contradiction" dimensions; it is observed that employees' emotional labor differs from the dimension of "emotional contradiction". Similarly, Pala and Tepeci (2009) conducted a resarch on levels and dimensions of emotional labor of employees in tourism establishments; dimensions which constitute emotional labor in tourism establishments were identified as "deep acting" and "surface acting". Kozak and Güçlü (2008) made a research in order to put forward in what extent factors of emotional labor are taken into consideration during the recruitment process in tourism establishments; at the end of the research they found that the factor of "genuine behavior" among emotional labor factors is the one which is paid most attention. In Genç's (2013) study, it is observed that level of emotional labor and emotional intelligence of employees in tourism establishments affect their job satisfaction, and considering the influence of emotional intelligence on job satisfaction, emotional labor partially mediates. Similarly, many researches in literature of tourism area emphasize that emotional management affects job performances of employees [36].

In provision of services, because service employees whose physical, mental and emotional labor are demanded create added value for service product specifically in accomodation industry, emotional labor and emotional management are seen as important phenomena [12], [57].

There are researches which examine tourism employees' intention to turnover [40], level of job burnout and job satisfaction [2], [3], [6], [18], [41], [56]. According to these researches, employees encounter with burnout syndrome and it affects their performance and hence businesses' service quality.

Methodology

Population and Sample

This research is made on employees of travel agencies in Diyarbakır. All population was tried to be reached and 110 people were reached.

Data Collection Tool

In research, survey was used for data collection. Surveys were made by directly going to travel agencies and through face to face talking. Sırveys were made between January and March in 2015.

Among levels of measurement used in surveys, the ones regarding emotional labor were taken from 12-question Tourism Employees Emotional Labor level of measurement which was prepared Chu and Murmann (2006) and translated into Turkish by Pala and Tepeci (2008) and Boylu and Avcı (2010); the ones regarding job burnout were taken from 22-question Maslach Burnout Inventory which was developed by Maslach and Jackson (1981) and translated into Turkish by Ergin (1992); and ones regarding intention to turnover were taken from 5-question level of measurement prepared by Blau and Boal (1989) and translated into Turkish by Zayas (2006) and Yalçın (2010). Negative statements in level of measurement were inputted into the statictical programme in computer through reverse coding [5], [9], [12], [19], [35], [39], [59].

Analysis of Data

For validity and reliability of research, reliability test and confirmatory factor analysis were made.

In order to test hypotheses of research, descriptive statistical tests, percentage, frequency, mode, median, variance and standard deviation, crostabs were included [14].

Correlation analysis was used in order to find the relation between variables and regression analysis was used in order to find interaction and mediation between variables.

Validity and Reliability Studies

Common point in descriptions and explanations about validity is that level of measurement correctly measures what is supposed to be measured. Because levels of measurement of emotional labor, job burnout and intention to turnover have been already tested, validation test was not required.

Confirmatory factor analysis, CFA, was made and it confirmed that levels of measurement correspond to factors given in literature.

As a coefficient of reliability, Cronbach's Alpha statistic was used and it determined that Cronbach's Alpha statistic is located between 0,621 and 0,832. Therefore, it is possible to say that levels of measurement are in a sufficient level of reliability.

Table 1

Values of Reliability of Levels of Measurement

Levels of Measurement	Results of Authors	Results of Researcher
Emotional Labor		0,621
Surface Acting	0,710 (Pala and Tepeci, 2010)	0,729
Deep Acting	0,851 (Pala and Tepeci, 2010)	0,812
Job Burnout	0,789 (Ergin,1992)	
Emotional Exhaustion	0,83 (Ergin,1992)	0,832
Desensitization	0,65 (Ergin,1992)	0,796
Low Sense of Personal Success	0,72 (Ergin,1992)	0,676
Intention to Turnover	0,83 (Zayas, 2006)	0,803

Source: Made by researcher.

Result of Confirmatory Factor Analysis of Level of Measurement of Emotional Labor

First level factorial structure of level of measurement of emotional labor which includes two sub-dimensions and 12 articles (six articles about surface acting and six articles about deep acting) was tested via computer programme. In five-point likert scale, covariance matrix was created via method of calculation of maxiumum likelihood and through data collected from 110 subjects (Kline, 2011). Scheme of values of parameter including first level confirmatory factor analysis of the scale was created. Values of goodness of fit which were obtained as a result of first level CFA (x^2[51, N=110]=84,718; p<0.01; x^2/sd=1,66; RMSEA=0,078; CFI= 0,918; GFI=0,885) show that two-factor model which was suggested is acceptible and compatible with data. These results introduces that obtained data and anticipated theoretical structure of level of measurement of emotional labor (two-factor model) are compatible.

First level factorial structure of level of measurement of intention to turnover which includes one dimension and 5 articles was tested via programme called LISREL 8.5 (Scientific Software International). In five-point likert scale, covariance matrix was created via method of calculation of maximum likelihood and through data collected from 536 subjects (Kline, 2011). Scheme of values of parameter including first level confirmatory factor analysis of the scale was presented above as Scheme 3. Values of goodness of fit which were obtained as a result of first level CFA (x^2[4, N=110]=5,787; p<0.01; x^2/sd=1,446; RMSEA=0,064; CFI= 0,992; GFI=0,978) show that one-factor model which was suggested is acceptable and compatible with data. These results intoruduces that obtained data and anticipated theoretical structure of level of measurement of intention to turnover (one-factor model) are compatible.

First level factorial structure of level of measurement of job burnout which includes three dimensions and 22 articles (9 articles about emotional exhaustion, 5 articles about desensitization and 8 articles about personal failure) was tested via programme called LISREL 8.5 (Scientific Software International). In five-point likert scale, covariance matrix was created via method of calculation of maximum likelihood and through data collected from 536 subjects (Kline, 2011). Scheme of values of parameter including first level confirmatory factor analysis of the scale was presented above as Scheme 4. Values of goodness of fit which are obtained as a result of first level CFA (x^2[203, N=110]=436,203; p<0.01; x^2/sd=2,149; RMSEA=0,103; CFI= 0,741; GFI=0,754)) show that three-factor model which was suggested is acceptable and compatible with data. These results intoruduces that obtained data and anticipated theoretical structure of level of measurement of job burnout (three-factor model) are compatible.

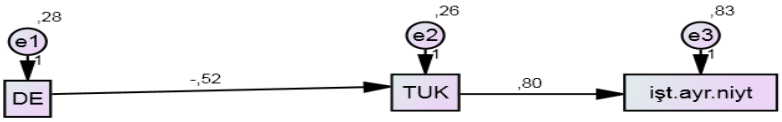
Data Analysis and Findings

66.4% of participants are male and 33.6% of them are female. 24.5% of participants are married and 75.5% of them are single. 44.5% of participants are graduated from high school, 36.4% of them are graduated associate degree program and 19.1% of them are graduated from university. 66.5% of participants received tourism education and 34.5% of them did not.

Model of Research

In this research, for testing hypotheses, model called SEM was used and the model below was obtained. According to this model, employees' emotional labor behaviors affect job burnout negatively

and significantly, and their level of job burnout affect their intention to turnover positively and significantly. However, their emotional labor behaviors do not significantly affect their intention to turnover. Values of goodness of fit (x^2[1, N=110]=1,110; p<0.01; x^2/sd=1,110; RMSEA=0,032; CFI= 0,998; GFI=0,993) are between acceptable values.



Schema 1. Model of Research

At the end of the research, following results was reached: Considering the effect of emotional labor behaviors on intention to turnover, job burnout does not have mediation effect.

Correlation Analysis

Results of correlation analysis which was made in order to find the relation between dimensions and the level of this relation can be seen in the Table 2.

Table 2

Interdimensional Correlation Table							
		1	**2**	**3**	**4**	**5**	**6**
Deepacting 1	Correlation	1	-,229*	-,361**	-,169	-,407**	,004
	Significance		,016	,000	,078	,000	,964
	N	110	110	110	110	110	110
Emotionalexhaustion 2	Correlation	-,229*	1	,739**	-,253**	-,134	,555**
	Significance	,016		,000	,008	,164	,000
	N	110	110	110	110	110	110
Desensitization 3	Correlation	-,361**	,739**	1	-,220*	-,067	,447**
	Significance	,000	,000		,021	,488	,000
	N	110	110	110	110	110	110
Surfaceacting 4	Correlation	-,169	-,253**	-,220*	1	,234*	-,183
	Significance	,078	,008	,021		,014	,055
	N	110	110	110	110	110	110
Personalfailure 5	Correlation	-,407**	-,134	-,067	,234*	1	-,142
	Significance	,000	,164	,488	,014		,139
	N	110	110	110	110	110	110
Int. to. turnover 6	Correlation	,004	,555**	,447**	-,183	-,142	1
	Significance	,964	,000	,000	,055	,139	
	N	110	110	110	110	110	110
. Correlation is significant in the level of 0.05.							
****. Correlation is significant in the level of 0.01.***							

Source: Made by researcher.

According to the table above, the dimension of deep acting among strategies of emotional labor is related with all dimensions of job burnout in reverse direction and in medium level. This means that when tendency to display deep acting increases, level of job burnout decreases. Similarly dimension of surface acting also is related with all dimensions of job burnout in reverse direction and in medium level. However, because reverse coding was made before the analysis of data, reverse direction of surface acting refers normally to same direction. This means that when tendency to display surface acting increases, level of job burnout increases. Intention to turnover is related only with sub-dimensions of job burnout called emotional exhaustion and desensitizationin same direction. This means that when emotional exhaustion and desensitization increases, intention to turnover increases. Any relation between intention to turnover and deep acting was not found.

In studies on emotional labor and job burnout, Dıjk and Brown (2006), in their study on employees of two historical establishments which provide service for tourists, reached the result that emotional labor affects emotional exhaustion. Hwa (2012:121), in his/her study on front office employees, found that surface acting affects emotional exhaustion positively and deep acting affects emotional exhaustion negatively. Kim (2008), in his/her study on employees in tourism sector, suggests that surface acting has a medium level and positive significant influence on emotional exhaustion and deep acting does not have a significant influence. Basım, Beğenirbaş and Can Yalçın (2013), detected that surface acting affects emotional exhaustion positively and deep acting affects emotional exhaustion negatively. Grandey, Fisk and Steiner (2005: 900), suggests that obligation to regulate emotions causes emotional exhaustion. Brotheridge and Grandey [11], in their research on the effect of emotional labor on emotional exhaustion of employees from different sectors, found that surface acting affects the dimension of desensitization positively and significantly, and it affects the dimension of sense of personal success negatively and significantly; deep acting affects only dimension of low sense of personal success positively and significantly [11]. Glomb and Tews, in their study to develop a level of measurement for emotional labor, found a significant and positive relation between surface acting and emotional exhaustion [21]. Mikolajczak, Menil and Luminet (2007), reached the result that surface acting affects job burnout negatively and significantly, and that deep acting affects job burnout positively and significantly.

In studies on the relation between emotional labor and intention to turnover, Karatepe and Aleshinloye (2009), in their research on hotel employees, indicates that affective disharmony and emotional exhaustion influence intention to turnover positively and significantly, and that emotional exhaustion has a partially mediation effect on the effect of affective disharmony on intention to turnover. Goodwin, Groth and Frenkel (2011), in their research in which they examine the relation between emotional labor, job performance and intention to turnover, suggest that deep acting affects job burnout and intention to turnover positively and significantly, and that surface acting affects emotional exhaustion positively and significantly [22].

Wong and Wang indicate that emotional behaviors of tour leaders affect their interactions with tourist and their ability of problem solving [58]. Gürsoy, Boylu and Avcı, in their study on trainees, found that emotional labor affects job satisfaction negatively and significantly [24].

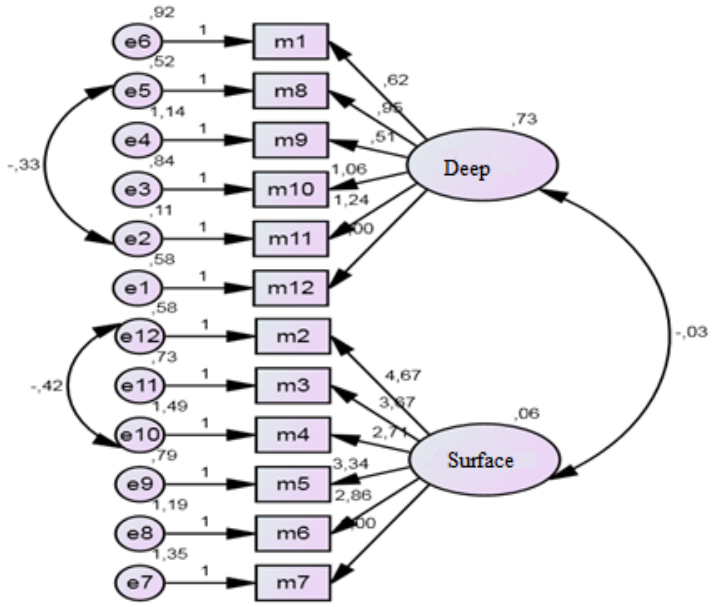
Conclusion. First and important impression of customers regarding service quality is constituted of behaviors displayed by employees who provide service. Therefore, examining levels and dimensions of emotional labor is significant for companies in order to create advantage in competition by guaranteing efficiency in recruitment in human resources management and employing right person in right area. Labor-intensivity, customer centricity and high level of rates of employee turnover makes human resources management more important for businesses. In this framework, success of companies which aim to become successful in service sector can be ensured by recruiting workers who tend to display emotional labor and by not employing ones who do not. Whereas knowledge and skills are learned through experiences, emotions are not learned or cannot be changed. Additionally, employees who tend to display emotional labor do not encounter with negative situations such as alienation, physical or emotional stress when business asks for cheerful and sincere behavior [5], [39].

This research was conducted in order to introduce travel agency personnels' level of emotional labor, level of job burnout and intention to turnover, and the relation between them.

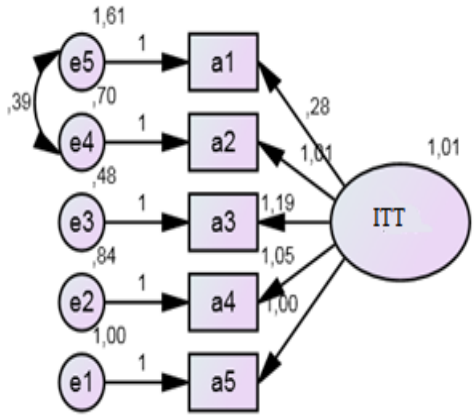
In another research, any difference in dimensions of emotional labor was not found regarding employees' demographical characteristics such as their age, educational background, seniority, marital status and total working hours. [51]. In researches conducted, results on the effect of working hours on deep acting are obtained [37], [55]. According to the results of researches mentioned, increase in working hours increases employees' tendency to display deep acting.

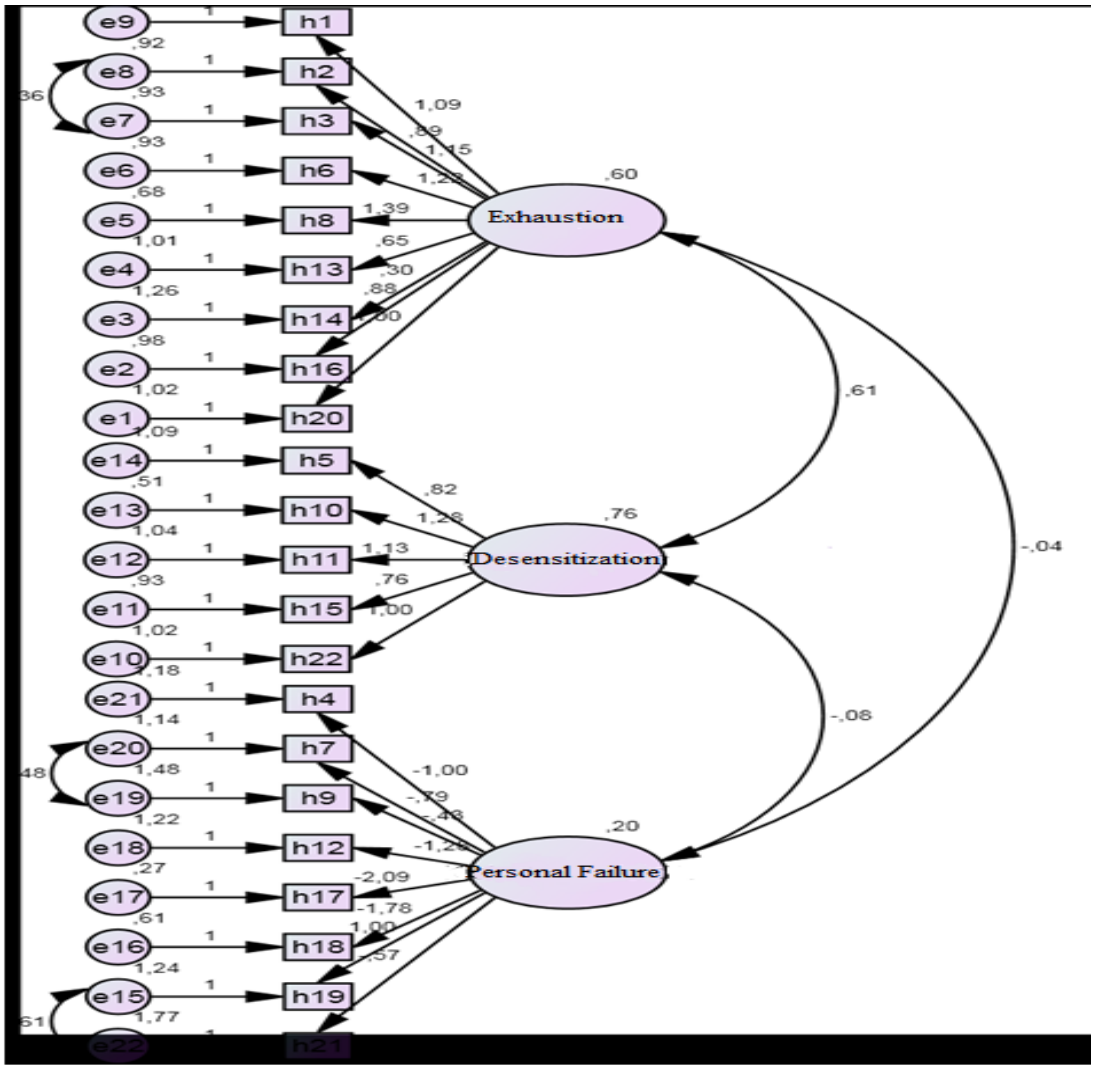
Appendix:

Emotional Labor Confirmatory Factor Analysis



Intention to Turnover Confirmatory Factor Analysis





Job Burnout Confirmatory Factor Analysis

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ECONOMIC RELATIONS BETWEEN REPUBLIC OF MOLDOVA AND TURKEY

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The topic of article is bilateral economical and foreign trade relations between Turkey, which has started to apply outward-oriented economic policies since globalization and Moldova, which has done market transition after breaking up with the Soviet Union. Within this frame, the subject of article has been searched in depth as follows: general overview of Turkey's economic relations, overall picture of Moldovan-Turkish relations, short exposition of Moldovan economy and bilateral economic and foreign trade relations of Moldova and Turkey. The topic of article is a current issue. Because Moldova, which is closed to Turkey in terms of geography, culture and history always has been an attractive country politico-economically for Turkey since its independence. Bilateral economic relations starting with shuttle trade have formalized and further developed and Turkey became as one of top ten biggest economic and trade partner of Moldova. On this basis, the aim of study is to elucidate foreign trade of Turkey with Moldova and to compare performances of Turkey by years and by other countries, which have remarkable domination in Moldovan market. Within this scope, bilateral trade volume of Moldova and Turkey has increased year by year considering the past decade, which makes Turkey as the 7th largest import and 8th export partner of Moldova. Turkey aims to be one of the first three biggest economic partner of Moldova after entry into force of Free Trade Agreement (FTA), which was signed by both countries in 2014 to increase foreign trade volume up to 1 billion US dollars.

Key words: *agreement, economy, export, foreign trade, import, Moldova, Turkey.*

Subiectul articolului abordează relațiile bilaterale comerciale și economice dintre Turcia, care a început să aplice politici economice orientate spre exterior la globalizare, și Moldova, care a făcut tranziția pe piață după destrămarea Uniunii Sovietice. În acest aspect, subiectul articolului a fost cercetat în profunzime, după cum urmează: privire generală a relațiilor economice ale Turciei, imaginea de ansamblu a relațiilor moldo-turcești, expunerea succintă privind economia Republicii Moldova și a relațiilor comerciale economice și externe bilaterale ale Republicii Moldova și Turcia. Subiectul articolului reprezintă o problemă curentă. Republica Moldova, în ceea ce privește geografia, cultura și istoria, a fost întotdeauna o țară atractivă politico-economică pentru Turcia, începând cu proclamarea independenței sale. Turcia a devenit unul dintre cel mai mare din topul celor zece parteneri economici și comerciali ai Republicii Moldova. Pe această bază, obiectivul de studiu este de a elucida comerțul exterior din Turcia cu Moldova și pentru a compara performanțele Turciei, precum și cu alte țări, care au dominație remarcabilă pe piața moldovenească. În cadrul acestui domeniu de aplicare, volumul schimburilor comerciale bilaterale ale Moldovei și Turciei a crescut an de an, având în vedere ultimul deceniu, ceea ce face ca Turcia să fie al 7-lea cel mai mare partener de import și al 8-lea partener de export pentru Moldova. Turcia își propune să fie unul dintre primii trei cei mai mari parteneri economici ai Republicii Moldova după intrarea în vigoare a Acordului de Liber Schimb (ALS), care a fost semnat de ambele țări în anul 2014 pentru a spori volumul comerțului exterior până la 1 miliard de dolari SUA.

Cuvinte-cheie: *acord, economie, export, comerț exterior, import, Republica Moldova, Turcia.*

В статье рассматриваются экономические и внешнеторговые отношения между Турцией, в результате глобализации начавшей применять внешнюю направленность экономической политики, и Молдовой, которая после распада Советского Союза совершила переход к рынку. Молдова, со времени ее независимости, в географическом, культурном и историческом планах,

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всегда была привлекательной страной для Турции с политико-экономической точки зрения. Двусторонние экономические отношения, начинающиеся с челночной торговли, получили дальнейшее развитие: Турция вошла в первую десятку экономических торговых партнеров Молдовы. После вступления в силу соглашения о свободной торговле (PTA), подписанное обеими странами в 2014 году, Турция стремится занять место в первой тройке крупнейших экономических партнеров Молдовы, чтобы увеличить объем внешней торговли до 1 млрд долларов США.

Ключевые слова: *соглашение, экономика, экспорт, внешняя торговля, импорт, Молдова, Турция.*

JEL Classification: F15; F53; F55; F59; O13; Q17.

The methodology of research. Literature research, historical method, comparison method and statistical method have been used for analyse.

Literature research. Literature research has been done as a first step after subject identification of aformentioned article. In this context several reports, news, articles, statistics and web-sites of public authorities were examined through internet access.

Historical method. Historical method has been used to make evident the historical development process of Moldovan and Turkish economy within a fixed time. In this context we can see, that Turkey has amended its economy from import-substituting policies to outward-oriented economy policies and has started to establish trade relations and has entered into integration process as a result of globalization. By this means Turkey achieved to appear at international arena through several economic cooperations and agreements. As a positive result of this evolution, Turkish foreign trade indicators showed remarkable changes.

On the other hand, Moldova was under domination of the Soviet Union in the beginning of globalization trend – 1980s. Its economy depended on central socialistic planning[1] of the Soviet Union. Then Moldova transferred to free market economy after breaking up with the Soviet Union. Its economy is weaker than its neighbour countries, but it is recovering. Moldova involved to EU integration policies after the full-membership of Romania and gained trade advantages through these policies and financial supports from EU. The significant increase in Moldova's economy was seen in 2013 with 8.9% growth in national income.

Comparison method. Comparison method has been utilized to reveal the problems in bilateral foreign trade relations between Turkey and Moldova. In this context despite bilateral foreign trade increased year by year, it did not reach to desired level. Bilateral foreign trade volume particularly is approximately at the same level over past two years. The significant increase in bilateral foreign trade volume was seen in 2011, when it remained from 259 million US dollars to 454 million US dollars. It further increased to 534 million US dollars in 2014 by comparison with 2011.

Otherwise, even if Turkey is the 7th largest import partner and 8th largest export partner of Moldova, its market share is small in comparison with other trade partners of Moldova. The largest trade partner of Moldova is EU, particularly Germany, Italy and Romania. Russia has also a remarkable market share in Moldova.

Statistical method. Statistical method has been used to create tables and to account amount changes.

Introduction. Achievement is essential to turn upside-down competition, which is a product of free market economy accompanied by globalization. That's why states, which desire to secure economies, prefered cooperation with other states, that have stronger economies instead of competition in such a world order. In this scope, several agreements have been signed and various cooperations or integrations have been constituted in both economic and trading spheres.

Turkey as a developing and being up to date country has entered to several economic integrations or cooperations and has put signature to bilateral trade agreements with many countries. One of them is

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[1] ***Agriculture was the predominant occupation in the Soviet Union before the massive industrialization under Joseph Stalin. That's why Moldova had an important place at agricultural production of the Soviet Union due to its rich soils.***

Moldova, which is known as "Agricultural land" by virtue of bening soils that rose from the "ashes" in 1991 after its declaration of independence. Turkey was one of the first countries recognizing the independence of the Republic of Moldova and established diplomatical relations with it on February 3, 1992. By this means bilateral politico-economical relations between Turkey and Moldova have developed expeditiously since then.

When viewed from economical aspect there are several important agreements for Turkey to constitute and develope the legal infrastructure of bilateral economic relations. Both Moldova and Turkey were signed these agreements. Additionally when considered bilateral foreign trade from material point of view, bilateral foreign trade volume almost has increased quituple over the past decade, yet it hasn't reached to desired level. The reason is that Turkey's share in Moldovan market is small comparing with EU and CIS countries. The benefits of FTA signed by Moldova and Turkey can promote to extend market share of Turkey and can increase bilateral foreign trade volume.

Besides Moldova always has been an attractive country in terms of investment by Turkish enterpreneurs since its independence. Within this scope Turkey is Moldova's 10th biggest economic partner with amount of 23 million US dollars of foreign investment, however Turkish-capitalized companies existing in Moldova, have employed 4500 Moldovan in total.

The year of 2014 was active for both Turkey and Moldova. Namely FTA was signed and the Liberalization of Visa Regime entered into force in 2014. By this means either number of tourists visiting Moldova and Turkey or number of business travels will increase and this situation contributes inflow of foreign currency to both sides.

Turkey's economic integrations and agreements

Economic developments seen in the World have been continuing at top speed from past to present. In this context, owing to increasing World trade volume and competition, marketshare strengthening efforts of states and companies paralelly increase. Achievement at international arena became as an unavoidable factor to survive and stand at such a strong competition environment. That is why developed or developing countries, which aimed to get out of this situation without loss or minimum loss, have started to attach more importance to their economic securities. Particularly since 1980's with fast-growing globalization process, states have gone to cooperation and integration way in the direction of mutual benefits to avoid from competition and competitior countries and to expedite integration process with the World. In this way, organisations have been established and bilateral or multilateral trade agreements have been signed within the frame of integration.

As many developing countries Turkey also has stopped import-substituting economy policies to boost its capital movement to international level since the beginning of globalization trend with developing technology. Then it has begun then has begun outward-oriented economy policies to improve its economy and it has started to establish trade relations and has entered into integration process. Within this frame Turkey is member of organisations and cooperations towards economic integrations such as World Trade Organisation (WTO), Developing Eight (D-8), Economic Cooperation Organisation (ECO), Organisation for Economic Cooperation and Development (OECD), Black Sea Economic Cooperation Organisation (BSEC), International Monetary Fund (IMF) and World Bank (WB). Besides bilateral economic relations also have importance for development of Turkish foreign trade. In this context Double Taxatation Avoidence Agreement (DTAA), Agreement on Promotion and Mutual Protection of Investments (APMPI), Joint Economic Committee (JEC), Free Trade Agreement (FTA) play very important role in constitution and development of legal infrastructure of bilateral economic relations.

Turkey has signed with 79 countries DTAA, 69 countries APMPI and FTA[1] with 34 countries until today. However JEC exists with 65 countries. Turkey was continuing its cooperation relations with totalitarian regimes and developing countries through JEC. Then JEC countries did market transition and Turkey's relations with these countries slided to private sector. That's why these committees' importance gradually has fallen and majority of them aren't effective today [2].

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[1] ***Turkey signed FTA with 11 countries of Central and Eastern Europe. Agreements were abolished due to European Union membership of these countries. Turkey joined to European Union Customs Union on 1st January 1996. That's why Turkey performs trade and foreign direct invesment (FDI) relations with aforementioned 11 countries through European Union Customs Union.***

Aforesaid integrations and agreements of Turkey reflected on parameters as foreign trade volume, foreign direct investment (FDI) and direct investment abroad (DIA). According to datas of Turkish Statistical Institute amount of Turkish foreign trade volume was approximately 42 billion US dollars in 1994 and it increased almost ten times and reached to 400 billion US dollars. However FDI inflow was 19.6 billion US dollars between the years of 1975 and 2004. This amount increased more than eightfold and reached to 144.3 billion US dollars between the years of 2005-2014 [4], [9]. In addition amount of DIA was 1.823 billion US dollars in 2010 and it reached to 2.5 billion US dollars in 2011 and to 4.3 billion US dollars in 2012. Due to Global Financial Crisis amount of DIA fell to 3.226 billion US dollars in 2013, even so it reached to 5 billion US dollars in 2014 [14].

Factors such as geographical closeness, common history, political situation, infrastructure, adaptation process to free market economy, communication, promotion play important role for further development of economic integration and bilateral trade relations in Turkish economy, which dynamised and opened up to the World. For example Middle East countries can't concentrate on their economies sufficiently due to political conflicts. As a result of this, investments remain incapable, correspondingly they have payment difficulties and their imports remain limited. Accordingly, Middle East countries have structural problems in economical context. Bilateral trade volume couldn't reach to desired level between Turkey and countries of this region, despite Turkey wants to develope its relations with Middle East, as it wants with other regions. Besides Gulf countries have stronger economies than Middle East countries. But these states are in cooperation with Western countries, which have advanced economies. That's why Turkish entrepreneurship and Turkish companies weren't known sufficiently, as a result access to market was limited.

When we look at countries of Central Asia, we can say that they have adaptation problem in transition process from communism to democracy, from collectivist economy to free market economy after the collapse of Soviet Union. They have had difficulties in this environment, where exists production downturn, paralelly decrease of trade, irregular movements of money and appearance of clearing and settlement systems. That's why Central Asian countries couldn't constitute a rational economy and they couldn't sufficiently provide public order. Turkey is a democratic and secularistic country that adopted market economy. That's why some countries showed Turkey as an example and they qualified Turkey as a model for Central Asian countries. Turkey has supported aforementioned countries, which are close in historical and cultural context. Turkey could have done cooperation with these countries in many spheres like energy, agriculture, mining industry, trade and tourism. But unsettled economies, problems at transition process, inabilities of financing and problems caused by infrastructure deficiencies prevent full foreign trade between Turkey and these countries.

Turkey's foreign trade relations with Africa except several countries (Libya, Algeria, Morocco, Tunisia and Egypt) haven't reached to desired level until today. Communication deficiencies, domestic political instabilities and staying out of Turkey's natural point of interest are main negative effectors of foreign trade between Turkey and African countries, despite geographical closeness and common cultural history. That's why bilateral trade couldn't have reached exactly to desired level. Turkey is seen as a gate, opening to Middle East, Central Asia and Europe by Sub-contitent and Asia-Pacific countries. In this sense they recently have begun to search spheres and opportunities for economic cooperation with Turkey. In spite of Turkey's positive image, foreign trade level couldn't have reached to desired level yet. The source of this problem is geographical closeness, namely this region stays out of Turkey's sphere of influence.

Turkey exists on route of access to the Balkans. Development of trade relations with this region is important for Turkey in economical and political context. If Turkey provides economic growth and joins to integrations constituted by West like European Union (EU), either Turkey or region countries will gain favor. Turkish bilateral trade relations are quite good notably with Romania and Bulgaria fromaforementioned region, which is geographically close. Turkey is one of ten biggest investor countries in both countries. Turkey's volume of foreign trade have reached to 1.633 billion US dollars through FTAs signed with region countries and this amount will increase more and more as expected.

Turkey is a transcontinental Eurasian country. European countries which includes 3%. Turkey's trade relations with European Union (EU) developes with "win-win" strategy toward mutual benefits. Turkey has EU candidate status, which officially joined to EU Customs Union on 1st January 1996. By means of EU Customs Union foreign trade relations between them deeply developed. Turkey is the 7th biggest importer and the 5th biggest exporter of EU today [12].

Developing relations with the Republic of Moldova

Considering trade agreements and integrations, Turkey has entered to cooperation with many countries, which will be continued. In this context one of these countries is the Republic of Moldova[1], which isn't so far to Turkey in terms of culture, history and geography (See Map 1).

Map 1. Geopolitical location of Moldova and Turkey

Source: Stratfor Global Intelligence, 2010, www.stratfor.com

The capital of Moldova is Chisinau, which is far to Istanbul approximately 616 miles (992 kilometres). Moldova is an ex-Soviet Union country, that proclaimed its independence on 27th August, 1991. Turkey recognised its independence on December, 1991. The bilateral diplomatical relations of two countries has been continuing since February 3, 1992, which has been progressing further. The Agreement on Friendship and Cooperation, which counts as a judical basis of two countries' relations was signed in 1994 by President of Turkey of period Suleyman Demirel[2], when he visited Moldova. In addition to this, Turkey gives particular importance on relations with Gagauzia, where live Gagauzians, who are Turkish society and believe in Orthodox Christianity. Gagavuzians as known as Ghuzz Turks are living in autonomus region named "Gagauzia", where is depended to Moldova. Particular attention of Turkey to Gagauzia also helps to strengthen Moldova-Turkey relations [op. cit.]. According to forecasts, approximately 250-300 thousand of Gagavuzians live today. 167.500 of them live in Gagauzian Autonomus Region of Moldova, 32 thousand of them live in Ucraine, 30 thousand of them live in Greece, 3 thousand of them live in Bulgaria, 1.500 of them live in Romania and 15 thousand of them live in Turkey. According to datas of 2002 a thousand of Gagauzian live in Kazahstan [5].

Moldova becomes strong. Moldova transferred to free market economy after the collapse of Soviet Union. The big picture of Moldovan economy is weaker, comparing its neighbours. The biggest deficiency of its economy is energy dependency. Moldova imports almost whole energy sources. Russia mostly provides them. Energy dependency of Moldova to Russia increases its foreign trade deficit. National income fell 6% by virtue of The Global Financial Crisis in 2008. Another strike to Moldovan economy came from Russia due to political reasons. In this sense Russia increased twice natural gas prices and imposed embargo to wine and another agricultural products of Moldova, which has suitable soil and climatic conditions in agriculture.

Moldova involved to EU integration policies after the full-membership of neighbour Romania and it gained trade advantages through these policies. Besides IMF's help with amount of 574 million US dollars under "The authorities" program for 2010-2012 and increasing numbers of export to Russia put a smile on

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[1] ***Moldova, which is known historically as "Basarabia" and locates between two rivers the Prut and the Dniestr entered into the domination of the Ottoman Empire in 16th century. Moldova had depended as "Bogdan State" to the Ottoman Empire for 300 years until the Treaty of Bucharest of 1812. In accordance with the Treaty of Bucharest of 1812 Moldova entered into the domination of the Russian Empire.***

[2] ***The 9th president of the Republic of Turkey Suleyman Demirel died on 17th June, 2015.***

Moldova's face in terms of economy. The significant increase in Moldova's national income was seen in 2013 with 8.9% economic growth thanks to fast developments of agriculture sector and consumer expenditures [10].

Turkey's market share is small

Moldova has done market transition and has started to open to the world after the dissolution of the Soviet Union as mentioned above. In this context, Turkey immediately has initiated to Moldova market and has become one of the most important trade partner of Moldova. Turkey has entered to Moldova with shuttle trade at the beginning. Then mutual fairs participation and business travels have led to gain momentum of economic relations. Today Turkey is the 8th biggest export partner of Moldova with 4.5% share after Romania, Russia, Italy, Germany, Belarus, Ukraine and the UK, however Turkey is the 7th largest import partner of Moldova with 5.7% share after Romania, Russia, Ukraine, China, Germany and Italy according to datas of Central Intelligence Agency (CIA) World Factbook of 2014.

Considering bilateral trade and economic relations between Turkey and "agricultural land" Moldova, the desired increase could not have been captured in spite of momentum in 2013. Namely bilateral trade volume was 359.4 million US dollars in 2012, which increased to 537.3 million US dollars and stayed at 533.7 million US dollars with a small decrease (See Table 1).

Table 1

Foreign trade indicators between Turkey and Moldova by years

Year	Export (Million US $)	Import (Million US $)	Bilateral Trade Volume (Million US $)	Bilateral Trade Balance (Million US $)
2005	81.11	31.45	112.56	49.66
2006	107.38	31.41	138.79	75.97
2007	145.75	52.88	198.63	92.87
2008	198.47	69.53	268	128.94
2009	117.77	86.52	204.29	31.25
2010	148.21	110.73	258.94	37.48
2011	208.95	244.48	453.4	-35.6
2012	224.3	135.0	359.4	89.3
2013	276.3	260.9	537.3	15.3
2014	286.8	246.9	533.7	39.9

Source: Ministry of Economy of the Republic of Turkey, 2015, www.ekonomi.gov.tr

Bilateral trade volume between Turkey and Moldova is 213 million US dollars in January-July period of 2015. This amount is lower 31.1 million US dollars comparing the same period of 2014 (See Table 2). In this context Turkey created 5.8% share in total export of Moldova and it created 5.11% share in total import of Moldova on January-July period of 2014. But balances have changed at the same period in 2015. Namely Turkey's total market share in export to Moldova fell to 3.2% and it reached to 7.5% in import from Moldova.

Table 2

Foreign Trade Indicators of Moldova and Turkey between January and July

Year	Export (Million $)	Import (Million $)	Bilateral Foreign Trade Volume (Million $)	Bilateral Foreign Trade Balance (Million $)
2014	70.3	173.8	244.1	-10.3
2015	37	176	213	-13.9

Source: National Bureau of Statistics of the Republic of Moldova, 2015, www.statistica.md

Moldova's general total amount of export is 1.3 billion US dollars and import is 2.9 billion US dollars in January-July period of 2015. Comparing same period of 2014, export to Moldova decreased 15.9% and import decreased 22.3%.

Why is Turkey's market share small? Answer is simple: by virtue of EU and Commonwealth of Independent States (CIS). Bilateral foreign trade between Moldova and EU and between Moldova and CIS are more than Turkey's. Additionally bilateral trade between Moldova and EU has increased more in January-July period of 2015 than the same period of 2014, concordantly it decreased with CIS and other countries more than the same period of 2014. Still CIS countries have a respectable share at market of Moldova in 2015.

The biggest trade partner of Moldova from CIS countries is Russia. The biggest trade partners of Moldova from EU countries are Italy, Germany and Romania [7].

Turkey's export to Moldova mostly consists of textile and off-the-self products, vegetables (tomato, cucumber) and citrus fruits, knitted fabrics, cleaning products like toilet paper and kitchen paper, pharmacy products, aluminium rod and aluminium/plastic shapes, synthetic fiber yarns, construction products and car/bus products. Turkey's import from Moldova mostly consists of sunflower seed, oilseed rape, steel/iron trashes and scraps, wheat, raw/crude hide, cereals and carpets [11].

Turkey attaches importance as well as Moldova to bilateral economic relations to develope its foreign trade as aforementioned. The most important agreements, which constitute and develope legal infrastructure of Turkish economic relations are DTAA, APMPI and FTAs. In this context all these agreements were signed by Turkey and Moldova[1]. In addition to this, they also signed Bilateral Trade and Economic Cooperation Agreement, Agreement on Cooperation and Mutual Assistance in Customs Matters, International Road Transport Agreement and Agreement on Cooperation in Industrial Area and Scientific and Technological Cooperation Agreement.

Considering development-oriented integrations right along with aforementioned trade agreements, both countries are members of WTO, IMF and World Bank. Besides Moldova is a member of BSEC, which was founded by Turkey.

Moldova, which has signed with 35 different countries APMPI including Turkey has strengthened fighting against corruption and has made arrangements on legal infrastructure particularly in recent years. Within this frame Moldova made reforms to create an advantageous clime for foreign investors and it has begun to take measures for foreign companies for utilization from same advantages of local companies [9].

Turkish companies provide employment

Within this frame, Moldova always has been an attractive country for Turkish investors since the declaration of its independence. As of today, the number of Turkish-capitalized companies registered to Moldova Chamber of Commerce is over a thousand. But approximately 120 of these companies operate actively. Additionally Turkey is Moldova's 10th biggest economic partner considering the amount of foreign investments that reached to 23 million US dollars. Besides capital outflow from Turkey to Moldova is approximately 11.6 million US dollars.

Priority sectors of Turkish companies based in Moldova are food, drink, telecommunication, garment industry, tourism, ceramic, medicine, construction, transportation and restaurant management. Within this scope leading companies as Leogrand, Moldcell, Asena Textile, Nefis, Infinity, Ece Bath Companies, Medpark Hospital, Acibadem Hospital and SUMMA etc. have made investments with high amount in Moldova. Besides lots of Turkish-capitalized tourism agencies exist in Moldova.

Tourism is a contributory factor for economic growth of Moldova as well as for every country. In this context liberalization of visa regime[2], which has begun since 1st June 2014 is a subsidiary motivation to increase number of Turkish investors and tourists to Moldova [3]. Approximately 58 thousand of Moldovan tourists visit Turkey every year, notably through abovementioned tourism agencies. The number of Moldovan tourists visiting Turkey reached to 63.500 in 2014, which was above average [6]. In the same year the total number of tourists visiting Moldova is 283 thousand. In this sense the number of Turkish tourists visiting Moldova was 10.754 [8, 26]. Under favour of agreement on visa liberalization regime between Moldova and other countries, including Turkey the total number of tourists visiting Moldova increased 4.2 percent [5].

When examining employment between Turkey and Moldova, Turkey has employer status considering either Turkish investments and Turkish companies in Moldova or the number of Moldovans going to Turkey for employment. Turkish companies in Moldova have provided employment in total to 4500 Moldovan, 2 thousand of them were in Gagauzia. Additionally according to datas of the Ministry of Labour and Social Security of the Republic of Turkey, 6391 Moldovan people had applied for work

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[1] Moldova-Turkey FTA was signed on 11st September 2014. The negotiations of this FTA was continuing since 2011. Aforementioned FTA is the 1st FTA, existed in non-EU Eastern Europe. According to agreement, opportunity for entrance to association state will be provided to 89% of Moldovan import and 69% of Moldovan export. Both states aimed to increase volume of foreign trade to 1 billion US dollars and Turkey aims to be one of the first three largest trade partner of Moldova.

[2] The Agreement on Liberalization of Visa Regime were signed by Moldova and Turkey on 1st November 2012 in Ankara, that entered into force on 1st January 2014.

permit to Turkey, who were mostly women in 2011-2014 period. Within this frame Moldova is the 6th of the 10 countries, which applied most for work permit to Turkey [1].

Conclusion

Bilateral trade volume of Turkey and Moldova couldn't have reached to desired level, despite it has increased year after year. One of the most important reason of this trouble is small market share of Turkey in Moldova. Because Moldova's bilateral foreign trade with EU, notably with Germany, Italy and Romania and with CIS, notably with Russia is larger than Turkey. Even so, Turkey is the 8th largest export partner and 7th biggest import partner of Moldova, that led to Turkey being one of top 10 largest trade partner. In this context, Turkey aims to be one of the first three largest economic partners of Moldova and both Turkey and Moldova aim to increase bilateral trade volume up to one billion US dollars in future, through the instrument of FTA signed by them in 2014.

In terms of investment Moldova always has been an attractive country for Turkish entrepreneurs since its independence. Turkey is Moldova's 10th biggest economic partner with amount of 23 million US dollars of foreign investments in Moldova. Besides 120 Turkish-capitalized companies are operating actively in Moldova today. Considering Turkish companies in Moldova and Moldovan labours in Turkey, Turkey has employer status. Turkish companies in Moldova provided employment to 4500 Moldovan, 2000 of them are in Gagauzia. Otherwise 6391 Moldovan notably women have applied to Turkey for work permit in 2011-2014 period. In this context Moldova is one of top ten most applied countries for work-permit to Turkey.

Apart from that liberalization of visa regime entered into force in 2014, signed by Moldova and Turkey in 2012. According to expectations both number of tourists visiting Moldova and Turkey and number of business travels to both countries will increase. This situation will contribute to increase of foreign trade, investment and inflow of foreign currency either to Moldova or to Turkey.

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INTERNATIONAL CONCEPTUAL REFLECTION ON THE FINANCING OF ECONOMIC ACTIVITY

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Novelty of this article is determined by the importance and impact that international donors have on economic activity of Romania. The main purpose of the article is the theoretical foundation in the development of methods to streamline the functioning of the Romanian economy under international funding; for this purpose, the following methods have been used: grouping, categorization, methods of analysis, synthesis, extrapolation complex treatment processes economic. The main scientific results obtained in this article, result of research consists of all problems solved, and also the conceptual and practical concept attracted international financing to develop the economy, arguing its role and effectiveness in transforming the economy into one innovative.

Key words: *financial funds attracted, international financial operations, foreign direct investment, effects, economic growth, impact, contributions.*

Actualitatea prezentului articol este determinată de importanța și impactul pe care îl au finanțările internaționale asupra activității economice a României. Scopul principal al studiului constă în fundamentarea teoretică, în elaborarea metodelor de eficientizare a funcționării economiei României în baza finanțărilor internaționale, fiind utilizate următoarele metode: gruparea, tipologizarea, metodele de analiză, sinteză, de extrapolare, de tratare complexă a proceselor economice. Principalele rezultate științifice obținute, ca urmare a cercetării, rezidă în totalitatea problemelor soluționate și, totodată, în generalizarea conceptual-practică a conceptului de finanțare internațională atrasă în vederea dezvoltării economiei, argumentând rolul și eficiența acestuia în transformarea economiei în una inovațională.

Cuvinte-cheie: *fonduri financiare atrase, operațiuni financiare internaționale, investiții străine directe, efecte, creștere economică, impact, contribuții.*

Актуальность данной статьи определяется значением и влиянием которое оказывает внешнее финансирование на экономическое развитие Румынии. Основная цель данной статьи является теоретическое обоснование определения методов повышеня эффективности функционирования экономики Румынии в рамках международного финансирования, используя в этих целях следующие методы: группировки, категоризации, методы анализа, синтеза, экстраполяциидля комплексного рассмотрения сложных экономических процессов. Основные научные положения, представленные в статье, в результату проведенного исследования исходят из комплекса рассмотренных проблем и, одновременно из общей концептуально-практической характерисьтки концепции междкнародного финансирования в целях экономического развития, аргументируя её роль и эффективное влияние в трансформировании экономики на инновационный путь развития.

Ключевые слова: *финансовые средства, привлеченные, международные финансовые операции, прямые иностранные инвестиции, эффективность, экономический рост, влияние, взносов.*

JEL Classification: E2; F2; F5.

Introduction. Funding can get different aspects as how to make available funds. Because the donor has to be ensured in the use of the funds for designated and effective as anticipated funding is often accompanied by some prerequisites for the beneficiary.

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Financing operations pass through the following stages:

a) first, shall be undertaken by the institutional framework of financial markets, action by fundraising in their home markets. Here fall requests for funds to finance investment or placement of securities, the imposition by international financial institutions turning levies or quotas of participation (International Monetary Fund, World Bank), soliciting funds or aids, etc.

If you come accompanied attracted financial funds and amounts in national currency, financial market creates a claim for such amounts for financial institutions providing funds and money market showed signs are money;

b) in the second stage assessment phases appear attracted international funds. This is done by using international currency made available on international monetary market, exchange rate using the international standard. After this evaluation, financial fund value fluctuates along with the international standard course. This fluctuation can be avoided through international agreements that provide discount terms;

c) in the third stage, directing financial market makes monetised funds - international standard on destinations; These objectives can be achieved in various fields of economic, financial, municipal, cultural, military, applications received after the financial market. Such funds established in international currency finally takes on a new form which specifies the action that will serve and benefit respectively;

d) the last stage are effected movements of funds to national economies they have requested.

International financial transactions are usually the following: direct international investment, international funding for placement of securities of international financial aid, insurance and reinsurance, contributions to international financial institutions [5].

Foreign investment is the component of the international flows that reflects the purpose entity (natural or legal) resident in a country, to get interest (short or long) in an enterprise resident in another country.

International investment implies the existence of at least two undertakings, the trader and the trader issuing receptor located in different national spaces.

According to the established investment issuer and receiver are two categories of international investment: foreign direct investment (FDI) and foreign portfolio investment (ISP). From Historically, foreign portfolio investments precede FDI.

Thus, unlike foreign portfolio investment, foreign direct investment “that shifts by the issuing control and decision on receptor activity”.

If foreign direct investment interest of foreign investors and, consequently, its involvement manifests itself in the long term, which excludes the possibility of carrying out activities if possible speculative foreign portfolio investments.

Unlike ISP which represents outsourcing of financial assets (stocks and bonds), foreign direct investment generates investment flow internalized that include both capital assets (tangible) and intangible assets (knowledge management, marketing, know-how).

For the purpose of UNCTAD, collective investment funds (collective investment funds) include, inter alia, private investment companies (private equity Firms) and various investment funds (mutual funds and hedge funds).

A definition possible would be that “Foreign direct investment is a category of international investment that reflects the purpose of an entity resident in a country (direct investor) to obtain a lasting interest in an enterprise resident in another country (investment Direct)” [8].

Another definition would be: “FDI consist of the transfer of a package that contained industrial capital, technologies, methods of industrial organization, management expertise, marketing knowledge, etc., allowing the investor to exercise control over investment law”.

Foreign direct investment involves the internalization of tangible and intangible assets in the following conditions:

- economic agents involved to be located in different national spaces, namely direct investor (natural or legal) resident in the home, and direct investment is reflected in the host country or the receiving country;
- investor to show interest in the long term;
- investor to exercise control over the assets in which the investment is made.

Most domestic and international authors and organizations deemed of FDI flows consist of [1]:

a) actions: participation in the capital of a new or existing companies, which involves creating, expanding a company or purchase an existing business;

b) loans intracompanie: include borrowed funds between direct investors and subsidiaries, branches and associated companies;

c) reinvested earnings: those revenues it receives direct investor and not distributed as dividends or income on which the branch has not remitted to the direct investor.

Direct investments depend on a number of factors such as:

- marginal cost of access to a foreign market must be lower than the marginal revenue obtained from this operation;
- existence of conditions that make the production abroad would be less expensive than exporting the same product;
- its production abroad is more profitable than exportation or sale of licenses.

From a conceptual standpoint, the positive macroeconomic implications relate mainly to the following aspects [4]:

Support economic growth, which is performed differently depending on the form it takes foreign direct investment. If an investment "empty place" (greenfield), economic growth is due to the creation of new production capacity, additional jobs, the emergence of new consumer and taxpayer. If participation in privatization, positive effects appear if activity of economic efficiency and increase competitiveness, allowing long-term survival of the privatized enterprise.

Stimulate domestic investment, as local producers will be interested in increasing the efficiency and improving the quality of outputs either to face competition due to the presence of foreign investors in the sector in question, either to act as suppliers to foreign investors. In addition, local companies can gain access to the distribution channels of the foreign investor, in which case they will be interested in increasing production and quality of goods carried.

Supports restructuring and privatization, a matter which is of particular importance in the case of Central and Eastern Europe, particularly for companies requiring large amounts of capital and the ability to reorganize and streamline operations. Thus, foreign investors can contribute not only to the financial resources necessary to privatization, to the extent that subsequently perform rapid investment in order to improve business activity.

Increase investment capital due to foreign investors' access to external sources of capital. Where local capital markets lack the financial resources to fund important projects, foreign investment can cover this deficit as it is a direct source of foreign capital. This can have positive effects on the balance of payments by financing the current account deficit.

Generate positive effects on the trade balance, if the investor directly produce primarily for export or for the production for the domestic market substituting imports.

I support the state budget revenue growth due to new taxpayers in the host country's economy. Even if they are granted certain tax incentives, increase budget revenues due to higher receipts from payroll taxes.

Although foreign direct investment can generate a number of positive effects on the country implantation is not ruled out the possibility of a negative impact both at macroeconomic and sectoral levels [9], [10, p. 117-147]. Some of these adverse effects are inherent and manifests generally short, their emergence is closely linked to the implementation of the investment and/or its effectiveness, for example:

The increase in imports reflected negatively on the trade balance, due to imports of machinery and equipment financed by foreign investors, without which implementation of the investment would not be possible. In the long term, to the extent that refurbishment activity translates into increased productivity and competitiveness, it can record trade deficit decreased mainly when the foreign investor is driven primarily by export or import substitution.

Rising unemployment due to the restructuring of privatized enterprises with fast efficient order of business. Obviously, in this case, it can decrease the number of jobs in privatized enterprises. In our view, long-term, this disadvantage is insignificant if the restructured enterprises benefit from increased efficiency and competitiveness of business, in which case, the effects of training can generate new jobs (through the development of activities upstream or downstream) [7].

Negative impact on the budget because, on the one hand, tax incentives granted to foreign investors (political incentives) that the immediate effect of reducing revenues. On the other hand, increasing the number of unemployed as a result of privatization and restructuring of state enterprises generate additional budget expenditure, whereas the unemployed labor force of the restructured sectors is not immediately absorbed activities under development. In the long term, as the investments mature, it can record an increase in revenues to the state budget through taxes paid by new taxpayers (companies and employees) [6].

Therefore, the impact of FDI on the host economy is different from country to country, depending on the existing concrete economic, social and political and foreign capital penetration.

Bidirectional relationship between foreign direct investment and economic growth is due on the one hand, their impact on the economic environment in each country and on the other hand, the positive influences sustained and sustainable economic growth has on foreign capital flows receiver. According to specialists, for a given country periods.

Strong economic growth are characterized by attracting significant flows of foreign direct investment.

Although Romania has experienced high rates of growth, it was not supported to the same extent by foreign direct investment. In the year 2014 the share of FDI stock to GDP represented 24.2%, which is below the European average EU-25 (31.7%).

Accordingly, in the context of globalization and economic integration materialized mainly in the internationalization of production, foreign investments support growth in a more or less depending on specific conditions in each country [2].

The effects of FDI on the balance of payments are numerous and sometimes contradictory, being determined by a number of factors, among which the most important are: type of investment, economic efficiency, scope, access to resources, transaction costs classics and interventions host country.

Analysis of the impact of FDI on the balance of payments should take into account both trade flows (the trade balance) and "possible significant outflow of capital or diversion of flows from other potential investors". In this respect, the best example is the case of telephone company Romtelecom, the privatization of which, the foreign investor was guaranteed monopoly on the market for a period of five years, during which prices have increased significantly. These higher profits obtained as a result of anti-competitive techniques can turn into outflows in the form of excessive salaries of expatriates and high royalty fees, negatively affecting the balance of payments. For countries in transition to a market economy, such situations are not unique if we have the concentration of FDI in oligopolistic markets.

Another issue raised by the impact analysis of foreign direct investment is financing modality, which directly affect the level of external private debt. The negative effects on the balance of payments arise from foreign companies that borrow abroad and subsequently focuses on the rapid recovery of investment through the use of fiscal evasion techniques (higher transfer prices or fees).

Another aspect of analyzing the impact of FDI on the balance of payments aimed at tracking the effects generated by investment projects, as follows: in the first phase (the investment), capital inflows are recorded in the financial account as a tool to balance the balance of payments by financing the current account deficit; in the second phase (implementation of investment) due to massive imports made by foreign companies (equipment, machinery, raw materials etc.) there is an adverse effect on the trade balance.

In the third phase (maturity investment) effects on the balance of payments, trade balance are diversified respectively. Positive effects on the current account occur when profits are reinvested in the host country and capital outflows in the form of interest and fees generated by the system of transfer pricing administration are not significant.

Another aggregate effect of FDI is the budget, what impact can manifest itself in the form of contributions both positive and negative. In essence, the experts consider that in a first phase a negative impact on the budget and later with the development activities and creating new jobs, it becomes positive.

Positive and negative contributions to the budget:

a) *Negative contributions:*

The initial phase (implantation of investment):

- In budget revenues due to tax concessions granted to foreign investors (tax incentive policy);
- Additional budget expenditure, social, due to increased unemployment as a result of privatization and restructuring of state enterprises.

Subsequent phase (maturity investment):

- Can reduce taxes paid to the host state using transfer pricing mechanism and other mechanisms.

b) *Positive contributions (occurring only in the mature stage):*

- Additional revenue to the state budget in taxes paid consisting of new contributors (employees and businesses).

The quantity of the capital contribution of foreign direct investment inflows is expressed to the ratio of FDI flows received and gross fixed capital formation (GFCF). Foreign investment supplement internal capital be when done "the empty place" leading to the development of new activities or in case of change of ownership

(privatization or takeovers of firms) if the company so acquired would be closed or whether through the investment foreign, are improved performance. Obviously, from this point of view, the impact of foreign capital inflows is stronger for investment of "greenfield".

One of the most important effects of FDI, felt directly by local consumers, is to reduce the prices of goods and services with a positive impact on the standard of living of the native population. By entering into the local economy to foreign companies drop prices as a result of widening competition.

Of course, if the foreign investor manages to capture the market and hold a monopoly position, negative social and economic effects due to higher prices are good or service in order to obtain additional earnings. One example is the privatization of Romtelecom Romanian telephony followed by a significant increase in tariffs as a result of the monopoly position held by Greek investors and guaranteed by the Romanian state for a period of 5 years.

Therefore, the net impact of FDI on the living standards of the local population is difficult to quantify. If we consider only the issue of reducing prices is obvious that the standard of living is improving as local consumers will benefit from the new prices lower and a greater diversity of products. If it, however, in view of the more complex aspects, namely direct and indirect effects long term, the situation is changing, as undesirable phenomena may occur in economically and socially. In other words, higher living standards as a result of foreign direct investment aimed at the local market (market-seeking) has a price consisted essentially in widening disparities between members of society.

FDI impact on employment. The effects of FDI on local labor force depend substantially on the following factors: the size and type of investment; the mode of entry of the foreign investor; sphere; companies investing strategy; specific conditions in the host country.

The size of the investment (the firm) affects the local workforce both quantitatively and qualitatively. Quantitatively, transnational companies, though small in number (about 2% of the number of companies with foreign capital) attract the bulk of the workforce (60% of employees of companies with foreign capital) compared to small and medium investors prevailing number, but attract only a small proportion of local employees (about 35%). In terms of quality, size and financial strength of the company determines the extent to which it is involved in the preparation and training of its employees. This is the main reason that the activities of "trening" are more numerous for large transnational companies (like the mobile, financial companies etc.) than small and medium firms. At the same time, transnational companies, due to competitive behavior and owned technologies generates more often, fewer jobs than local firms of the same size.

Type of investment, namely its motivation, is another major determinant of FDI impact in human resources. Thus, if foreign investment motivated by the low cost of labor (for intensive branches of service) and/or quality of labor force characteristics of human resources indigenous significantly influence the investment decision constitutes the main advantage of the location of the host country [10].

How to enter foreign investor influence the amount of the active population structure. Thus, the investment of "greenfield" create new jobs with positive effects on employment. The situation is completely different in the case of FDI attracted in the privatization process, since acquired businesses faced generally by dramatic reductions in personnel as a result of restructuring activities, adversely impacting the labor market. However, given that the foreign investor fails, by streamlining business to bail out the company concerned long-term beneficial effects recorded due preservation of jobs.

The business scope of the company both quantitatively and qualitatively affect the local workforce. Thus, depending on the type of products manufactured (intensive in labor, capital or knowledge) can override one of the factors of production. If the predominant factor is labor, foreign direct investments have a significant quantitative impact on employment.

The strategy investing firm has direct effects on the local workforce, quantitatively. Thus, where the multinational company produce directly in the host country is much more significant impact than if they just set up branches (networks) distribution. Note that in Romania, as in other central and eastern European countries were adopted both strategies - direct production or distribution networks.

The effects of FDI on the restructuring. Transnational companies support economic restructuring host country both directly and indirectly. Direct effects due to: introduction of new technologies and/or upgrading existing ones, in their own interest; development of new activities; local suppliers in order to stimulate vertical integration in the corporate system. The indirect impact is generated by increasing competition between foreign and domestic firms. Thus, in order to compete with foreign manufacturers, local companies are interested to restructure and modernize the work [3].

Depending on the level at which the restructuring, the literature identifies the following types:

- Sectoral restructuring: the information revolution and is partly reflected in the restructuring of all sectors of the economy, the trend being the increase in the share of services at the expense of agriculture;
- Intra-sector restructuring: involves passing within each sector, the activities characterized by low productivity (labor intensive) to highly productive activities, generating high value added, knowledge-intensive and technology;
- Restructuring of the company: by using new, modern technology and development of high added value generating activities.

The effects of FDI on technologization. Experts say that one of the most important contributions of FDI is the technology transfer, returning a special role in this regard, transnational corporations. From the point of view of the country, the technological transfer through FDI, has many advantages, among which the most important are:

- Use of new technologies, the implementation of which involves improving the knowledge and skills of workers;
- Diffusion of technology, knowledge and capabilities that benefit the businesses that ST enter into business relations (suppliers, subcontractors, competitors), reflected on the cost and quality of goods and services provided;
- Development of relations between ST and local institutions (research institutes, universities, standardization and quality control, training centers);
- Stimulating competition and boosting domestic companies to focus their efforts on technologies activity;
- Attracting employees by ST local firms it a dispersion of the technological and managerial practices.

FDI and research and development (R&D). Developments in the past decade have shown that, following the increasing international competitive pressures and rapid technological development, more and more transnational companies increase their permanent research and development expenses to maintain competitive advantages arising from technological innovation.

In essence, transnational companies that develop R&D abroad fall within the following categories:

a) ST pursuing the exploitation of assets (Assets exploiting) they are generally originating in developed countries and its internationalized production for access to natural resources or cheap labor, so lies in R&D in the background;
b) ST aimed at enhancing assets (augmenting exploiting) are often originating in the economies of developing and seeking that the achievement of FDI to gain access to capabilities for research and local development (in order to increase competitiveness through technological innovation) which is why at the heart of their R&D activities.

The role of FDI in the knowledge economy. Building the knowledge economy involves the transition from “industrial approach” of the economy to “addressing information” whose main feature is the speed of change.

Consequently, competition has turned fierce global “knowledge” the lifeblood of the economy, so to survive, transnational companies are obliged to allocate significant resources to obtain knowledge.

The importance of knowledge in the new global economy was officially recognized at EU level since the adoption of the Lisbon Agenda as a priority for Member States building the knowledge economy to ensure increased competitiveness and sustained economic development.

The effects of FDI vary from country to country, depending on the existing concrete economic, social and political penetration of foreign capital and the structure of FDI inflows.

Results and conclusions

We appreciate that foreign lending has both a positive and negative impact to the national economy. On the one hand, positive, because in the foreground our country turn to foreign loans in order to balance the balance of payments, which includes the policy of the National Bank of Romania, and on the other hand, negative, since we can not Considered one effective as applying it currently has favorable effects, but as time effects turns into an economic issue because further lead to rising external debt.

At the same time, foreign lending has a positive influence, where sources of funds raised would be concentrated to the maximum value with investment in production, which could respectively cover the interest on it, but thus in line with the policy, the sources are exhausted in the sphere of consumption, which covers only the expenses incurred, but places no small profit.

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IMPACT OF EVOLUTION OF SOCIAL SECURITY SYSTEM ON AGRICULTURAL SECTOR

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Actuality. Starting from the presentation of the main issues and trends in rural areas, as the average development of the agricultural sector, it is necessary to reflect the conditions of implementation of social insurance mechanism in this sector. Aim. Following the particularities accentuation of the social insurance system in agricultural sector, with some parts of it, in terms of their evolution and interdependence between economic and social plan, as well as attempts of reformation state's social insurance system. Methodology. Only emphasizing differences, similarities and interactions can be highlighted mechanisms of a specific policy and evaluation of programs and directions of reform needed. The comparative method has a practical significance because knowledge of development can offer clues for adoption and implementation of future policies. In this context comparison method and dynamic analysis are used. Results. The peculiarities of development of state social insurance system in the agricultural sector are highlighted, both in terms of insurance fees applied, and also some considerations (pensions).

Key words: *state social insurance system, social security charges, social security contributions, agricultural pension, subsidies.*

Actualitatea. Pornind de la prezentarea principalelor probleme şi tendinţe din sectorul rural, ca mediu de dezvoltare a sectorului agrar, se impune necesitatea reflectării condiţiilor de aplicare ale mecanismului de asigurare socială la nivelul sectorului respectiv. Scopul. Se urmăreşte accentuarea particularităţilor sistemului de asigurare socială în sectorul agrar, cu unele componente ale sale, din perspectiva evoluţiei acestora şi interdependenţele între planul economic şi social, dar şi tentativele de reformare ale sistemului asigurărilor sociale de stat. Metode. Numai prin sublinierea diferenţelor, similitudinilor şi a interacţiunilor se pot evidenţia mecanismele unei anumite politici, dar şi evaluarea programelor şi direcţiilor de reformă necesare. Metoda comparativă are o importanţă practică, deoarece cunoaşterea evoluţiei poate oferi, puncte de reper pentru adoptarea şi implementarea politicilor viitoare. În acest context se utilizează metoda comparaţiei şi analiza dinamică. Rezultate. Se evidenţiază particularităţile evoluţiei sistemului de asigurare socială de stat în sectorul agrar atât prin prisma tarifelor de asigurare aplicate, cât şi prin prisma unor contraprestaţii (pensii).

Cuvinte-cheie: *sistem de asigurări sociale de stat, tarifele asigurării sociale, contribuţii de asigurări sociale, pensii agricole, subvenţii.*

Актуальность. Начиная с изложения с основных проблем и тенденций в сельском секторе, который является основой для развития аграрного сектора, появляется необходимость отражения условий реализации механизма социального страхования в этой отрасли. Цель направлена на выделение особенностей системы социального страхования в сельском хозяйстве, с некоторыми его частями, с точки зрения их развития и взаимосвязи между экономическими и социальными планами, а также попыток реформировать систему государственного социального страхования. Методы. Только подчеркивая различия, сходства и взаимодействия можно выделить механизмы особенной политики, а также оценка программ и необходимые направления реформы. Сравнительный метод имеет практическое значение, потому что знание о развитии событий могут обеспечить ориентиры для будущего принятия и реализации политики. В этом контексте необходимо использовать метод сравнения и динамический анализ. Результаты. Подчеркивается

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особенности развития государственной системы социального страхования в аграрном секторе, как с точки зрения применяемых страховых взносов, а также выплатах (пенсии).

Ключевые слова: *государственная система социальная страхования, тарифы на социальное страхование, взносы социального страхования, сельскохозяйственные пенсии, субсидии.*

JEL Classification: H5; H55.

Introduction. In the Republic of Moldova the social security system is quite complicated: the size of insurance tariff by categories of payers is differentiated: employers, employed persons and persons that unfold on their own (individual landowners, people who have taken agricultural land lease; individual entrepreneurs and founders of individual enterprises, people which having concluded individual insurance contract etc); there are different forms of expression of insurance tariff (percentage or fixed value size); specified facilities for certain categories of taxpayers (lower price for the agricultural sector, scaling possibilities of contributions payment); It is unbalanced the way of establishing social insurance benefits compared with the level of participation in the accumulation of income (in agrarian sector is reduced the participation quota of income formation, but considerable the size of pensions and other benefits under expenditures).

Basic content. The Republic of Moldova is a rural country, where 58% of population lives in rural areas. Despite the fact that half of the Moldovan population lives in rural areas, employment rate in rural areas is only 36%. The share of economically active population in Moldova is lower compared with other Eastern European countries, on account of massive migration. The lowest employment rate of the labor force in rural areas in Moldova have young people with low educational level.

The low rate of employment in the labor market in rural areas is significantly determined by low wages in agriculture compared to other ecnomic sectors. Low wages and limited job influenced entrenched poverty in rural areas. In the 2001-2014 period, urban households have increased their actual threefold existence level, while the standards living of the rural population has remained constant.

Because of employment opportunities decrease in rural areas in Moldova, occurs a process of migration: the young people and those who graduate high schools from rural to urban, as outside the country. Every fifth Moldovan working abroad and every fourth migrant comes from rural areas. The situation is worse in rural areas – in 2011 nearly 200,000 people, about 25% of the rural population have left to work abroad. As a result of the migration, remittances play an increasingly important role in the incomes of rural households in Moldova. In the years 2004-2014 the share of remittances in disposable income of urban households was 12%, while for rural households this figure reached 21%. Besides remittances, incomes of those who work in rural areas depends largely workforce's self-employment, agriculture and pensions.

In this context can be highlighted the features of the social insurance relations system and agriculture. It is worth mentioning that in Moldova the social insurance system is quite complicated. First, the size of the insurance tariff is differentiated by categories of payers: employers, employees and persons operating on their own (individuals, landowners, people who have taken agricultural land on lease or use; individual entrepreneurs and founders of individual businesses, people who have signed individual insurance contract etc.).

Since 2005 a special category of payers of social contributions were highlighted employers in the sphere of agricultural production, transferring social insurance benefits to people who work under individual labor contract, other contracts on performance of works or services in the processing industrial agricultural production.

Secondly, for different categories of payers insurance contributions differ very much the tax base, which is payed to insurance contributions. Nowadays all employers and payers of individual social state contributions calculate and pay contributions, based on calculated salary amounts and other rewards.

In 2005 the basis for calculating contributions constituted:

- The total salaries and other payments made by insurers employed under individual employment contract or other contracts for the execution of works or services;
- Sum of degree/hectare;
- Amounts paid for entrepreneurial patent.

Simultaneously there were established fixed annual fees amounting 1374 lei (for those who work in agriculture – 1224 lei) annually for individual entrepreneurs and founders of individual enterprises and persons employed on contract basis, outside Moldova.

In 2005 it was approved a specific method for calculating contributions for workers in the agricultural sphere:

- Employer in the sphere of agriculture will provide persons employed by individual employment contract or other contracts, the execution of works or services to agricultural land processing of the animals, calculated contributions of 20% to the fund of labor remuneration and other rewards of these persons, and to ensure people employed in the industrial processing of agricultural production will calculate 27% of labor remuneration and other rewards;
- Individuals, landowners, that work Individual land, and persons by agreement took on lease or agricultural land utilization, will pay contributions, calculated on the basis tariff of 1.7 lei annually for a unit degree hectare of agricultural land.

Reforming the pension system in Moldova provided for the gradual transformation of the burden related to the payment of insurance contributions from the employer to employees. In 2004 it was assumed that the annual size of the employer's contribution will be reduced by 1%, while the size of individual contributions will increase by 1%. Indeed, if individual contribution in 2004 was 1%, in 2005 already – 2%, in 2006 – 3%, in 2007-2008 – 4%, and from 2009 to present – 6%.

So, if in the rates for employers and employees is clarity, then paying fees for other things are more complicated, especially referring to workers employed in agriculture sphere. Landowners, who had worked individually farmland and people who have leased or taken into farmland, paid insurance contributions depending on agricultural land and creditworthiness: in 2004 the rate was 17 lei per unit degree/hectare.

Individuals who have leased agricultural land, except for those who paid contributions under other tariff paid insurance contributions in the form of fixed fees. In 2005 system grade/hectare was maintained. Since 2006 this category of payers of insurance contributions was set a fixed fee in the amount of 480 lei per year, which gives the benefit of minimum pension and death grant. For 2007, the tax value increased up to 576 fixed lei and 2014 lei in 1428.

In 2012 individuals – landowners and people who have leased farmland that process ground individually in 2009 are not included in the list of compulsory insured, they have the possibility of ensuring voluntarily by signing contract individual social insurance.

Individuals owners or lessees of agricultural land and founders homestead (excluding family members) who process individually agricultural land, can be secured only by the conclusion of the National Social Insurance of the individual social insurance state will pay 1164 lei per year. The peasant farm is an individual enterprise, based on private farmland property and other property, the personal work (unpaid) members of a family (members of peasant farming), having production of agricultural products as a purpose their primary processing, commercialization preponderance of their agricultural production.

As a result, founders homestead, using other people's agricultural work than family members, had to pay 4704 lei per year for individual insurance. Collection services of local taxes within municipalities are required to ensure settle arrears of state social insurance contributions compulsory, to the default and fines for contributions at State social insurance budget charged to individuals owners or lessees of agricultural land processing individually land.

Social prices insurance contributions are differentiated for different categories of payers and their sizes are adopted annually by Parliament.

The evolution of social insurance tariffs contributions, including particularly applicable in the agricultural sector, highlights the difference between Social Security and the sector in general.

At the table's dates can be noted equally modification reverse of tariffs for individual contributions employer: the individuals increased by 1 percentage point in 2008 compared to 2007 in 2009 compared to 2008, maintaining the level of 6% in the period 2009-2014; those incurred by the employer constituted 25% in 2007, 24% in 2008 and 23% from 2009 until 2014.

Table 1

Obligatory state social prices insurance contribution

The categories of payers and insurers	Unit of measure	Years							
		2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
The employer, physical or individual person, for employees	%	25	24	23	23	23	23	23	23
Agricultural employer to employees, *including:* - Subsidies from the state budget; - Paid by the employer	%	20 4 16	20 4 16	22 6 16	22 6 16	22 6 16	22 6 16	22 6 16	22 6 16
Employees (individual contribution) transferred from employer	%	4	5	6	6	6	6	6	6
Physical person, individual entrepreneurs	Lei	2318	2920	3708	4044	4368	4704	5220	5784
Physical person, owners or lessees of agricultural land	Lei	576	725	920	996	1080	1164	1296	1428

Source: State social insurance budget law for the years 2007-2014.

For employers of agriculture the rate for 2007 and 2008 was 20%, of which 16% paid by the employer and 4% subsidized by the state, and in 2009-2014 the rate of 22%, of which 16% paid by the employer and 6% subsidy from the state budget. *For physical people, owners or lessee of agricultural land* in the analyzed period the rate was expressed in fixed fee, which ranged from 576 lei in 2007 up to 1428 lei in 2014. *For 2015* it was established the same agricultural tariffs, expressed in percentage size, and charges fixed size constitutes 6372 lei for physic people, individual entrepreneurs and 1584 lei for individuals owner or lessee of agricultural land.

The complicated system of insurance contributions causes a range of problems. Some are directly related to agriculture. A lower rate of insurance contributions, established for employees in the agricultural sector and the differential system of contributions for owners of agricultural land, in combination with the low level of their accumulation leads to a redistribution rather essential means in favor of the number of agricultural workers sector.

Thus, according to the Ministry of Labour, Family and Social Protection of the Republic of Moldova in 2005 employees in the agricultural sector contributed to the social security budget only 7.9% of total revenues, while they benefit by pension and compensation in the amount of 40% of the total. While the gap was reduced respectively.

Another important criterion is the number and size of pensions, as reflected in the following table.

Table 2

The number and average size of pensions for age limit by economic sector

Years	**For limit age, non agricultural**				**For limit age, agricultural**			
	Men		*Women*		*Men*		*Women*	
	Thousands person	Lei	Thousands person	Lei	Thousands person	Lei	Thousands person	Lei
2007	38.8	841.6	161.5	587.4	96.7	529.2	155.2	497.3
2008	62.8	845.4	170.6	690.3	69.5	636.3	152.3	579.1
2009	63.8	1029.2	178.2	826.9	66.6	759.4	149.3	690.8
2010	65.2	1087.9	185.4	860.6	64.2	785.2	145.7	716.3
2011	66.7	1110.3	199.0	951.3	64.4	828.4	143.0	764.8
2012	76.5	1153.3	203.6	1004.4	64.4	894.0	140.1	834.0
2013	81.4	1390.2	212.7	1062.7	64.5	938.4	127.3	880.7
2014	85.6	1479.8	222.8	1122.3	64.3	986.5	134.7	931.5

Source: National Statistics Bureau of the Republic of Moldova.

Of the table's dates is observed that during the analyzed period increases the number of pensions, for limit age, non agricultural, men category from 38 800 in 2007 to 85 600 people in 2014 and for women category from 161 500 to 222 800 people.

The number of agricultural pensions changes in reverse: men categoy is reduced at the time period from 96,700 to 64,300 and at the women category from 155 200 to 134 700.

The size of the agricultural pension is less than the agricultural throughout the analyzed period and both categories of person (men/women). It's recording increase of the size pension average for limit age for all analyzed categories: non agricultural pension for men with 638.2 lei and for women with 534,9 lei, but agricultural pension with 457.3 lei for men and 434.2 lei for women.

That situation cannot be maintained permanently, Moldovan policy on social insurance charges implies that the multiplicity of social insurance contributions may be reduced, however taking into account the specific of agricultural sector and the consideration balancing by the social insurance system.

Conclusions. Compulsory social state insurance allows to accumulate and fairly distribute the financial resources, ensuring social protection of workers and their families where appropriate social risks occurr.

Analyzing the specific of agricultural sector and importance for national economy, the peculiarities of relations with the state social insurance system are highlighted. A price lower insurance contributions, established for employees in the agricultural sector and differentiated contribution system, for owners of agricultural land, in combination with their lower storage leads to the essential resources distribution for peensions in favor of the pensioners of the workers number of the agricultural sector.

Physical people or lessees of agricultural land that processing land individually – starting in 2009, based on individual contract signed with the National Social Insurance if they pay each year contribution of state social insurance in the amount provided acquire the right social benefits.

For employers in agriculture, regardless of the type of property and the legal form of organization, increase delay for non-payment of contributions deadlines for obligatory state social insurance calculated for the current year will apply with effect from November 1st of this year.

It is necessary the development and permanent reform, social insurance system taking into account the specific activity sectors (including agriculture); reviewing the mechanisms for implementing the law on the pension right, other social insurance rights and the special rights granted by law.

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COOPERATION IN THE FIELD OF ECONOMICS, OF SCIENCE AND MEDICINE IN EUROPE

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The issue of medical cooperation raises many questions current and controversial, which are the focus of interest in socio-political and legal, such as debates on instruments to combat the high costs, the public health system, legislation aimed at ensuring health, tobacco consumption, alcohol, obesity and others. Public health legislation deals with the framework conditions, legal and social aspects of public health, protection and deployment the law of public health on tobacco. The aim of this study is to identify the degree to which economic freedom correlates with indicators of development, health and economic cooperation in medicine field. In this regard, we consider useful to investigate how the correlation indicators of policy Health – 2020 with global and European economic development. Research methods are located in estimating the degree of international cooperation in the medicine field through statistical methods, comparison, graphics, deduction or induction.The results allow to formulate a whole picture regarding international cooperation in the field of medicine, combating different diseases but human vices as obesity, tobacco use, alcohol etc. Facilitation of cooperation in research and innovation is the key to bridging the gap between research and demand in different countries and regions.

Key words: *medical cooperation, medicine and health, tobacco, alcohol, obesity, the public health system, danger of health, law concerning tobacco, research and innovation.*

Problema cooperării medicale evidențiază multe întrebări actuale, dar și controversate, ce vizează importante aspecte sociopolitice și juridice, cum ar fi: dezbateri privind instrumentele pentru combaterea costurilor înalte, sistemul de sănătate publică, legislația care vizează asigurarea de sănătate, consumul de tutun, alcoolul, obezitatea etc. Legislația din domeniul sănătății publice se referă la condițiile cadru, juridice și sociale ale sistemului de sănătate publică, la protecția dreptului public de sănătate, implementarea prevederilor legii cu privire la tutun. Scopul studiului de față constă în identificarea gradului în care libertatea economică corelează cu indicatorii dezvoltării, cu sănătatea populației și cooperarea economică în domeniul medicinii. În acest sens, considerăm utilă investigarea modului în care sunt concepuți indicatorii de corelare a politicii Sănătatea – 2020 cu dezvoltarea economică mondială și europeană. Metodele de cercetare sunt focalizate în estimarea gradului de cooperare internațională în domeniul medicinii prin prisma metodelor statistice, de comparație, grafică, deducției și inducției. Rezultatele obținute permit a formula un tablou integru vizând cooperarea internațională în domeniul medicinii, lupta cu diferite maladii, dar și cu viciile umane: obezitatea, consumul de tutun, alcoolul etc. Facilitarea activităților de cooperare în domeniul cercetării și inovării este cheia reducerii decalajului dintre cercetare și cererea din diferite țări și regiuni.

Cuvinte-cheie: *cooperare medicală, medicină și sănătate, tabac, alcool, obezitate, sistem de sănătate publică, pericol de sănătate, dreptul privind tabacul, cercetare și inovare.*

Актуальность. Медицинское сотрудничество поднимают актуальные текущих проблемы, но и спорные вопросы, находящиеся в центре социально-политического и правового интереса, как-то: обсуждение юридических методов для обуздания расходов, системы здравоохранения, законодательство медицинского страхования и здравоохранения, потребление табака, алкоголя, ожирение и др. законодательство в части государственного здравоохранения имеет дело с

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юридическими и социальными условиями, кадрами системы здравоохранения, правовая защитой здоровья, внедрения на практике закона о табаке. Цель исследования состоит в определении степени экономической либерализации, коррелирующая с показателями развития, здоровья населения и экономического сотрудничества о области медицины. В этой части считаем важным исследование показателей по программе Здоровья – 2020 с развитием мировой и европейской экономики. Методы исследования сфокусированы в оценке степени международного кооперирования в области здравоохранения посредством статистических, сравнительных, графических методов а также индукции и дедукции. Полученные результаты позволяют сформулировать целостностную картину международного сотрудничества в области медицины, борьба с различными заболеваниями, но и последствиями плохих привычек и слабостей человеческих, как курение, алкоголь, тучность и др. Поддержание процесса сотрудничества в области исследования и инноваций – как ключика к сокращению разрыва между исследованиями и спроса разных стран и регионов.

Ключевые слова: *медицинское сотрудничество, медицина и здоровье, табак, алкоголь, ожирение, система здравоохранения, опасность здоровья, закон о табаке, исследования и инновации.*

JEL Clasification: A14; O38; P26.

Introduction. Health economics (which is known as medical economics or health economics) forming appearance independently as a vital application to express the concern demonstrated by economists to investigate from their perspective all aspects of social life, the Government, managers and doctors to estimate results and efforts to streamline the health care system overall.

The aim of this study is to identify the degree to which economic freedom correlates with indicators of development and health. In this regard, we consider useful description of the way in which indicators are in correlation with the policy *Health – 2020* and the global and European economic development.

Human Development Indicator (HDI) is calculated to highlight trends in the quality of people's lives. It includes a three-pronged approach covering landmarks such as life expectancy, literacy and per capita real GDP. Highlighting developments in three areas it is based on related indicators, namely life expectancy index, education index and GDP index. Although the European region is consistently oriented towards meeting the target value of the policy *Health – 2020* policy to reduce premature mortality, there are many problems that need solving that will reduce major risk factors [2].

The European Region is moving steadily towards the target value of reducing premature deaths from cardiovascular diseases, cancer, chronic respiratory diseases and diabetes. The achieved progress tends mostly toward improving the situation in the region regarding the highest premature mortality. However, we distinguish an alarming state regarding high level of key risk factors for premature mortality as: alcohol and tobacco, obesity and overweight (Figure 1).

The use of alcohol – 11 litres of pure alcohol per person during a year

The overweight and the obesity – 59% of population are suffering of overweight or obesity

30% of population are using tobacco

Fig. 1. The main 3 risk factors of early mortality in the European region
Source: World Health Organization Report, 2014.

European region has the highest consumption of alcohol and tobacco in the world, with the prevalence of overweight and obesity, only slightly lagging region of American countries, where stands the highest levels of these indicators. The prevalence of overweight and obesity in European countries is 45-67% (Figure 2).

From May 31, 1987 it is organized international action against smoking – World No Tobacco Day. Laws aimed at restricting smoking in public places were introduced in Austria – July 1, 2010, Belgium – January 1, 2007, Bulgaria – January 1, 2005, Belgium in 2006 and 2007, Brazil – May 8, 2009, UK – February 1, 2006, Germany – September 1, 2010, Greece – September 1, 2010, Denmark – August 1, 2007, Egypt – September 1, 2010, India – October 1, 2008, Spain – January 2, 2011, Ireland – March 1, 2004, Italy – January 10, 2005, China – May 1, 2008, Cuba – February 1, 2005, Latvia – January 1, 2008, Moldova – July 1, 2004, Monaco – November 1, 2008 Netherlands – July 1, 2008, Norway – June 1, 2004, UAE – 2007, Poland – November 15, 2010, Portugal – January 1, 2008, DR Congo – May 31, 2013 Russia – 2001, USA – January 1, 2010, San Marino – July 2008, Singapore – July 2006, Syria – August 2005, Slovenia – August 2007, Turkmenistan – December 25, 2013 Turkey – May 2008, Uzbekistan – April 2008, Ukraine – July 1, 2006, Philippines – 2008, Finland – 1976 (the trend is that in 2040 Finland will become a non-smoking country), France – February 2007, Montenegro – February 2005, Sweden – June 1, 2005 Estonia – June 2007, Japan – March 24, 2009.

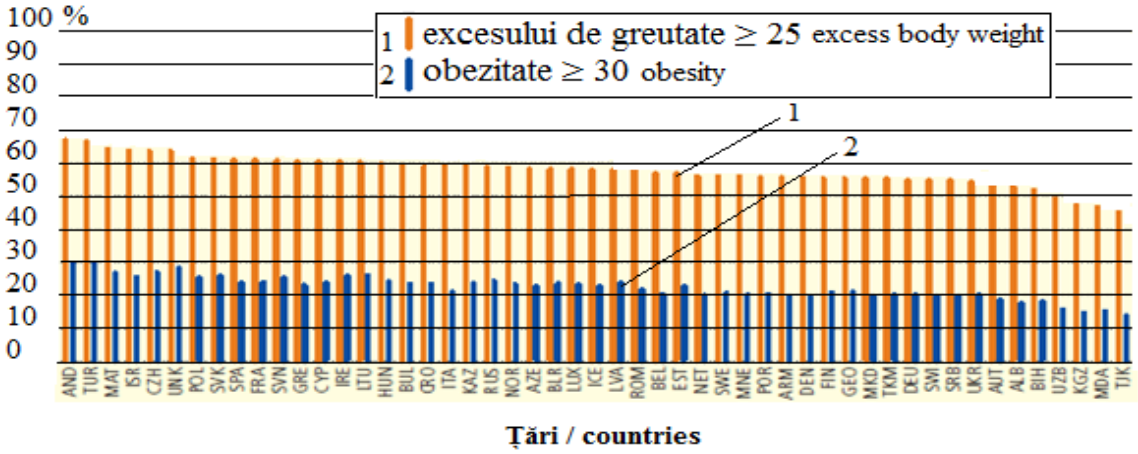


Fig. 2. The spread of obesity among people from different countries, aged 16 years, 2014
Source: World Health Organization report on non-communicable diseases in the world, 2014

***Legendă**: ALB – Albania, AND – Andora, ARM – Armenia, AUT – Austria, AZE – Azerbaijan, BH –Bosnia and Herzegovina, BLR – Belarus, BEL – Belgium, BUL – Bulgaria, CRO – Croatia, CYP – Cyprus, CZH – the Czech Republic, DEN – Danmark, DEU – Germany, EST – Estonia, FIN – Finland, FRA – France, GEO – Georgia, GRE – Greece, HUN – Hungary, ICE – Iceland, IRE – Ireland, ISR – Israel, ITA – Italy, KAZ – Kazakhstan, KGZ – Kyrgystan, LTU – Lithuania, LUX – Luxembourg, LVA – Latvia, MAT – Malta, MDA – Repablic of Moldova, MKD – Macedonia (ex-Yu.), MNE – Montenegro, NET – the Netherlands NOR – Norway, POL – Poland, POR – Portugal, ROM – Romania, RUS – Russia, SPA – Spain, SRB – Serbia, SVK – Slovakia, SVN – Slovenia, SWE – Sweden, SWI – Switzerland, TJK – Tajikistan, TKM – Turkmenistan, TUR –Turkey, UKR – Ukraine, UNK – Great Britain, UZB – Uzbekistan.*

Law no. 278 from 14.12.2007 from Republic of Moldova regarding tobacco and tobacco products ban smoking in enclosed public places. To these concerns: state institutions, cinemas, theatres, circuses, concert halls, exhibition halls, museums, libraries, waiting rooms, bus terminals, portable terminals, railway stations, public transport, areas of agreement and leisure.

Recognizing acute problems, countries have made progress in the implementation of strategies to overcome these risk factors, which led to a steady decline in the consumption of tobacco and alcohol in Europe. However, for most of the countries achieving reduction of tobacco consumption is not sufficient to diminish the value of this indicator by 30% in 2025, according to the Global Monitoring system for non-communicable diseases [8]. Comparison with other regions, WHO emphasizes that a further reduction in all of the key risk factors carries a significant potential for improving results regarding health.

Few countries provides to WHO a regular information on risk factors, so that European health report 2015 [1], uses data on tobacco consumption, overweight and obesity. Moreover, in recent years, only a limited number of countries provided WHO mortality database. This affects the reliability of premature mortality values. The accuracy of any index depends on compliance with the quality requirements regarding codification causes of deaths. All these constraints must be taken into account when interpreting the data on premature mortality targets. Dealing with the data it will optimize to monitor the policy *Health – 2020* and will improve the evidence base for health policy.

Since 1990, the infant mortality rate in countries with the highest values of this indicator decreased, which resulted in reducing the gap between countries in the region (Figure 3).

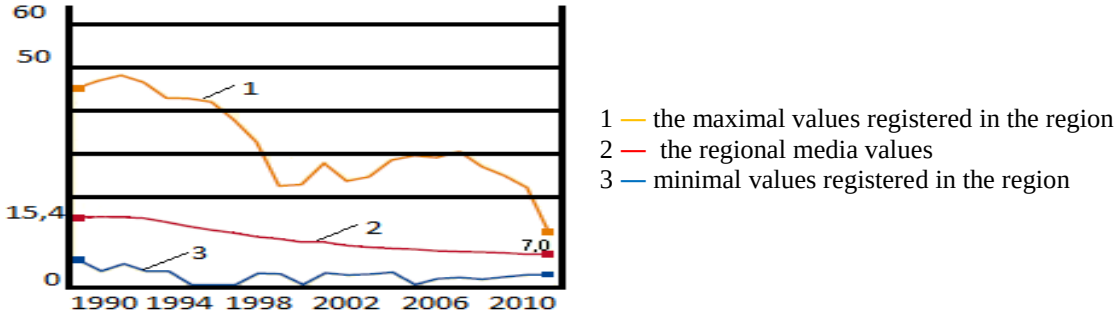
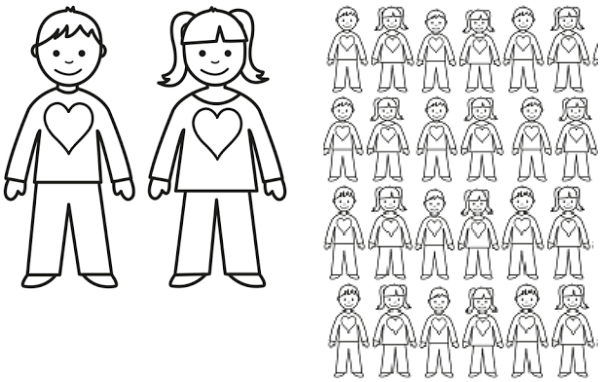


Fig. 3. The rate of mortality among new born

Source: European database "Health for All", 2014.

Although this trend persists and after 2010 – a starting point for the policy *Health – 2020* is the data received in recent years that does not offer sufficient coverage, which would allow to make reliable conclusions. The differences between countries in terms of life expectancy at birth is gradually diminished, but providing such data and in recent years has been limited. Despite the positive trends, absolute differences between countries are still significant. This refers not only to infant mortality and life expectancy, but also, and other indicators of the policy *Health – 2020* regarding social determinants of the health (Figure 4-7).



2 death at 1000 new born – the lowest level in the region

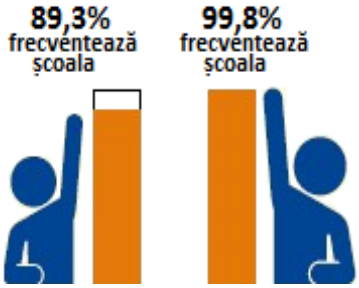
22 deaths at 1000 new born – the highest level in the region

Fig. 4. Uneven difference in the indicator of infant mortality in European region

The lowest level of life expectancy in the region

The highest average life expectancy value

Fig. 5. Uneven differences in the values of life expectancy of population within the European region

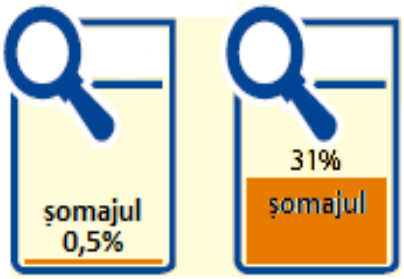


89.3% are going to school – The lowest level in the region

99.8% are going to school – The highest level in the region

Fig. 6. Uneven differences in the enrollment of children in the school in the European region

Source: Rapport UNESCO, 2014



0.5% unemployed – The lowest level in the region

31% unemployed – The highest level in the region

Fig. 7. Uneven differences in the level of unemployment in the European region

Source: European database "Health for All"

The share of countries that have adopted specific strategies to reduce social inequalities in health, increased from 58% in 2010 to 67% in 2013. For these countries, expanded enforcement strategy, includes: in 2010 the most common measures focus on improving the health status of vulnerable segments

of the population and in ensuring a healthy start in life for children in 2013, the number of strategies and combating poverty and improving the physical environment of living.

There is some evidence in terms of subjective well-being in European countries; however, to improve monitoring is required extra effort measurement parameters wealth and its cultural contexts.

The welfare state is subjectively individual level. However, it also can be described using a number of objective indicators such as: population, education, income and housing conditions [1]. *The media value of the gradual marking of life satisfaction* is a measure of subjective well-being, ranging between 7.8 – 4.2 in European countries, where 10 – is the best, and 0 – the worst, according to respondents, conditions living etc. (Figure 8).

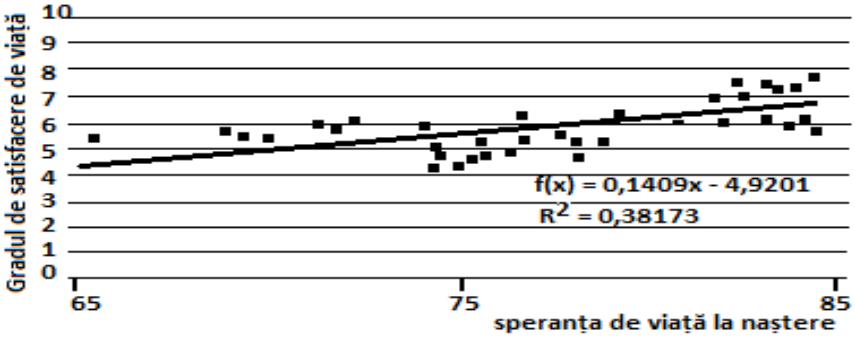


Fig. 8. The expected life longevity the correlation with life satisfaction
Source: European database "Health for All", The survey Gallup, National Human Development Report.

The monitoring system of the politics *Health – 2020* includes indicators of life satisfaction, but the Monitoring System *Health – 2020* include indicator of life satisfaction, but not among the indicators that require systematic collection of data, so the report of the health in Europe 2015 [7], uses collected data and published in an order planned by competition of other interested bodies.

In a globalized world, solving many key health challenges requires cooperation and collaboration between countries. To achieve this objective, it needs transnational cooperation.

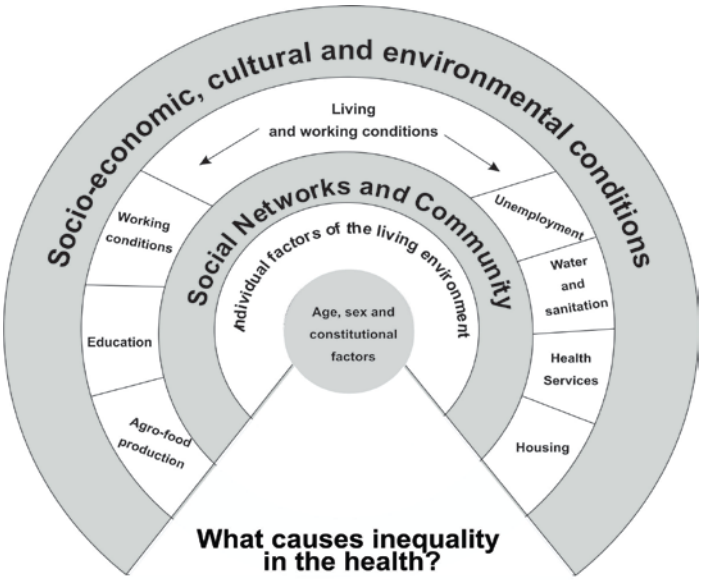


Fig. 9. The factors that cause inequalities in health, worldwide
Source: G. Dahlgren, Whitehead M.

The WHO exchanged the paradigm shift from public health emphasizing from problems of morbidity and diseases to the improvement of the health status and increased welfare. For the information regarding health state it is important to pay attention to subjective and qualitative indicators, the degree of satisfaction of life. According to scientific research findings, data regarding welfare have a reliability and value at local and national level, as indicators of the health.

However, remain questions about the compatibility welfare parameters, in particular is very important about the impact of these parameters in appropriate cultural context. In this area, it needs more research, which is particularly important for the cultural diversity of the European region. Further WHO reports on well-being should be included as an essential component of reliable data on subjective well-being. In January 2015 under the auspices of the WHO Regional Office held a meeting of the expert group for the development of priority areas for further work in this area. The Expert Group recommended that, in order to improve reporting on health and well-being indicators in the European region to consider non-traditional sources of health information.

Table 1

The rating of life prosperity in some European countries

Rank	Countries	Economy	Entrepre-neurship	Governance	Education	Health	Security	Personal freedom	Social Capital
1	Norway	4	5	8	5	4	8	3	2
2	Switzerland	2	3	1	18	3	13	11	9
3	Denmark	9	2	3	3	16	7	8	3
5	Sweden	7	1	4	17	12	5	7	8
8	Netherlands	10	13	12	4	5	19	13	7
9	Finland	33	8	5	7	13	3	18	5
10	Ireland	18	18	14	8	17	4	6	10
11	USA	11	11	11	9	1	33	15	11
13	Luxembourg	6	9	6	43	2	10	4	24
14	Germany	5	16	16	12	6	21	17	16
15	United Kingdom	19	6	9	25	20	23	12	12
16	Austria	22	7	15	24	9	16	19	18
17	Singapore	1	12	13	15	14	12	38	25
18	Belgium	23	24	17	21	10	20	20	20
19	Japan	25	22	19	28	7	22	33	29
22	France	30	19	20	26	8	31	21	53
23	Malta	27	20	21	42	25	29	23	19
24	Spain	37	30	27	19	24	25	22	23
25	Slovenia	58	25	33	11	27	14	25	40
26	Czech Rep.	26	29	34	13	26	24	45	66
27	Portugal	62	31	32	46	31	18	16	47
29	Poland	34	36	39	33	33	26	29	34
31	Estonia	35	26	23	39	40	36	61	30
35	Slovakia	36	34	46	14	30	32	63	58
37	Italy	44	41	42	47	22	39	48	42
39	Cyprus	84	39	26	38	35	45	46	86
40	Latvia	48	38	41	35	47	40	73	83
41	Lithuania	63	45	40	30	44	30	97	64
45	Hungary	52	50	38	34	36	37	99	98
49	Greece	102	46	49	32	29	27	108	100
50	Romania	69	48	63	61	69	46	37	109
51	Bulgaria	79	43	81	44	48	42	96	67
52	China	3	59	67	63	56	100	120	28
58	Russia	55	42	106	29	42	91	111	50
63	Belarus	89	54	121	31	38	53	128	37
92	**Republic of Moldova**	**128**	**68**	**101**	**72**	**83**	**69**	**113**	**106**

Source: The Legatum Institute: The Legatum Prosperity Index 2015.

These may include cultural evidence such as historical records and anthropological observation, quantitative and qualitative data and analytical descriptions of practice examples. Following the meeting, the Regional Office will develop an action plan aimed at developing a more extensive set of tools and methodologies for reporting data on welfare. Implementation of Health – 2020 is gaining momentum, but

requires greater monitoring to establish truly beneficial effect, including features such as stability of local communities from adverse external influences, empowerment citizens and awareness of social belonging.

Increased the share of countries where national policies are built in accordance with the principles of Health – 2020 (from 58% in 2010 to 75% in 2013, Figure10).

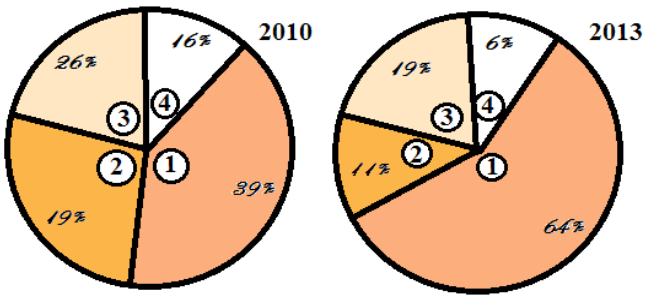


Fig.10. The share of countries in which strategies and policies are adopted according to the *Health – 2020* program

Source: Qualitative indicators for monitoring the policy Health – 2020.

It also increased the number of countries with the plans for implementation and accountability mechanisms in relation to these strategies. Thus, within a few years the developments of Health – 2020 a growing number of countries take measures to adopt and implement its principles and approaches to improve the health and welfare of its citizens.

Monitoring the Health – 2020 system includes a standard set of quantitative and qualitative indicators (described above) that characterize the processes of policy formulation and implementation. Health – 2020 Policy includes many of the key concepts that have not been subject to systematic assessment so that coverage and optimize their monitoring is necessary to extend the common theme. Some examples of these concepts: transparency; stability (viability) local communities; supporting medium; supportive environment; social sense of belonging; sense of control of the situation; principle for the participation of the whole society; responsible management; responsibility; the principle of including all stages of life; empowerment; man-centred health system; health systems that fulfil their purpose; adaptation strategies.

Methodologies and indicators to characterize these concepts can be determined based on existing knowledge and further exploration process. To facilitate evaluation of the implementation should be used appropriate types of existing data without excessive overburdening the requests to the country for the provision of new details. This should include information from other disciplines, especially the quantitative and descriptive study results. WHO Regional Office for Europe is currently drafting proposals to member states on the mechanism and roadmap for monitoring all the concepts contained in the *Health – 2020*.The international cooperation is essential for the implementation of research agenda and information development in health care and of efforts to generate information and evidence on health for XXI century. To optimize the monitoring the program *Health – 2020* at the next steps it is necessary the cooperation to solve both current data collection and meet the need for new information and factual information. Population characteristics are changing and appear new concepts in the field of public health that need to be modified in the strategies.

Information systems concerning health should be adapted to these social changes. To meet the needs of XXI century in terms of information and evidence required powerful systems, comprehensive information to ensure timely flow effectively and systematically statistical data on health and health maintenance. At the same time, these systems must be flexible enough to adapt to new strategic needs and include innovative approaches to information and the actual data in health. Tasks in the field of health information which is facing the European region can be resolved successfully and reliably only within broad international cooperation: it is necessary to harmonize cooperation and exchange of knowledge, experience and best practices. To this end, under the auspices of the European Regional Office, WHO was established European Initiative for Health Information (EIIZ) – an established network of countries, bringing together several partners, which aims to help improve the health of the region by improving information that are at the base of the policy. EIIZ supports the development of a single European health information in accordance with the Joint Declaration adopted by the WHO Regional Office for Europe and the European Commission in 2010 [5].

In this regard have been taken a number of important steps in which the EIIZ members had a concrete contribution. European Commission and the Organisation for Economic Co-operation and Development (OECD) supports EIIZ, their representatives took part in the first meeting of the Coordination Network, which took place in March 2015, the activity rate EIIZ increases, but further strengthening networks and capacity building to enhance its activities in the field of health information and its consistency over the six key areas of activity requires the involvement of new members, Figure 11.

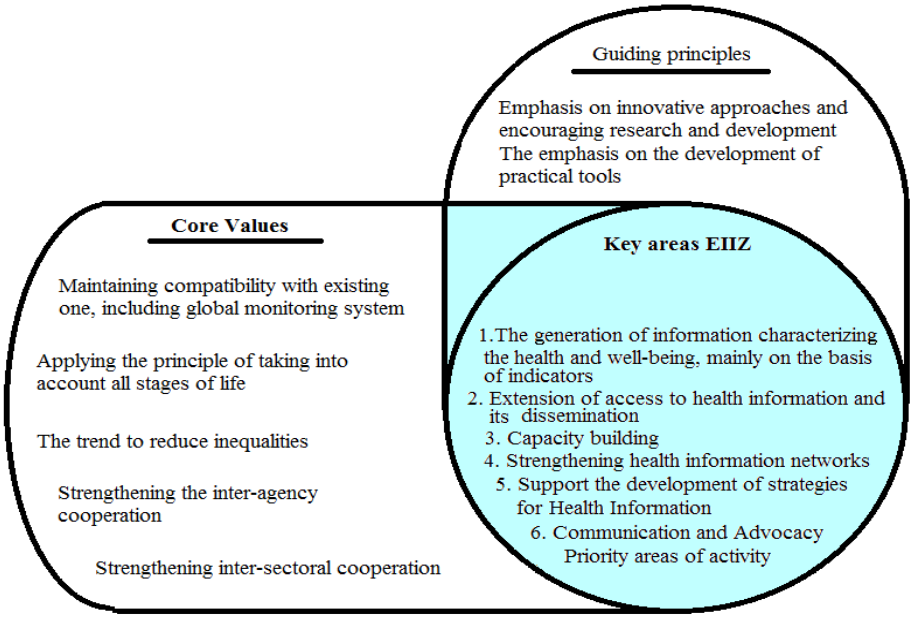


Fig. 11. Vector orientation of the strategies implementation concerning health
Source: Qualitative indicators for monitoring the policy Health – 2020.

Only through joint efforts can be improved the region's health information, in an effective, sustainable and consistency way meant to redress the socio-economic and employment status and of the nation.

Main findings. The European region is moving steadily towards achieving the targets of *Health – 2020*, but much remains to be done to further improvement of health and to reduce social injustice. For full information support of the implementation of the Health – 2020 policy it's needed to strengthen data collection mechanisms and to develop new approaches to health monitoring. These include the use of non-traditional sources of information, such as quality data and descriptive study. Strengthening international cooperation is the key to the further development of research and development in the field of health information in the region.

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IMPLICATIONS OF CREDIT RISK TRANSFER ON BANK PERFORMANCES

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The impact of the financial crisis has demonstrated the fragility of the banking sector and the need to implement new technologies that would allow not only insurance against the most important credit risk - credit risk, but development of lending segment. In such conditions, transfer of credit risk is an efficient and actual way to diversify the banks exposure for credit risk by the presence of those who are willing to take on some of this risk. Taking of credit risk can be achieved through credit derivatives, securitization and sale of loans, being selected the most advantageous technique for the bank. The current situation of the national banking sector requires solving the problem of bad loans, which, unfortunately, are increasing, by implementing new techniques for credit risk management according with EU directives.

Key words: *credit risk transfer, credit risk, credit derivatives, bank, profitability rate loan portfolios.*

Impactul crizei financiare a demonstrat fragilitatea sectorului bancar şi necesitatea implementării unor noi tehnologii care ar permite nu doar asigurarea împotriva celui mai important risc bancar – riscul de credit, dar şi dezvoltarea segmentului de creditare. În aceste condiţii, transferul riscului de credit este o modalitate eficientă şi actuală pentru a diversifica expunerea băncilor riscului de credit prin existenţa celor care sunt dispuşi să preia o parte din acest risc. Preluarea riscului de credit poate fi realizată prin intermediul derivatelor de credit, securitizării sau vânzării de credite, fiind aleasă cea mai avantajoasă tehnică pentru bancă. Starea actuală a sectorului bancar naţional impune soluţionarea problemei creditelor neperformante, care, cu regret, sunt în creştere, prin implementarea noilor tehnici de gestiune a riscului de credit în concordanţă cu directivele UE.

Cuvinte-cheie: *transfer al riscului de credit, risc de credit, derivate de credit, bancă, rată a rentabilităţii portofoliilor de credite.*

Последствия финансового кризиса продемонстрировали хрупкость банковского сектора, а также необходимость внедрения новых технологий, которые позволили бы не только страхование от наиболее важного риска – кредитного риска, но и развитие сегмента кредитования. В таких условиях, передача кредитного риска является эффективным способом разнообразить подверженность банков кредитному риску при существовании тех, кто готов взять на себя часть этой опасности. Передача кредитного риска может быть достигнута с помощью кредитных деривативов, секьюритизации и продажи кредитов. Нынешняя ситуация в банковском секторе требует решения проблемы «плохих кредитов», которые, к сожалению, становится все больше, за счет внедрения новых методов управления кредитным риском в соответствии с директивами ЕС.

Ключевые слова: *передача кредитного риска, кредитный риск, кредитные деривативы, банк, прибыльность кредитных портфелей.*

JEL Classification: G15; G21; G32.

Introduction. The global financial crisis has left its mark in all countries, being more pronounced in highly developed countries and with less harmful effects in developing countries. As a result, global financial market has become more vulnerable and affected by different financial risks, including credit risk. So, in order to prevent this risk, we need to implement different techniques of correct management of

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credit risk or to use instruments of its transfer. Credit sale, securitization and credit derivates are transfer instruments of credit risk which bas been widely used by banks in recent decades to actively manage the credit risk. Credit sale and securitization are techniques by which banks sell future flows of payment arising from the loans based third parties. Unlike a loan sale, securitization involves creating a vehicle with special destination and issuing of new securities. Credit derivatives instrument are contracts that ensure banks against the risk of default from debtors, for a tax.

Concept of credit risk transfer. Currently, the typical function of transfer of credit risk is seen like a good allocation of credit risk in a large spectrum of market participants, not only on banking but also on capital markets. From the capital market perspective, we have to distinguish between risk diversification and risk transfer. Transfer of credit risk can be explained as – a part of credit risk which can be diversified with other risks exposed by investment companies (insurance companies, pension funds), but, evident, a part of risk is systemic and, therefore, generates a price with premium. This makes it attractive for active risk trading (speculation) deppending on size and time of payment of the premium.

Some researchers concerned with the study of instruments for credit risk transfer are Arping S., Duffee G., Zhou C., Morrison A. D., Behr P., Lee S., Allen F., Carletti E., Wagner W., Marsh I. and others, being concerned both with the positive effects of credit risk transfer and negatives. So, we intend to present positive aspects selected from empirical studies:

a) researchers G. Duffee and C. Zhou, mention that incentive for risk transfer comes from costs associated with bank insolvency. They analyze individual credit risk transfers, like swap on credit risk (CDS) and individual loan sales, showing that as long as asymmetric information regarding credit quality varies over the loan life, instruments of credit derivatives, loan sales prevails in solving problems caused by bank information on the loan quality. However, introduction of credit derivatives markets can cause destruction of the credit market sales. This think is harmful when problem of asymmetric information is one of adverse selection, because it prevents individual sale of loans in order to avoid diminishing monitoring. In contrast, transfer of credit risk, itself, improves monitoring [6, p. 25-54];
b) economist A. Morrison noted that credit derivatives facilitate risk sharing credit by a bank in case of risk aversion [8, p. 621-647];
c) W. Wagner and I. Marsh mention that a part of the banks credit risk can be transferred to non-banking sector, because of the difference between banks and bankruptcy costs between banks and „non-banks” [13];
d) researchers A. Nicolò and L. Pelizzon show how different intruments of credit risk transfer can signal quality of bank loans in accordance with prudential capital requirements [9];
e) scientist S. Arping shows that transfer of credit risk can create value based on incentives, even for completely different reasons, giving to bank the possibility to be credibly engaged to investment, in poorly performing projects, by isolating banks from losses by project. This corrects distorted incentives of borrowers for effort and, thus, increases the efficiency of the investment project [2].

Negative repercussions of credit risk transfer regarding incentives monitoring are found by Duffee and Zhou [6], Morrison [8], Behr and Lee [4], Parlour and Plantin [10], Parlour and Winton [11]. In all these works prevails theidea that debt financing maximizes reward for monitoring. The results of the monitoring are “high”. Additional arrangements, such as transfer of credit risk, can reduce only incentives monitoring.

A similar opinion is exposed by scientist A. Persuad who said that transfer of credit risk may cause problems for the stability of the financial system, by increasing fragility of risk buyer or increasing risk taking by banks. After noting that non-performing loans increased significantly, while the balance continued to show healthy, good, he also asking himself:“Where went all credit risk?”. He attributes this phenomenon to the multiplication of instruments of credit derivatives (a tenfold increase to 2 trillion dollars in five years), and warns “the more risks are assessed, marketed and covered in the same way in the same markets, the more pronounced are systemic risks” [12].

The problem of insurance benefits of credit risk transfer was approached also by researchers Wagner and Marsh, who said that the transfer of risk from a relatively fragile banking sector leads to an improvement of the stable system [13, p. 173-193]. More exactly, they predict that by activating the diversification, credit risk transfer offers banks the possibility to diversify their risk, enhancing financial stability and reduce the financing cost. More, while it supports the transfer of risk from banks to other financial players less fragile, such as insurance companies, we can determine taking new risks by raising

riskier loans. This increase of lending may, on the other hand, cause a more efficient allocation of capital in the real sector of the economy.

The economist A. Morrison [8, p. 621-647] by contrary arguments that markets with credit derivatives can destroy the signaling role of bank debt and generates an overall reduction in welfare by reducing the banks' interests.

As instruments used in specialized literature to transfer credit risk is suggested swaps on credit risk, collateral bond debt, asset-backed securities, total swaps on income, credit notes, credit spread options etc.

From specialized literature we studied that, generally, the transfer of credit risk reduce the incentives for monitoring of banks, and therefore, undermines financial stability. The instruments from portfolio of credit risk transfer, such as the securitization of loan portfolio with guarantees accessories are quite used by banks. However, the degree of improvement of credit quality should be clearly defined in a timeframe. Outside this period, monitoring incentives are undermined.

Table 1

Elements of credit risk transfer

Assets underlying credit risk		**Attenuation of transfer of typical credit risk**
Consumer credits	Residential mortgages Claims on credit card Auto credits and rentals	ABS[1]: underlying risk tends to be "local", assets tend to be more homogeneous than those securitized CDO[2] şi CLNS[3]
Transferable claims (bonds and credits)	Commercial mortgages Commercial claims Rental of equipment	
	Corporate debts Leveraged loans Emerging markets of ABSs and collateral bond debtor	Direct sale: cheaper and cleaner alternative
		CDO: expensive to configure and maintain risk
Transferable and non-transferable claims		CLNS and synthetic CDO: cheaper than convetional CDO to maintain risk
		Simple instruments of credit derivates and guarantees: expensive and exposed to conterparty risk
		Swaps on multiple risk or baskets: exposure to counterparty risk

Source: Adapted by author after Kiff, J., Michaud, F., Mitchell, J. [7]

The problems approached. The motivation for involvement of banks in transfer activities of credit risk consist in their separating into two categories – "banks for portfolio management" using transfer instrument for credit risk to those who are carriers of credit risk and/or those who are willing to take credit risk and "intermediate", who active sell, operate with products of credit risk transfer and generate free access on makets with instruments of credit derivative. In this activity, banks, usually, aim to ensure right positions for credit risk.

In order to assess the possibility of transfer of credit risk in the banking sector of the Republic of Moldova it is necessary to analyze the composition of credits depending on the degree of exposure based on the information reflected in Figure 1.

The weight of standard credits reflects a negative trend of reduction in the analized period from 59.2% in 2004 to 47.2% in 2013. The best situation is observed in 2007, when credit standards were of 65.3 percent of the credit portfolio. For 2014 the situation changes, as observed an increasing of weight of standard credits at 55.2%.

Supervised credits shows an increased trend from 33.9% to 41.12% during the studied period, in 2014, on the contrary, their weight is reducing, helping to increase the weight of standard credits. The weight of substandard credits in 2004-2009 increases from 5% to 9.7% and that is gradually decreases to 3.0%. Dubious credits increasing similar to those substandard increasing from 1.6% to 6.4% between 2004-2009 and decreases to 3.0% in 2013, and at the end of 2014 they have 3.2 per cent of credit portfolio per banking system.

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[1] ***Asset-backed securities***
[2] ***Collateral bond debtor***
[3] ***Credit notes***

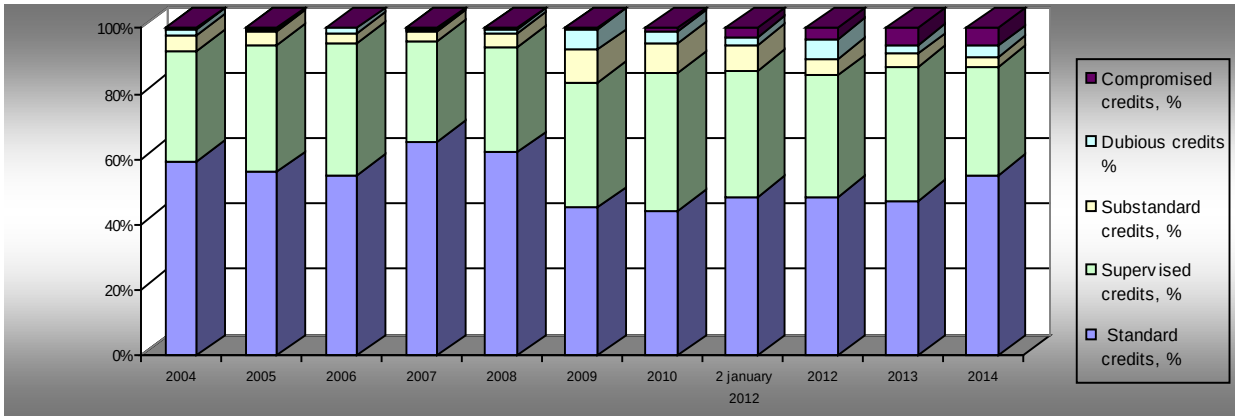

Fig. 1. Credit distribution deppending on level of risk esposure
Source: Made by author based on information presented by NBM on www.bnm.md/md/annual_report.

The "worst" credits are considered those compromised, reflecting a negative ascent during 2004-2014, increasing from 0.3% to 5.5%.

This dynamic suggests the following:

- banking system does not have instruments to insure against credit risk;
- in banking activities is missing practice of transferring credit risk to those who are willing to take it.

In general, the transfer of credit risk has two opposite effects. On the one side, it improves asset and liability management and helps banks in capital redistribution in periods of liquidity shocks without needing liquidation of costly project. On the other side, because of the fact that banks use secondary markets in order to recycle nonperforming credits, informational asymmetry reduces informational content of price of credit derivatives.

Benefits or negative effects of the transfer of credit risk depends, first of all, of the type of shock that affects the business cycle. In the presence of traditional macroeconomic shocks, transfer of credit risk helps to stabilize the economy.

In order to reduce banks exposure to credit risk its need to find that niche that will allow implementation of financial credit derivatives throught swaps on credit risk. Thus, for banking sector of the Republic of Moldova, it could issue financial credit derivatives that would have as support active supervised credits, after that, throught transferring credit risk would improve the quality of credit portfolio at the system level.

At the same time, appear the necessity to assess the effects of the rising cost of management of credit risk based on following formulas, synthesized by Victoria Cociug in work "Banking Management":

$$\text{RRCP1} = \frac{Interest_income - Interest_expenditure - DRPC}{PC} x100\% \qquad (1.1),$$

where: RRCP – rate of return of credit portofolio, adjusted on risk; DRPC – breakdowns for reduction for credit losses; PC – portofoliul de credite.

This indicator shows how profitable the bank is in terms of given credits by it. It shows the level of income that is generated by credit activities after deductions of breakdowns for reduction for credit losses. Thus, the breakdowns for losses on credits are the greater , the more income obtained from credit activities will decrease. As a result, as lower the indicator is, as less profit will get the bank from its credit portfolio.

$$\text{RRCP 2} = \frac{Interest_income - Interest_expenditure - RC}{CP} x100\% \qquad (1.2),$$

where: RRCP – rate of return of credit portofolio, after deducting remaining credits; RC – remaining credits.

As previous indicator, this coefficient shows the level of income obtained by the bank from credit operations after deducting remaining credits.

These two indicators demonstrate how effectively the bank manages its loan portfolio. Thus, as higher the level of remaining credits is, as more losses bank suffers.

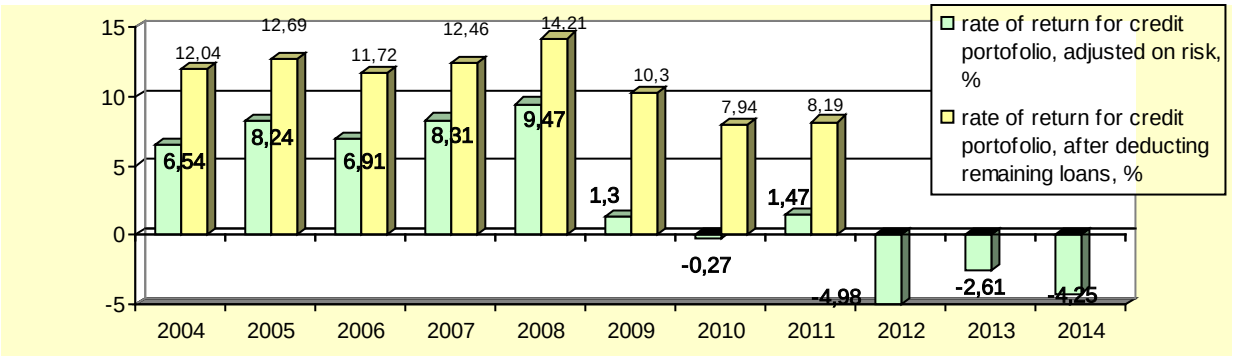

Fig. 2. Variation of return of credit portofolio
Source: Calculated and made by author based on informations presented by NBM.

Analyzing the results of the national banking system, we conclude that the rate of return on the credit portfolio indicates positive values in the period 2004-2009 and 2011. Detailed analysis shows that the income generated from credit operations is able to cover expences for interest on credits and reductions for losses on credits in the mentioned years, the result being materialized in profit obtained per banking system from credit operations.

The implication of the financial crisis can be observed beginning with 2010 when it reduced income from credit operations in conditions of increasing the expences for interest for credits and reduction for credit losses. Similarly, negative oscillation is present and for the years 2012 and 2013, generating losses in the banking system, instead of profitability from credit operations. Looking at the results of credit operations after deducting remaining loans, we conclude that in the banking sector portfolio return have comfortable values that vary between 7.94-14.21%.

Losses from credit operations is confirmed by variation of indicators characterizing banks' exposure to credit risk, as we see in the following figure.

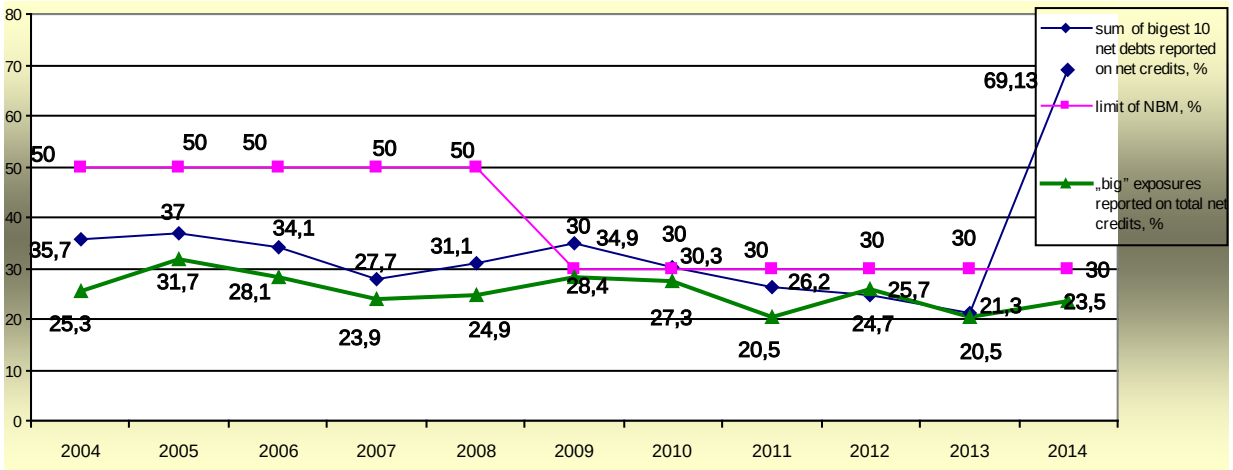

Fig. 3. Trend of indicators of exposure at credit risk
Source: Made by author according with informations presented by NBM on www.bnm.md/md/financial_indices_of_bank_system.

For the period 2004-2008, for the banking system, sum of 10 largest net debt reported to net credits was included into the permissible values per system (normative of NBM for the period 2004-2009 was maximum 50%), reported results varying between 27.7-37%. For 2009-2010 with modification of the maximum limit (for 2009-2013 the maximum limit was 30%) and negative situation on lending market is observed as exceeding of these with 4.9% and 0.3% but, according with provisions of NBM from Regulation on "big" exposures, unrespecting till December 31st, 2011 of the provided maximum limits are not considered infringement, if such unrespecting occurred because of the exposures assumed by the bank till the entry into force of the aforesaid Regulation. However, beginning with 2009 having observed a decline of the resultative indicator at the minimum value for all analized period by 21.3% in 2013,

which indicates a more rigorous monitoring of the process of credit giving. For 2014 we note an excessive increase of this report to 69.13%, exceeding by 39.13% NBM limit, which is assessed as negative for banking and crediting segment.

"Big" exposures reported to net credits indicates an irregular trend due to deviation in the volume of given credits in the years of crisis and recession, however the minimum value is observed on 31.12.2011 and 31.12.2013 in the amount of 20.5% and maximum of 31.7% for 2005, but at the end of 2014 we see an increase of this report to 23.5% due to the increase of large exposures.

Table 2

The problems of information asymmetry created on markets for credit risk transfer

	Potential problems	Effect of relationship	Characteristics of instruments that offer potential solutions
Adverse selection	reduced incentives for creditor to eliminate low-quality assets	debtor – creditor creditor – protection seller	-context where used instrument improve - credit provided by creditor - partial retention of risk by the creditor
	selection problem: creditor buying poor-quality of assets protection, causing the cost of protection for high quality assets	creditor – protection seller	- context where instrument is used; - standardized negotiation; - complexity of portfolio securitized instrument.
	incentives for asset managers in order to select low quality assets (managed securitizations)	creditor – protection seller	- independent governance; - strict rules for the assets selection; - partial retention of administrator risk.
Moral hazard	Reduced incentives for creditors to monitor credits	debtor – creditor creditor – seller protection	-credit improvement providing by creditor; - partial retention of credit risk; - monitoring regulations of documentation.
	Purchasing by creditor protection against debtor willing	debtor – creditor	the requirement to notify the debtor
	increased incentives for creditors to premature trigger the risk	creditor – protection seller debtor – creditor	- trigger events; - using the monitoring of transfer of finances credit risk;
	Protection seller (partially or fully) on contingent payments	creditor – protection seller	- increase the transparency of all markets of credit risk transfer

Source: Adapted by author after Kiff, J., Michaud, F., Mitchell, J. [7].

***Recommendations*.** Banks are the major share of market activities of transfer of credit risk. Their involvement is contained into two categories. First, banks use transfer instruments of credit risk for various purposes, such as diversification or hedging purposes in order to improve financing. These activities are grouped under the heading of portfolio management. Secondly, some big universal banks are involved in mediation of transfer instruments of credit risk. Thus, they do not engage in taking credit risk or assumption, but providing services for investors through development and intermediation of transfer products of credit risk and credit derivatives markets. Consequently, individual banks may be involved in both portfolio management and intermediation activities, depending on their strategy.

In both activities of portfolio management and intermediation, banks may be engaged in initiating of transfer instruments of credit risk. In the case of portfolio management, a bank creates transfer products of credit risk based on balance assets. The motivation is to improve financing or capital management.

So, we opt for transfer of credit risk for the following reasons:

- risk decreasing regarding individual entities, in order to obtain benefits from capital management and maintaining regulatory capital;
- access the funds through securitization;
- diversification of credit risk by claims purchasing on societies which otherwise, would not be accessible to them;
- hope to increase the incomes by transfer instruments of credit risk.

For most banks, the importance of transfer instruments of credit risk remains limited. However, some banks already use transfers of credit risk.

According to financial reports, drastic changes in the business models of banks are still expected in terms of the deep changes at the global level. Most of the banks consider that transfer of credit risk, as part of their strategy, can be, relatively easily integrated into their current business. In their strategy, some banks, mostly intermediate, mentioned a business strategy and explicit need of transfer of credit risk. Deepening and expanding of transfer markets of credit risk has been regarded as a potential which will allow banks to make major changes in their business strategies.

Here can be identified many examples of benefits from the transfer of credit risk. These include:

- separation of risk credit from financing risk and market risk;
- time isolation of credit risk;
- separation of credit risk classes, allowing distribution to different levels of risk appetite;
- banks accept to choose keeping of ownership right, when transfer of credit risk allows specialization, loan "separation" from credit risk, and relaxation from regulatory constraints.

The recommendations comming from working group consisting of representatives from Bank of International Regulations are:

1. Market participants should use instruments for credit risk transfer in a compatible manner with the policy of risk management, approved by their board of directors or equivalent governing body and implemented by top management.
2. Market participants on trading instruments of transfer of credit risk should have the capacity to understand and assess the risks regarding to inherent credits in such instruments. This should include the ability to understand the variables influencing on the instrument assessment and how the instrument asessment will be affected by changes in this variable. Banks, that perform transactions of tranfer of credit risk, should be able to evaluate on a comparable basis the credit risk, no matter of how it appears on the balance transaction.
3. Banks based on models of assessing credit and on instruments of transfer of credit risk should have sufficient staff and enought experience to understand correctly the assumptions and limitations of these models and accordingly to use them.
4. Market participants should understand the nature and scope of external ratings assigned instruments of transfer of credit risk, especially collateral obligations (CDO), how they differ from external ratings assigned to other types of instrumets and way how methodologies rating different from rating agencies.
5. Market participants investing in dynamic structures should carefully evaluate the report of the manager, nature of appreciation from manager and potential conflicts of interest. Key problems in this regard include factors that require or prevent certain actions, provisions governing the diversion of cash flows to various tranches and the ability or right to substitute reference credits.
6. Counterparty credit risk, that result from transactions of credit risk transfer without reserve forming should be actively managed, at least on the same standards applied to other derivatives financial instruments on the extra bursary market. Especially, for risk management, counterparty credit exposures on derivatives instruments and other credit exposures at the same counterparty, should be aggregated taking into consideration enforceable agreements of compensation. Credit exposures of counterparty should be frequently calculated (in most cases, daily), and in relation to credit limits.
7. All market participants should pay attention to the legal documentation regarding the instruments for credit risk transfer, like range of credit events covered by instruments of credit risk transfer and clear and unambiguous identification of underlying reference entities.
8. Before entering into a transfer transaction of credit risk, market participants shlould count necessary estimates in order to clearly identify the legal responsibilities of the counterparty or client, depending on their role in transactions and take into account that the counterparty or client have legal authority to enter the transaction. More than that, dealers and end users should have space in processes in order to evaluate and control the reputational risks involved in the transaction.
9. Market participants, especially banks, that offer possibility to use transfer instrument of credit risk, should take care to ensure compliance with all relevant laws and regulations, which relate to participation in transactions for the transfer of credit risk.

10. Market participants should execute confirmations and other documents associated with a transfer transaction of credit risk immediately after the transaction was realized. Market participants should establish clear standards or guidelines for periods of time that should be allowed for the exchange of documents and confirmations. Banks, which usually offer summary information and breakdowns of credit exposures for credit portfolios, should take into account the presentation of information that describes how transfer transactions of credit risk affect these summary measures and breakdowns of credit exposure. Market participants, like insurers, that take credit risk as underwriters, should take into account the information about the quantity of such exposures and associated provisions.
11. The Commission's efforts for global financial stability for developing mechanisms that identify better information about aggregate credit risk should be strongly supported by supervisory authorities and market participants.
12. Supervisory authorities should take necessary measure to facilitate their understanding regarding transfer transactions of credit risk. This includes necessity to attract and maintain qualified personnel, implementation of training procedures in order to improve staff knowledge and perception.
13. Supervisory authorities should periodically review regulations, supervisory guidance and reporting mechanisms, that are relevant for transactions of credit risk transfer. In many cases, orientation of supervision and reglementations applicable for extra bursary derivate financial instruments are not specifically adapted for transactions with financial instruments of credit derivatives. So, may be circumstances where regulations, guidance reporting or supervisory mechanisms of supervision should be adapted for more effectively achievement of their specific objectives. Supervisory organs should make efforts for better understanding accounting approach of transfer transactions of credit risk and their implications, seeking to ensure a contribution of vast knowledge in development of adequate accounting standards for transfer transactions of credit risk.
14. Supervisory authorities should continue efforts to share information regarding activities of credit risk transfer with the goals of strengthening mutual understanding of the evolution of credit risk and improvement practices of risk management by market participants. Especially, supervisors authorities should exchange information about regulatory approaches adopted in areas, like minimum capital and securitization, for a better understanding of possible interactions between different approaches and incentives, that these interactions could create for market participants [3].

Credit risk transfer produce a compromise between an improvement in risk ensuring and liquidity management (positive effect) and a reduction of banks' incentives to monitoring (negative effect). Optimal instruments of transfer of credit risk are based, rather, on credit portfolios than on individual loans and hace credit guarantees for consolidation. But level of credit accessory must be clearly defined, being present a temporary defined interval. Outside this interval, monitoring incentives are undermined.

Conclusions. Following worldwide talks appeared need to assess the problems in the credit risk transfer, that are important from perspective of financial stability, being highlighted three aspects:

1) implication of derivate financial instrument in realization of credit risk transfer;
2) the level where participants of market of credit risk transfer understand involved risks;
3) the impact of credit risk transfer in excessive concentration of credit risk within or outside the regulated financial sector.

Transfer of credit risk facilitates the distribution of credit risk. It is clear that selling protection of transfer of credit risk is equivalent with improvement the liquidity of the financial system.

Successful transfer of credit risk and creation of sustainable qualitative market would not have been possible without the strong influence of financial institutions, particularly banks.

Regarding to general process of financial disintermediation, that is accelerated by markets credit risk transfer, should be differentiated between effects of capacity (for example, infrastructure, market creation), effects of information (for example, transparency, disclosure, adverse selection) and effects of coordination.

So, the transfer of credit risk, as an efficient and modern concept, certainly, should be interesting for all banks, from all banking systems where banks act, from other hand, we have to recognize that few banks are able to protect themselves against risk, due to lack of adequate markets, which is an important condition for the successful implementation of the concept of credit risk transfer.

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INVESTMENTS AND ENTREPRENEURIAL FACTOR IN PROVIDING SUSTAINABLE JOBS

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The topic of creating decent jobs in the Republic of Moldova is one of the most actual issues that touch both the society as well as the authorities of the country. The main goal of this scientific paper is to analyse how investments in the economy impacted the creation of welfare and decent jobs for the population of the Republic Moldova and what are the main factors that are able to generate this outcome. The main results of the research consist in the argumentation that creation of decent and sustainable jobs can happen not just relaying on attracting FDI, but mainly on the consolidation of the local entrepreneurial factor and enhancement of SMEs. Investment in local SMEs by information, expertize, financial support, the right legal frame and development of human capital is a key element in developing the entrepreneurial factor that brings sustainable jobs. The methodology of research includes a classical approach and empirical research, such as methods of comparative, historical-analytical, systemic analysis and quantitative and qualitative analysis.

Key words: *local investments, FDI, entrepreneurial factor, decent jobs, export, economy, SMEs, human capital.*

Tematica creării locurilor de muncă decente în Republica Moldova este una dintre cele mai actuale provocări, adresate atât societăţii, cât şi autorităţilor ţării. Scopul principal al acestui articol ştiinţific este de a analiza modul în care investiţiile în economie au determinat crearea bunăstării şi a locurilor de muncă decente şi durabile pentru populaţia Republicii Moldova şi care sunt factorii ce pot genera aceste urmări. Principalele rezultate ale cercetării constau în argumentarea următorului fapt: crearea locurilor de muncă decente şi durabile poate avea loc nu doar prin atragerea ISD, dar, în mare parte, prin consolidarea factorului antreprenorial local şi prin consolidarea IMM-urilor. Investiţiile în IMM-uri prin informare, expertiză, suport financiar, cadrul legal favorabil şi dezvoltarea capitalului uman joacă un rol cheie în dezvoltarea factorului antreprenorial, care, la rândul său, generează locuri de muncă durabile. Metodologia cercetării include abordarea clasică şi cercetarea empirică. Astfel, menţionăm: metoda analizei comparative, istorico-analitică, sistematică, dar şi analiza cantitativă şi calitativă.

Cuvinte-cheie: *investiţii locale, ISD, factor antreprenorial, locuri de muncă decente, export, economie, IMM, capital uman.*

Тема о создании хорошо оплачиваемых рабочих мест в Республике Молдова является одной из самых актуальных, она касается как общества, так и руководства страны. Главной целю этой научной статьи является анализ того, как инвестиции в экономику вызывают создание благополучия и хорошо оплачиваемых, устойчивых рабочих мест для населения Республики Молдова, и каковы факторы, приводящие к таким результатам. Главный результат этого исследования состоит в аргументации того, что создание хорошо оплачиваемых и устойчивых рабочих мест возможно не только через прямые зарубежные инвестиции, но в значительной степени благодаря консолидации местного предпринимательского фактора и развития малых и средних предприятий (МСП). Инвестиции в МСП через информирование, экспертизу, финансовую поддержку, благоприятное законодательство и развитие человеческого капитала играют ключевую роль в развитии предпринимательского фактора, который, в свою очередь, генерирует устойчивые рабочие места. Методология исследования включает классический и эмпирический подходы, каковыми являются методы сравнительного анализа, историко-аналитический, системный методы, а также количественый и качественный анализ.

Ключевые слова: *местные инвестиции, ПИИ, предпринимательский фактор, достойная занятость, экспорт, экономика, малые и средние предприятия, человеческий капитал.*

JEL Classification: O11; F43; G15; G19.

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Introduction. In the last 3 decades, the Republic of Moldova passed through more economic stages of development that expressed more or less success on the population's welfare and level of life. The reforms implemented in the '90 linked with the economic liberalization and public goods privatization had little effect on creating decent jobs and eradication of poverty. This process laid more to the allotment of the oligarchs and officials at different levels. Our government was concentrated mostly on macroeconomic reforms, but insufficient in enhancing the micro level and its synergy with the macro- or world economy.

At the beginning of 2000 the Moldovan leadership started a new process of economic reforms that was concentrated again on macroeconomic reforms aimed to be more on the side of big companies and political interests of the ruling parties. The aim of these institutional actions was to promote Foreign Direct Investments (FDI) and exports in order to enlarge the market and to generate added value. Although the statistics shows us that there were registered little progress of economy and foreign trade with goods proved a negative trade balance since the Republic of Moldova got its independence.

A new tendency of the Moldovan economy is the association and integration in EU as a big economic attractor of the Eastern Europe countries. The integration in EU as a strategic economic objective of the Republic of Moldova is free access to the Western European market and access of EU structural funds and private FDI. The final outcome of the process ought to be the creation of decent jobs, the reduction of human trafficking and the improvement of living standards.

In our approach, the transition of Moldova's economy has more stages, expressing more steps in attracting FDI in order to create jobs, added value and increase the export of goods in the foreign market. These steps are linked more with the economic liberalization and public property privatization, elaboration of strategies on investment attraction and export promotion, and EU association (2010 – present) [1].

In comparison with the neighboring countries, the FDI on capita in the Republic of Moldova is lower, and we still aren't economically attractive for international companies due to political reasons and justice issues.

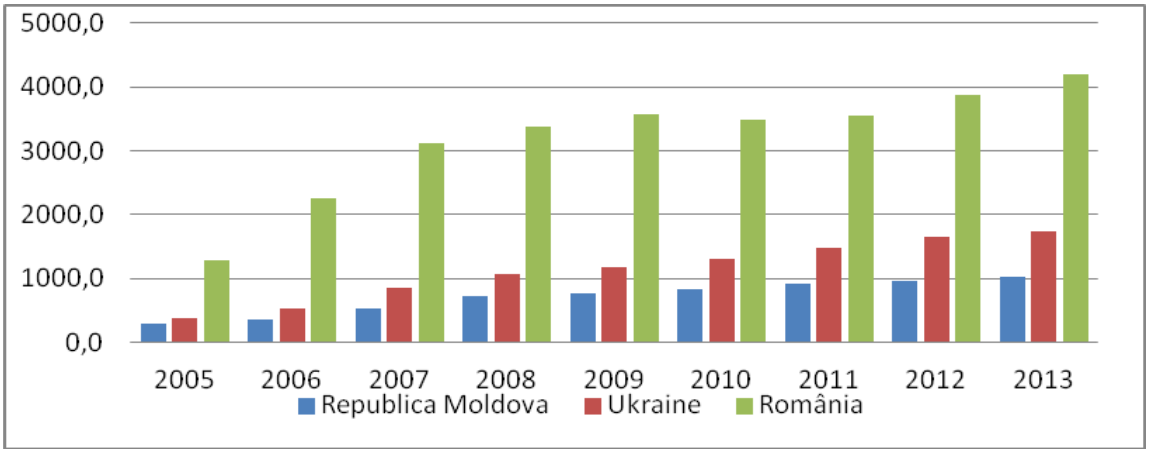

Fig. 1. Inward foreign investments stocks per capita, 2005-2013
Source: Created by author based on UNCTAD Reports [online].

Although we can observe a slight increase in the FDI since 2005 due to the economic reforms and approval of the *National Strategy on the Investments Attraction and Promotion of Exports for 2006-2015,* the competitiveness of our companies and economy is still an issue because the exports proved a lower performance during the same period of the time. The balance of the trade is still negative and only the exports of services proved a positive trade balance between 2011-2013. This shows us that FDI most of the time will have a limited contribution to the added value in economy and in the increase of exports of goods by Moldovan companies able to create sustainable and decent jobs, able to bring enough currency in the country and consolidate the national financial system (See Figure 2). Most multinational companies that have invested in our country are mostly interested in outsourcing and use of the cheap labor force, even though in the beginning, they create a lot of new jobs or bring new technologies, but as soon as the conditions are no longer favorable, they live in the country and withdraw the investments. Also, it has been already registered more cases in the Republic of Moldova when big foreign companies manipulated our government in order to get more tax redemption as well as more preferences, otherwise they will close the companies and withdraw the investments, that can create more social problems for the country rather than solving them.

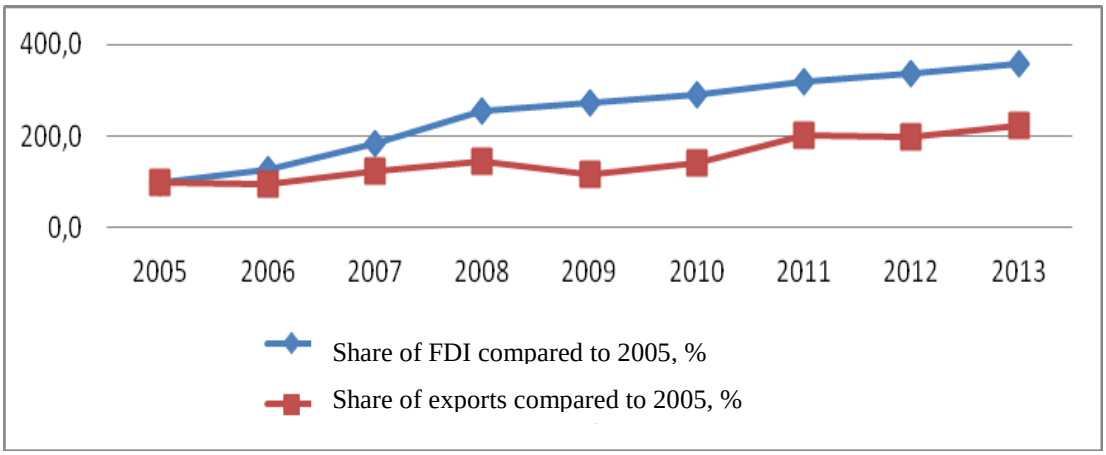

Fig. 2. Share of investments stocks and volume of exports compared to 2005, %
Source: Created by author based on NBM Reports [online].

Also, foreign companies are not paying the taxes for income in the county of its economic activity because this is repatriated in the country of its origin, taxes that could contribute to solving social issues in the Republic of Moldova. In addition, a big part of FDI is coming from countries with a high tax preference and offshore financial center such as Holland, Cyprus, Switzerland, or countries with investment companies which are often involved in money laundering such as Russia.

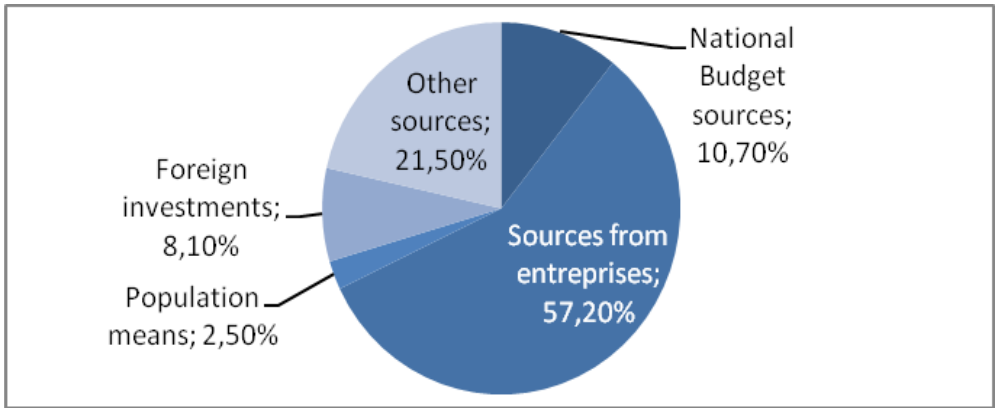

Fig. 3. Structure of investments in fixed assets on financing sources in the Republic of Moldova, 2012
Source: Created by author based on NBM Reports [online].

Taking into consideration the facts mentioned above, we consider that FDI are not key players in creating sustainable and decent jobs, or in stopping mass migration of Moldovan population to richer countries. The statistics are showing that since its independence, the biggest part of investments in the country's economy were the local ones. In 2012, from the total investments, 57.2% comes from local enterprises and, by including the population investments of 2.5%, the majority of the investment done in our economy belongs to the local private sector. This structure and trend is not characteristic only for the Republic of Moldova which is a poor country, but also for more developed countries from the region such Romania, which GDP per capita is 4 time bigger than the one from the Republic of Moldova (See Figure 4). The main factor that drove the development of big national economies consisted not of FDI in the first place but due to the development of the entrepreneurial factor.

The production factor that leads to the creation of added value in an economy is land, labor force, capital and entrepreneurial skills of the population. For the new independent state of the Republic of Moldova at the beginning of '90 remained with land, cheap labor force and a vast fixed capital that deteriorated in the next few years of its independence.

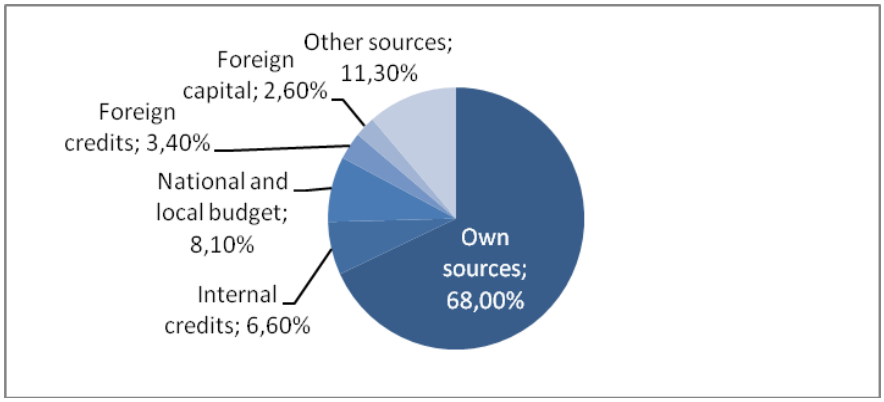

Fig. 4. Structure of investments in fixed assets on financing sources in Romania, 2012
Source: Created by author based on the Reports of National Institute of Statistics of Romania [online].

The missing factor that our population has lacked was the entrepreneurial one, annihilated in the time of the Soviet Union domination over this region when any social or economic initiative and activity was illegal. The main reforms that our former new democratic government should have implemented were to finish the privatization process in maximum 3 years since 1991 and to stimulate the development of the Small and Medium Sized Enterprises (SMEs) in the '90 that represents the real stimulator of entrepreneurship in a country. Unfortunately, our government started to promote SMEs much later through stimulation programs and state agencies such as ODIMM (Organization of the Development of SMEs Sector), founded in 2007.

Our country has a big potential in developing the entrepreneurial skills and, with little investment in this factor in the last decades, we still have a positive ROA in some units of the system. Overall, the Moldovan economic output is positive, especially if we consider its ROA for 2010 and 2011 which was 8.2% (See Table 1), comparing it to Romania that proved the same indicators[1] for the first decade on the century. The threat is that in the last few years its overall profitability significantly decreased to just 2% being a threat to more economic indicators as well as social.

Table 1

Return on Assets (ROA) for 2009-2013 (%)

	ROA (%)				
	2009	**2010**	**2011**	**2012**	**2013**
Total, *of which:*	2.5	8.2	8.2	2.5	2.1
Agriculture, hunting and forestry	-2.8	12.9	12.8	0.9	3.9
Fishery	-2.8	-98.8	-2.0	-4.8	-3.5
Mining industry	0.2	0.6	0.7	0.1	0.5
Manufacturing	0.0	7.0	7.6	2.1	2.6
Energy sector	-6.6	1.4	2.1	0.3	-5.1
Construction	5.0	11.1	8.7	2.4	3.1
Trade	6.4	16.0	14.0	4.5	4.6
Hotels and restaurants	-1.4	10	3.2	-4.2	-1.6
Transportation and communication	11.5	9.9	10.5	5.9	5.5
Financial activities	1.9	3.4	6.7	5.5	8.7
Real estate transactions, rentals and services delivered to enterprises	1.3	7.6	7.7	2.6	-1.3
Education and training	10.8	11.1	7.1	1.9	0.7
Health and social assistance	9.6	3.5	0.2	-1.6	-1.1
Other services	-1.7	-1.1	-1.2	-5.9	-3.9

Source: NBS Reports (2009-2013).

[1] ***Rolul companiilor nefinanciare din România în asigurarea şi menţinerea stabilităţii financiare. Banca Naţională a României. http://bnro.ro/SearchResult.aspx (quoted 05.06.2015)***

In developed countries from Europe the majority SMEs represents 98-99% and this sector holds and creates the biggest number of jobs. In Switzerland, the share of employees in SMEs is around 70% from the total. In the Republic of Moldova, the total number of SMEs was of 50.9 thousand in 2013 [3];its share from the total was 97%, being lower than in development countries from Europe (See Figure 5). Although the majority part of employees is working in SMEs, there is a tendency of decreasing from 59 to 56% in favor of big companies which puts our economy in a risky situation when big companies will use the cheap labor force of our population and national income will not significantly increase.

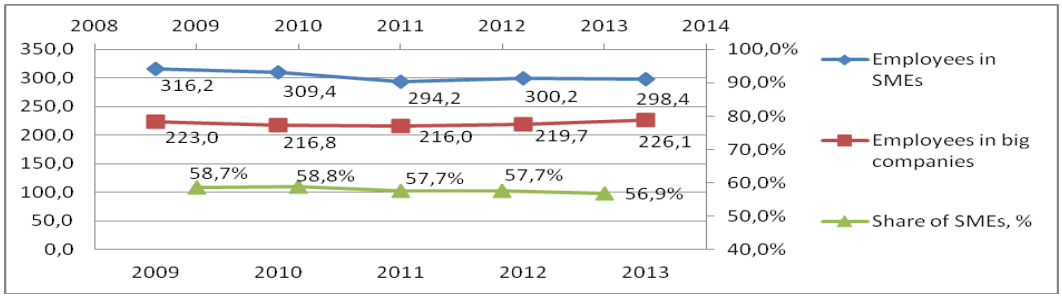

Fig. 5. Evolution of employees on the type of enterprises 2009-2013
Source: Created by author based on NBS Reports [online].

With this analysis of facts, we can recommend to the NGOs and political authorities to invest in the local business initiative that can contribute to the national income. We need entrepreneurs with good ideas, financial management skills, business planning skills, business people which are able to feel the market, more supply chains, and last but not least, to invest in human capital that brings the most added value in companies and in the economy.

The economic situation and the assurance of jobs in the Republic of Moldova depends mostly not on FDI or international grants, but on the entrepreneurial abilities of the population and local investments in fixed assets as well as in human capital. In a developed state, the majority of jobs are provided by the SME sector that largely corresponds with family business which is a generator of business innovations. That is why, this factor must be stimulated as a first priority through training, the right legal frame, financial support and expertize both from the state and civil society. In the Republic of Moldova there are profitable economic units (See Table 1) and in an aggregate view we have a positive ROA that means we have a big human potential and entrepreneurial factor.

Conclusion. As a conclusion there is a direct link between the entrepreneurial factor and the problem of decent jobs that most of the times cause premises for human trafficking from the Republic of Moldova to the consuming countries. This link is reflected in the level of national income and the population occupation that is much lower in comparison with the European countries.

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GRADING OF INDUSTRIES BY SIZE CRITERION AND ITS IMPACT ON THEIR PLACE AND ROLE IN ECONOMY OF AGRICULTURAL ENTERPRISES

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We find it reasonable to determine the importance (place) of an industry for an enterprise based on such indicators as the share of costs of the industry (production consumed resources) in the total operating costs of the enterprise and the scope of these costs per unit of land area, and to determine the role of an industry based on the share of the operating profit of the industry in the operating profit of the enterprise, the operating profit of the industry per unit of land sales, and the return on sales of the industry products.

According to the place and role of an industry in the economy of an enterprise, a size-based scale of industries was proposed, distinguishing auxiliary, minor, small, supplementary and key industries. It has been proved that enterprises with large-sized land areas normally afford developing minor industries, whereas smaller enterprises place an emphasis on the development of supplementary and key industries.

It has also been established that the place of minor and small industries is overestimated in the economy of enterprises because of their inefficiency as compared to their role and contribution to the development of such enterprises. Conversely, supplementary and especially key industries play a crucial role in ensuring the profitability of production.

Key words: *concentration, production direction of the enterprise, specialization of the company, the size of the industry to the place of the enterprise sector.*

În prezentul articol este cercetată valoarea (locul) industriei pentru întreprindere conform indicatorilor ca pondere a industriei cheltuielilor (resursele de producere și de consum) în costurile totale ale companiei și mărimea acestor costuri pe unitate de suprafață de teren, iar rolul industriei – conform raportului de operare a industriei în profitul intreprinderii, profitul operațional al industriei pe unitate de teren și rentabilitatea vânzărilor de produse ale industriei.

În conformitate cu locul și rolul industriei în economia companiei, este propusă grila industriei în baza dimensiunii acestora, printre care: cele comunale, mărunte, mici, suplimentare și principale. A fost demonstrat faptul că industria mică, de obicei, își permite să dezvolte mai mari dimensiuni de teren pentru companie, în timp ce companiile mai mici se concentrează pe dezvoltarea industriilor principale și suplimentare.

Cuvinte-cheie: *concentrare, direcție de producție a întreprinderii, specializarea companiei, dimensiunea industriei la locul sectorului întreprinderilor.*

Предложено значимость (место) отрасли для предприятия определять по таким показателям, как удельный вес расходов отрасли (производственно-потребленных ресурсов) в общих операционных расходах предприятия и размер этих расходов на единицу земельной площади, а роль отрасли – по удельному весу операционной прибыли отрасли в операционной прибыли предприятия, операционная прибыль отрасли на единицу земельной площади и рентабельность продажи продукции отрасли.

В соответствии с местом и ролью отрасли в экономике предприятия предложена шкала градации отраслей по их размеру, выделив среди них подсобные, мелкие, малые, дополнительные и главные. Доказано, что мелкие отрасли, как правило, позволяют себе развивать большие по размеру земельной площади предприятия, тогда как меньшие предприятия главное внимание сосредоточивают на развитии главных и дополнительных отраслей.

Установлено также, что в экономике предприятия место мелких и малых отраслей через их неэффективность завышается в сравнении с их ролью и вкладом в развитие таких

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предприятий. И наоборот, роль дополнительных и особенно главных отраслей становится решающей в обеспечении прибыльности производства.

Ключевые слова: *концентрация, производственное направление предприятия, специализация предприятия, размер отраслей предприятия, место отрасли предприятия.*

JEL Classification: Q1; H50; P17; R5.

Problem statement. Specialization and concentration of production of economic entities are important economic processes in the management system of the agro-industrial complex.

Such terms as “enterprise production line” and “enterprise specialization” are often used in economic literature. Moreover, there is no clear distinction between these concepts, and frequently they are treated as synonyms. Therefore, this aspect of the problem requires additional study with due regard to the size of industries.

The issue of grading of industries by their size has remained underexplored until today, which complicates the problem of determining their place and role in the economy of enterprises, and therefore in the reasoned formation of their industrial structure and clear definition of the production line or specialization of such economic entities. Another question requiring further study is the impact of not only the level of production concentration, but also the “status” of an industry according to its size and role in the enterprise economy on the efficiency of industries.

Analysis of major studies and publications. The questions of specialization and industrial structure of enterprises are predominantly treated in general terms in economic literature. However, the questions of industry size and the impact of industries on the economy of enterprises are considered only in individual works, notably without detailed substantiation of criteria for the classification of such industries according to their size, and without exploration of the effect of different size industries on the economy of enterprises. The substantiation of the methodological approach to determine the production line of enterprises and their specialization remains underexplored.

The insufficient scientific development of the specified issues stipulates the relevance of this article and determines its purpose. The latter consists in substantiating the grading of industries according to their size, defining the indicators of their place and role in the economy of enterprises, distinguishing between the concepts “production line” and “enterprise specialization” on this basis, and determining the impact of the status of industries on production efficiency.

Presentation of the main content. Specialization and concentration of production of economic entities are important economic processes in the business system of the agro-industrial complex. Narrower specialization allows commodity producers to concentrate limited resources on the production of one or several types of technologically connected products and, concurrently, organize it on a larger scale. Thus, these two processes are interconnected and interdependent, which is one of the essential factors of rational production organization and enhancement of profitability of agricultural enterprises.

There are also reasons to believe that the concentration level of an agricultural enterprise of a certain industry and the level of its specialization in the products of this industry are closely interrelated. In general, it can be described with the following tendency: the higher the level of concentration of a particular industry, the higher the level of specialization of an enterprise and the output of products of that industry. We hereby stress that this is only a general tendency which may have significant deviations for certain reasons.

Primarily, it should be noted that in order to achieve the purpose of the article the list and size of industries have been determined in terms of the cash proceeds structure (net income), and the concentration of production was assessed by means of the total volume of sales of a certain industry, the volume of sales per unit of land area, as well as the volume of operating costs incurred by a particular industry. As the importance of industries is far from being the same for an enterprise, a need arises to define their place and role in the economy of such a business entity.

There are economic reasons to believe that the place of an industry in the economy of an enterprise can be displayed by the share of the industry costs (production consumed resources) in the total operating costs of the enterprise and the size of these costs per unit of land area. The role of an industry in the economy of an enterprise is represented by such indicators as the share of the operating profit of the industry in the operating profit of the enterprise, the operating profit of the industry per unit of land sales, and the return on sales of the industry products.

The approach provided to determine the size, place and role of industries creates a scientific foundation for grading industries according to their size and for the distinction between the concepts “production line” and “enterprise specialization”.

Presently, there is no clear distinction in the use of the aforesaid concepts in the literature. There is a viewpoint equating these concepts [2], but we believe that they are different, therefore they should be considered as independent, based on the place and role played by an industry in the economy of an enterprise. This approach solving the present problem requires grading industries by their size. It should be pointed out that according to our observations economic literature contains no studies dedicated to the substantiation of marginal limits which could serve as the basis to identify a particular industry according to its place and role in the economy of an enterprise.

Based on the analysis of factual material on many enterprises in terms of the cash proceeds structure, we have reached the conclusion that it is reasonable to use the following industry size grading scale which is closely correlated with the place and role of industries in the economy of an enterprise (see Table 1):

- auxiliary industries, i.e. industries the products of which are manufactured for internal economic needs and do not assume the commodity form;
- minor industries with the share in the cash proceeds structure up to 5%;
- small industries with the share in the cash proceeds structure from 5 to 10%;
- supplementary industries where such a share is within the range from 10 to 19%;
- key industries with the cash proceeds share of 20% or more.

We consider well-reasoned the point of view according to which the production line of an enterprise is formed by supplementary and key industries of the agricultural enterprise, and that it is reasonable to formulate the name of such a line based on the range of industries the shares of which take the first three places in the descending rank of cash proceeds structure [1, p. 632].

If, for example, only two of all commodity industries of an enterprise meet the criteria of supplementary and key industries, the production line should be formed only based on these two industries.

Specialization of an enterprise is formed only by those key industries which occupy a dominant position in the economy of the enterprise, and hence in the cash proceeds structure. It is commonly believed that if a certain industry occupies 90 percent or more in the cash proceeds structure of an enterprise, the enterprise is highly specialized, and if an industry occupies 50 percent or more, the enterprise specializes in this sole industry. An enterprise specializes in two industries if their total share in the cash proceeds structure is 67 percent or more, with each of the industries occupies at least 25% of the cash proceeds. Finally, an enterprise specializes in three industries if their total share is 75 percent or more, with each of the industries occupies at least 20% [1, p. 634].

Given the above, there are reasons to make such a distinction in the use of the concepts “production line” and “specialization” of an enterprise. In particular, it is reasonable to use the term “enterprise specialization” when an enterprise can be identified as highly specialized or specialized in two or three industries based on the calculated cash proceeds according to the defined criteria. If such identification is not possible, it is justified to use the concept “production line of the enterprise”, as defined according to the previously set out methodical approach.

The study of an impact of the size of industries on their place and role in the economy of an enterprise was conducted using the examples of selected enterprises of Kyiv Region. The results obtained are shown in Table 1.

The obtained study results show that enterprises smaller in size do not afford developing industries smaller in size (minor and small), thus key and supplementary industries dominate in them. Normally, small industries can be developed by enterprises large in land area, while enterprises focusing on a key industry have a smaller land area, using it primarily to ensure functioning of the key industry. The results of this study also demonstrated that small and minor industries have low efficiency, causing the loss of 27.87 and 29.14 UAH/ha, while supplementary and key industries brought profit in the amount of 67.51 and 345.04 UAH/ha. Such an indicator of industry role in the economy of an enterprise as return on sales has a similar tendency – from -23.15% in minor industries to 11.66% in key industries.

Table 1

Grouping of Kyiv Region enterprises according to the size of their industries

Number of enterprises in the groups	Number of industries in the groups of enterprises, total	Number of industries per enterprise	Average cash proceeds per industry, thou. UAH	Share of cash proceeds from industries in total cash proceeds of an enterprise,%	Average agricultural area per enterprise, ha	Proceeds from an industry per ha, UAH/ha	Operating profit from industries, thou. UAH	Operating profit/loss from industries per 1 ha, UAH/ha	Return on sales of an industry, %	Share of industry costs in total costs of an enterprise, %	Average cost of production of an industry per enterprise, thou. UAH
Enterprises with minor industries											
65	202	3	301.7	1.67	2506.3	120.4	-69.85	-27.87	-23.15	2.12	371.57
Enterprises with small industries											
58	101	1.7	1362.3	7.33	2459.4	553.9	-71.67	-29.14	-5.26	8.08	1434.00
Enterprises with supplementary industries											
55	122	2.2	2011.8	13.96	2143.9	938.4	144.72	67.51	7.19	13.74	1867.04
Enterprises with key industries											
76	123	1.6	5571.7	39.58	1883.5	2958.1	649.90	345.04	11.66	37.70	4921.84

Source: Calculated by author based on statistics of enterprises of Kyiv region.

Places of different size industries in the economy of an enterprise draw particular attention. As seen in Table 1, the share of costs of minor and small industries in the total costs of an enterprise (2.12 and 8.08% respectively) is bigger than the share of these costs in the cash proceeds structure (1.67 and 7.33%), which causes their unprofitability. Supplementary and key industries are characterized by the opposite correlation of these indicators, namely 13.74 and 37.7% against 13.96 and 39.58%. Thus, the place of minor and small industries in the economy of an enterprise is overvalued because of their inefficiency as compared to their role and contribution to the development of such enterprises. Conversely, the role of supplementary and especially key industries is crucial to strengthen the economy of business entities.

The concentration factor became one of the most important conditions for the formation of quite different roles of different size industries in the economy of enterprises. In this context, economic interest represents a peculiar progress of concentration indicators – sales per enterprise and costs per enterprise – obtained from minor, small, supplementary, and key industries. If average proceeds of enterprises from a minor industry are taken as 100% (301.,700 UAH), the average proceeds from a small industry are 4.5 times higher, the average proceeds from a supplementary industry are 6.7 times higher, and the average proceeds from a main industry are 18.5 times higher (5.571.700 UAH). Concurrently, the increase in concentration in terms of costs is slower: operating costs increased averagely by a factor of 3.86 as compared to this indicator for one minor industry, by a factor of 5 as compared to one supplementary industry, and by a factor of 13.2 as compared to one key industry.

This peculiar progress of the studied concentration indicators was the reason for the reduction of unprofitability of small industries in comparison with minor industries on the one hand, and for the profitability of supplementary industries and significantly higher profitability of key industries on the other hand.

For the purpose of a more detailed study of the impact of concentration on the place and role of an industry in the economy of an enterprise, combination grouping was carried out with the distinction of subgroups for each of the distinguished industries by the size criterion. The subgroups were formed according to the cash proceeds obtained from the respective industry (Table 2).

Table 2

Grouping of Kyiv Region enterprises according to the size of their cash proceeds in terms of minor, small, supplementary and key industries

Cash proceeds from an industry, UAH thou.	Number of industries	Average cash proceeds per industry, thou. UAH	Share of cash proceeds from industries in total cash proceeds of an enterprise, %	Average agricultural area per enterprise, ha	Average cash proceeds per industry per 1 ha, UAH/ha	Operating profit from industries, thou. UAH	Operating profit/loss from industries per 1 ha, UAH/ha	Return on sales, %
Enterprises with minor industries								
Up to300	128	87.90	0.64	2120.76	41.45	-42.61	-20.09	-48.47
From 301 to 500	35	385.36	2.34	2377.89	162.06	-106.79	-44.91	-27.71
More than 501	39	928.42	2.75	3886.81	238.86	-126.09	-32.44	-13.58
Enterprises with small industries								
Up to 600	28	357.76	6.56	988.51	361.92	-7.18	-7.27	-2.01
From 601 to 800	15	675.09	6.51	1546.61	436.49	-84.58	-54.69	-12.53
More than 801	58	2025.04	7.49	3405.58	594.62	-99.46	-29.21	-4.91
Enterprises with supplementary industries								
Up to 900	33	590.31	12.88	916.61	644.01	8.15	8.90	1.38
From 901 to 1800	32	1238.30	13.74	1516.01	816.82	69.22	45.66	5.59
More than 1801	57	3268.93	14.13	3206.85	1019.36	266.18	83.00	8.14
Enterprises with key industries								
Up to 2000	31	969.90	29.09	648.13	1496.47	130.92	201.99	13.50
From 2001 to 5000	54	3417.29	28.98	1735.03	1969.58	483.22	278.51	14.14
More than 5001	38	12387.47	47.48	3102.39	3992.89	1310.15	422.30	10.58

Source: Calculated by author based on statistics of enterprises of Kyiv region.

According to the results of the study by analytical groupings, the following generalizations can be made. The groups of enterprises with minor and small industries have subgroups with practically the same level of production concentration (volume of product sales): this figure is respectively 385.360 UAH in the second subgroup of the first group (minor industries), and 357.760 UAH in the first subgroup of the second group (small industries). However, the results of functioning of these subgroups of industries differ significantly as to the key indicators of their role in the economy of enterprises. At the same level of concentration of production, minor industries as compared to small industries cause a substantially greater loss per unit of land area (about 45 UAH/ha) with a high level of sales loss ratio (-27.1%), while in small industries these figures are much smaller - 7.27 UAH/ha and 2.01% respectively.

The most probable reason for the lower loss ratio of small industries in comparison with minor industries at the same scale of production is the fact that the management of enterprises pays much less attention to the development of minor industries (their share in the cash proceeds structure is only 2.34%) because of their minor role in the economy of enterprises. Attention of the management to small industries is a little higher as their share in the cash proceeds structure is 6.56%, therefore their loss ratio decreases substantially.

The reasonableness of this generalization increases significantly when comparing the efficiency of functioning of minor industries with a higher level of concentration (the third subgroup of the first group of enterprises with the sales volume of 928.420 UAH) with the efficiency of key industries (the first subgroup of the first group of enterprises) having practically the same level of concentration of production – 969.900 UAH. When the indicated minor industries are unprofitable for enterprises, key industries with the same scale of production are profitable with 13.5% return on sales and 202 UAH mass of profit per 1 ha.

The reason for this phenomenon lies again in different importance (role) of industries – minor and key – in the economy of enterprises. When minor industries occupy only 2.75% in the cash proceeds structure of the specified third subgroup, key industries with the same level of production concentration occupy 29.09% in that structure, i.e. play a significant role in the economy of an enterprise, therefore the management places an emphasis on their development.

Approximately the same tendency is observed between small industries (the second subgroup of the second group) and supplementary industries (the first subgroup of the third group) with the cash proceeds of 675.090 UAH and 590.310 UAH respectively, i.e. they differ substantially according to this concentration indicator. However, because of the different role of these industries in the economy of enterprises, their financial result is the opposite – small industries caused a loss in the amount of 54.69 UAH/ha, while supplementary industries brought a profit of 8.90 UAH/ha. As expected, they are essentially different regarding the share of these industries in the cash proceeds structure of an enterprise, occupying 6.54 and 12.88% respectively.

Based on the results of this study we can make the following important generalizing ***conclusion***: the effectiveness of an industry is affected not only by the level of concentration of production, but also a significant impact is made by the status of the industry as to its place and role in the economy of an enterprise.

Conclusions. In the course of economic activity, agricultural enterprises normally develop several industries that can considerably vary according to the place and role in the development of their economy. We find it reasonable to determine the importance (place) of an industry for an enterprise based on such indicators as the share of costs of the industry (production consumed resources) in the total operating costs of the enterprise and the scope of these costs per unit of land area, and to determine the role of an industry based on the share of the operating profit of the industry in the operating profit of the enterprise, the operating profit of the industry per unit of land sales, and the return on sales of the industry products.

According to the place and role of an industry in the economy of an enterprise, a size-based scale of industries was proposed, distinguishing auxiliary, minor, small, supplementary and key industries. This size-based grading of industries became a scientific foundation for the distinction between the concepts “enterprise production line” and “enterprise specialization”.

Studying the impact of the size of industries on their place and role in the economy of enterprises showed that minor and small industries are unprofitable, while supplementary and key industries are profitable and play, especially the key industries, a crucial role in strengthening the economy of enterprises. It has been proved that enterprises with large-sized land areas normally afford developing minor industries, whereas smaller enterprises place an emphasis on the development of supplementary and key industries.

It has also been established that the place of minor and small industries is overestimated in the economy of enterprises because of their inefficiency as compared to their role and contribution to the development of such enterprises. Conversely, supplementary and especially key industries play a crucial role in ensuring the profitability of production.

In addition, it has been proved with the statistical grouping method that the efficiency of an industry is affected not only by the level of concentration of production, but also a significant impact is made by the status of the industry as to its place and role in the economy of an enterprise.

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GLOBALIZATION AND FINANCIAL CRISES

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Financial globalization is the latest stage of financial internationalization process. It is presented as a financial interdependence of the countries that emerged due to the increasing number and volume of international financial transactions and international capital flows. The aim of the research is to demonstrate that some manifestations of financial globalization are key determinants of the international financial crises. 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 dependencies enables forecasting of future international financial crises and developing mitigating measures both globally and in the Republic of Moldova.

Key words: *financial globalization, financial crisis, financial market, capital flows.*

Globalizarea financiară este cea mai recentă etapă a procesului de internaţionalizare financiară. Ea se prezintă în forma interdependenţei financiare a ţărilor, care a apărut datorită creşterii numărului şi volumului tranzacţiilor financiare internaţionale şi a fluxurilor internaţionale de capital. Scopul cercetării constă în demonstrarea faptului că unele manifestări ale globalizării financiare reprezintă principalii factori determinanţi ai crizelor financiare internaţionale. Metodologia cercetării – în vederea obţinerii rezultatelor scontate, autorul a aplicat metode şi tehnici recunoscute şi aplicate în investigaţiile economice: metoda comparaţiei, metoda statistică, metoda de analiză logică. Rezultatele cercetării, exprimate prin cunoaşterea dependenţelor menţionate, permit prognozarea viitoarelor crize financiare internaţionale şi elaborarea de măsuri de atenuare a consecinţelor atât la nivel global, cât şi în Republica Moldova.

Cuvinte-cheie: *globalizare financiară, criză financiară, piaţă financiară, fluxuri de capital.*

Финансовая глобализация является последней стадией процесса финансовой интернационализации. Она представлена в форме финансовой взаимозависимости стран, которые возникли в связи с увеличением количества и объема международных финансовых операций и международных потоков капитала. Целью исследования является доказательство, что некоторые проявления финансовой глобализации являются ключевыми определяющими факторами международных финансовых кризисов. Методология исследования – для достижения ожидаемых результатов, автор использовал признанные методы и приемы, применяемые в экономических исследованиях: сравнительный метод, статистический метод, метод логического анализа. Результаты исследования, заключенные в выявлении упомянутых зависимостей, дают возможность прогнозирования будущих международных финансовых кризисов и разработки мер по смягчению его последствий на глобальном уровне и в Республике Молдова.

Ключевые слова: *финансовая глобализация, финансовый кризис, финансовый рынок, потоки капитала.*

JEL Classification: G01; G15.

Introduction. Globalization is a process in which the world is transformed into a single global system. The concept of financial globalization is bound to create a global currency markets, a global financial markets, a global financial system, whose content and development is based on the phenomenon of national financial markets deregulation, the emergence and development of new financial instruments and business expansion of banks and other international financial institutions.

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Financial globalization requires a growing volume of financial flows of capital and increasing their intensity, which is proportional to the degree of openness of national financial markets, the level of leverage and the level of financial integration.

At the same time, financial globalization events lead to serious imbalances in various segments of the local and international financial markets, which, in certain circumstances, trigger the financial crisis.

The essence of financial globalization. *Financial globalization* is the integration of the financial systems of individual countries with international markets and financial institutions [12, p. 357].

Financial globalization refers to the process by which financial markets from different countries are integrated into a whole. Financial globalization can be defined as the free movement of finances across national borders without facing any restrictions [1].

International financial crises overview. The *financial crisis* is a situation where the value of financial institutions or asset falls quickly. Financial crisis is often associated with panic or bankruptcy of banks, during which investors sell their assets or withdraw money from bank accounts with confidence that the value of these assets will drop if they remain at financial institutions [5].

The *international (global) financial crisis* is a profound dysfunction of the financial and credit system in a group of countries, which leads to substantial disparities in international credit and foreign exchange systems and interrupt their operation. Typically, the financial crisis comprises different spheres of the global financial system. Main promoter of financial crises is capital in cash and immediate form, lending institutions and public finances [14].

The global financial crisis occurs for reasons, that are not necessarily based on accurate information or apparent logic, and are conducted under the financial contract parties from many nations simultaneously reaching the conclusion that the contracts they hold are unlikely to be honored by counterparties or the financial assets they hold they are likely to be worth much less than previously thought [2].

According to scientists Reinhart and Rogoff, the period 1900-2010 was very specific event on the international financial crises (Figure 1) [9].

The last global financial crisis took place in the period of 2007-2008, which is known as the "Global Financial Crisis" or "Financial Crisis of 2008". This crisis could lead to the total collapse of large financial institutions, but this has not occurred because of bank rescue measures of national governments, but stock markets, however, there has been a significant drop worldwide.

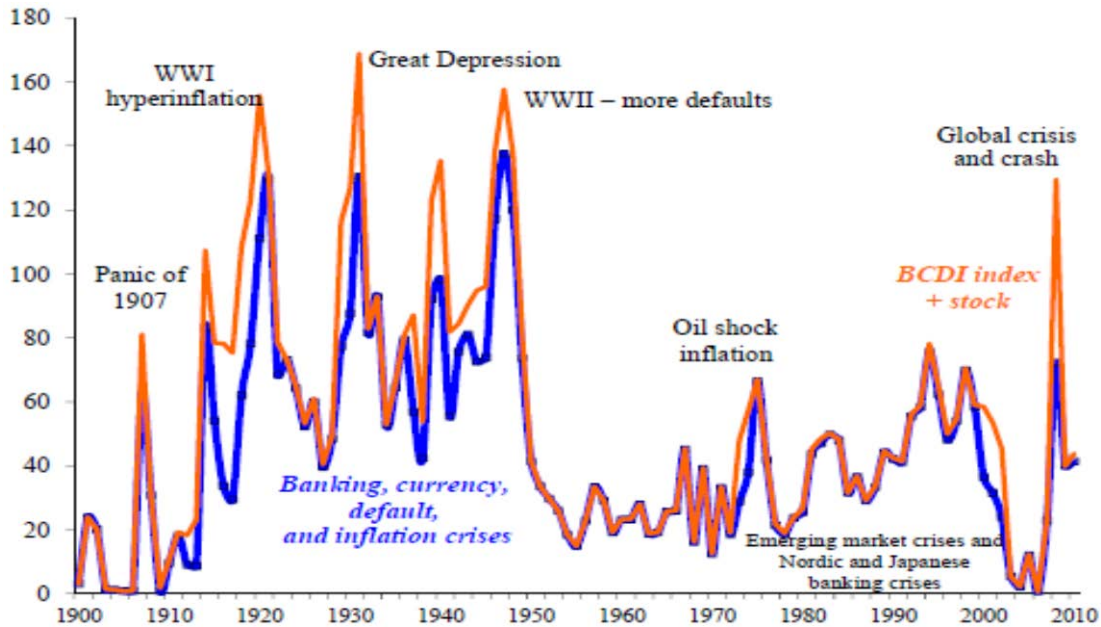

Fig. 1. Varieties of crises: World Aggregate, 1900-2010

Source: [9].

Contagion effect was reflected in many other areas: housing market, labor market. The crisis played a role in the bankruptcy of many companies in the real sector of the USA, led to 2008-2012 global economic downturns and contributed to the European sovereign debt crisis [6].

Financial globalization characteristics as international financial crisis premises. Under the impact of financial globalization, the environment in which financial transactions are carried out has significantly changed, changing the very nature of operations. The impact of financial globalization on the likelihood of financial crises can be considered on the basis of a number of characteristic phenomena, which, on the one hand, are creatures of financial globalization, and on the other hand, are factors that increase the likelihood of financial crises.

Russian scientist Senikov considers that these phenomena can be attributed [16]:

1. *Reducing the regulatory authority and capacity to monitor financial markets from both domestic and international regulators.*

As a result of the liberalization of economic legislation and limiting state control significantly reduced the possibility of central banks and other national regulatory institutions to have a significant impact on the financial markets. This is particularly relevant to financial globalization impact on reducing the ability of national regulators to influence the policies of major players in the financial market, such as multinational corporations and transnational banks. At supranational regulators also lack the effective instruments of influence on financial market participants.

2. *The liberalization of the legislation regulating the methods and rules of the financial activities.*

A consequence of the large-scale liberalization of financial activities, which covered most of the countries in the world, has become a significant simplification of the implementation of international financial transactions. The result was an unprecedented increase in cross-country capital flows (Figure 2).

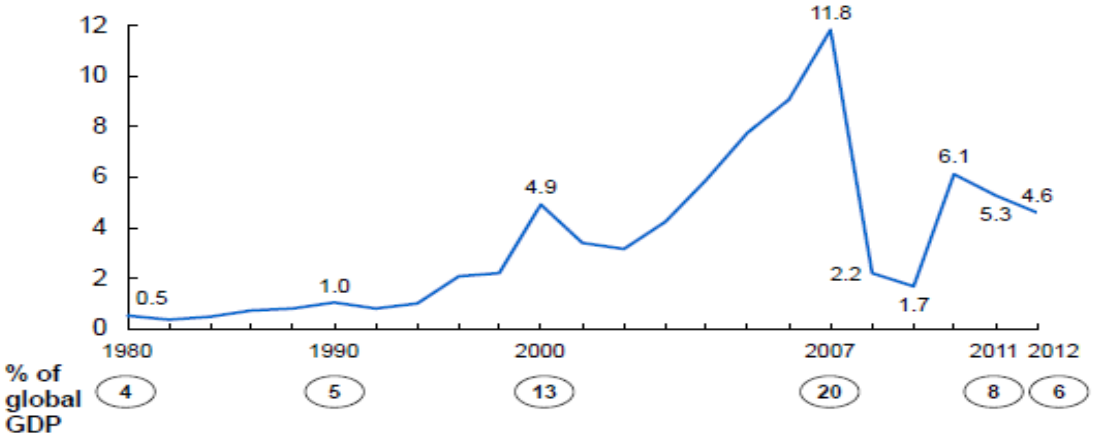

Fig. 2. Cross-border capital flows

Source: [8].

It specifies that international capital flows tend to rise sharply on the verge of financial crises. Thus, the amount of cross-border flows of 0,5 trillion USD level in 1980 increased to 4,9 trillion in 2000, then in 2007 – to 11,8 trillion USD. Along with it, was increased their share in world GDP at 4%, strictly observe up to 13% and 20%. But the onset of the international financial crisis, the value of cross-border financial flows tends to fall sharply.

It was also carried out the removal of the legislative distinction between the types of financial activities. Because of this, it was possible the emergence of financial institutions, combining the credit and investment function. As a result, a number of major financial companies operate at the same time in most parts of the financial market. This phenomenon leads to a significant increase in systemic risk, as the bankruptcy of a major financial institution can cause instability in a number of markets.

An important consequence of financial globalization has been the spread of securitization of banking and the use of derivatives. In view of these trends is much more complicated financial transactions and lost transparency.

Nowadays it is not always possible to establish the quality and reliability of assets which underlie the securities traded. Moreover, the use of derivatives by now reached a large scale.

In 2014 the global derivatives bubble was 20 percent bigger than in the last great financial crisis struck in 2008. It is a financial bubble far larger than anything the world has ever seen, and when it finally bursts it is going to be a complete and utter nightmare for the financial system of the planet. According to the Bank for International Settlements, the total notional value of derivatives contracts around the world has ballooned to an astounding 710 trillion USD [11].

3. *The accumulation of substantial funds in a number of specific areas, free from the control of national legislation and supranational regulators*.

As a result of financial globalization was formed a number of the world's financial centers, where due to favorable legislation and user-friendly infrastructure has focused a significant part of the financial market and the significant volumes of assets.

At the moment, there are in the world 83 international financial centers, which are grouped in a top perfected under the Global Financial Centres Index [3].

The importance of international financial centers, in large part, are the result of financial consolidation, primarily nationally and then globally. Thus, by the end of 1997, 25 cities world circuit controls 83 percent of shares in the world under institutional management and accounted for about half of global market capitalization (around 20,9 trillion USD). London, New York and Tokyo hold a third of the shares managed institutional and about 58 percent of global foreign exchange market [10].

In addition to the world's financial centers emerge and develop offshore and free economicareas , where capital flows are substantially free from the control of national regulators. As a result of financial globalization, has considerably increased the amount of funds held by individual and commercial financial institutions increasing the assets of institutional investors (pension, insurance, mutual and hedge funds).

In particular, global Hedge Funds' assets under management increased from 30 billion USD in 1990 to 1,4 trillion USD in 2005 [16] and hit a new high of 2,3 trillion USD in 2014 [4].

As a result, to date, a situation in which the total capital of the financial markets is larger than the size of foreign exchange reserves of the central banks of the world. It should be noted that the activities of hedge funds pose a threat to financial stability, as a high-risk, non-transparent and virtually free of government regulation.

4. *A significant increase in the size of short-term speculative trading in financial markets*.

As a result of liberalization legislation and the significant expansion of the financial markets has increased the possibility of short-term profit at the expense of the speculation. The bulk of transactions in the financial markets currently have a short-term, linked to the ultra-mobile speculative capital flows depending on subjective psychological factors that determine the behavior of investors.

These factors, in turn, are often irrational. Also, in the present conditions prevalent behavior caused a crisis of confidence, which is reflected in the mass changes in the market by agents of its financial position under the influence of negative news about the changes in market conditions. Large volumes of funds move as soon as possible under the influence of irrational psychological factors.

Focusing on making a profit from short-term speculative transactions on the exchange rate, or speculation on the international stock market, speculative capital may undermine both the activities of individual companies and entire countries and economic regions (provoking a collapse of the stock market, causing strong fluctuations of exchange rates) [17].

As a result of grew instability in the international financial system increases the likelihood of financial crises.

5. *A significant increase in systemic risk*.

As a result of financial globalization, the degree of correlation of the financial markets has significantly increased, this is manifested in a significant increase in the mutual influence of national and international financial markets. That is, in the modern financial system, the emergence of financial instability and crisis on a particular financial market or in a particular national economy are more likely to lead to the spread of the crisis on the financial systems of other countries and may acquire a global character.

Some authors point to the *problem of the concept of innovation and investment nature of globalization* are associated with the uncertainty of the outcome and the uneven development of the innovation process, which are the major risk factors associated with an acceleration of structural reforms in the national economy, the increasing number of mergers and acquisitions [13], [15].

Conclusions. Those related confirm the existence of dependencies between conducting financial globalization process and triggering international financial crises. The survey shows that the pursuit of global financial processes admits prediction of the global financial crisis. They also suggest the need to improve the international system of global financial market regulation and financial policies adaptation to new realities domestic crisis.

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SPIN-OFF COMPANIES AND THEIR ROLE IN KNOWLEDGE-BASED ECONOMY

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In the Republic of Moldova, the term of "spin-off" is little known, and research of the phenomenon, the possibilities for creating "spin-off" enterprises and the benefits they bring have not been achieved. The actuality of the theme is related to the need to create different groups of SMEs, given the importance that they have in the economy and the creation of new innovative enterprises (spin-offs) due to the implementation and marketing of knowledge products through the development of innovation activities and technology transfer and cooperation between SMEs and research institutions/universities. The purpose of this article is to show what companies are of "spin-off" type, the context in which there was necessary for creating them, their interaction with research organizations/universities, possible barriers to create such companies and the benefits of their creation. The following methods have been used in this article: analysis and generalization of literature, analytical materials, legislation creating innovative business abroad. As a result, it was found that "spin-off" companies are a new business model and one of the most effective and meaningful mechanisms to transfer and direct marketing knowledge from universities and public research institutions, or large companies with scientific activity. They are small businesses based on innovations and new technologies whose intellectual capital originates from organizations with scientific activity. These companies are designed to contribute to innovation, growth and jobs at local and national level and revenue generation. They are flexible and dynamic, they have great potential for growth, giving rise to fields and markets, and playing a key role in the development of high-tech clusters. There have been also drafted recommendations to facilitate the process of creating "spin-off" companies in Moldova by scientific/academic staff.

Key words: *economy, innovation, research, enterprise, SME, spin-off.*

În Republica Moldova, termenul de „spin-off" este puțin cunoscut, iar cercetarea fenomenului, a posibilităților de creare a întreprinderilor de tipul „spin-off" și a beneficiilor aduse de acestea nu s-a realizat până acum. Actualitatea temei respective ține de necesitatea creării diferitor grupe de IMM-uri, datorită importanței pe care o au acestea în economie și de crearea unor noi întreprinderi inovative (spin-off-uri) în rezultatul implementării și comercializării produselor de cunoaștere prin dezvoltarea activităților de inovare și transfer tehnologic și a cooperării dintre IMM-uri și instituțiile de cercetare/universități. Scopul prezentului articol este de a stabili ce întreprinderi se raportează la întreprinderile de tipul „spin-off", contextul în care a apărut necesitatea de creare a acestora, interacțiunea dintre acestea și organizațiile de cercetare/universități, posibilele bariere în calea creării unor asemenea întreprinderi, dar și beneficiile aduse de crearea lor. Metodele folosite la elaborarea articolului au fost: analiza și generalizarea literaturii de specialitate, a materialelor analitice, actelor legislative de creare a afacerilor inovative în străinătate. În rezultat, s-a constatat că întreprinderile de tipul „spin-off" sunt un nou model de afaceri și unul dintre cel mai eficient și mai semnificativ mecanism de transfer și comercializare directă a cunoștințelor din universități și instituțiile de cercetare publice sau din marile companii cu activitate științifică. Ele sunt întreprinderi mici bazate pe inovații și noi tehnologii, al căror capital intelectual are originea în organizații cu activitate științifică. Aceste întreprinderi sunt concepute pentru a contribui la inovare, creștere economică și locuri de muncă la nivel local și național și generare de venituri. Ele sunt flexibile și dinamice, dispun de un mare potențial de creștere, dând naștere la domenii și piețe noi, și jucând un rol esențial în dezvoltarea de clustere de înaltă tehnologie. De asemenea, au fost elaborate recomandări pentru a facilita procesul de creare a întreprinderilor de tipul „spin-off" în Republica Moldova de către personalul științific/universitar.

Cuvinte-cheie: *economie, inovație, cercetare, dezvoltare economică, întreprindere, IMM, spin-off.*

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В Республике Молдова термин «спин-офф» малоизвестен, а исследования этого явления, возможностей создания предприятий типа «спин-офф» и их преимущества до сих пор не были реализованы. Актуальность этой тематики связана с необходимостью создания различных групп малых и средних предприятий, учитывая их важность и роль в экономике и создания новых инновационных предприятий («спин-офф») в результате внедрения и коммерциализации наукоемких продуктов, развития деятельности в сфере инноваций и трансфера технологий и сотрудничества между МСП и научно-исследовательскими учреждениями/университетами. Цель статьи - показать какие предприятия относятся к «спин-офф», контекст, в котором возникает необходимость их создания, взаимодействие между ними и научно-исследовательскими организациями/университетами, возможные барьеры в создании таких предприятий, а также их преимущества. Для разработки статьи были использованы такие методы как анализ и обобщение специализированной литературы, аналитических материалов, законодательства о создании инновационного бизнеса за рубежом. В результате установлено, что предприятия типа «спин-офф» являются новой бизнес-моделей и одной из самых эффективных и значимых механизмов трансфера технологий и прямой коммерциализации знаний государственных научно-исследовательских институтов и университетов или крупных компаний, вовлеченных в научно-исследовательской деятельности. Они являются малыми предприятиями, основанных на инновациях и новых технологиях, интеллектуальный капитал которых происходит из организаций с научной деятельностью. Эти предприятия призваны содействовать инновациям, экономическому росту и созданию рабочих мест на местном и национальном уровне при генерации доходов. Они являются гибкими и динамичными, имеют большой потенциал роста, что приводит к появлению новых отраслей и новых рынков, и играют ключевую роль в развитии высокотехнологичных кластеров. Также, были разработаны рекомендации для продвижения процесса создания предприятий типа «спин-офф» в Молдове научно-исследовательским персоналом.

Ключевые слова: *экономика, инновации, исследования, предприятия, малого и среднего бизнеса, спин-офф.*

JEL Classification: G0; O3; O31; I2; M2; F63; P31; P42.

Introduction. Currently, in the economy, there are two major trends in the development of SMEs: 1) creation of different groups of SMEs, given the importance that they have in the economy and 2) the creation of new innovative enterprises due to the implementation and marketing of the knowledge products through disseminating innovation and technology transfer activities and cooperation between SMEs and research institutions/universities.

These two trends are promoted simultaneously, because increasing the number of reliable companies capable of creating quality jobs, ensuring high productivity and competitive export-oriented cannot be ensured without the development and continued support of science, the development of innovation and technology transfer activities, providing knowledge marketing and implementation. The transfer, marketing and implementation of knowledge products contribute to enhancing the competitiveness of SMEs, in particular, and to the development of the knowledge economy in general.

Knowledge-based economy is a new concept, new approach to the economy that will help the country to evolve rapidly and overtake the developed nations. This new economy is a gateway which US economist Joseph E. Stiglitz, Nobel Economics Laureate in 2001, considers as having *"a greater chance for a democratic and sustained economic growth, which will bring in future prosperity and social justice"*.

Knowledge-based economy is the only mechanism for rapid economic growth. In XXI century society, value is not represented by tangible goods but by intangible ones, such as human capital, knowledge, intellectual property etc. Investments in human capital, in education, in research and development are accompanied by positive effects.

The development of the knowledge-based economy is forcing government authorities to support a series of measures to create and develop SMEs and the dissemination and commercialization of research results and technology transfer in different regions of the country, identifying relevant technologies relevant for the development directions of the respective regions and establishing connections of SMEs with the research environment and large companies from the field of research and innovation. Among these measures are named the creation of innovation and technology transfer centers, scientific-technological parks, innovation incubators, innovation clusters etc., which could facilitate SMEs'

access to knowledge and new technologies, for which it is performed most often with difficulty. Also, these measures include a series of programs that have given rise in recent years, to a number of projects designed to stimulate entrepreneurial development, increasing SMEs competitiveness through research, innovation, technology transfer, and to facilitate the development of new business models. Programs that are directly related to the increasing number of SMEs and marketing of knowledge-based products are based on promoting and fostering technology transfer [11]. In the technology transfer process, in order to capitalize the results of the research, an important role is given to research institutions and universities that are moving from their traditional roles of research, teaching and dissemination of knowledge to playing a more advanced role in the creation of "spin-offs" and promoting the academic entrepreneurship [15].

In the Republic of Moldova, the notion of "spin-off" is little known, and the researches of the phenomenon and possibilities for creating "spin-off" enterprises and their benefits have not been achieved yet. The purpose of this article is to show how companies are related to the "spin-off" concept, the context in which it was necessary for creating them, their interaction with the research organizations/universities, possible barriers to create such companies and the benefits of their creation.

"Spin-off" does not have a uniform definition [16], [14], but all the definitions found in the literature converge on common characteristics: the parent organization of the "*spin-off*" is an organization with research/academic activity; "*spin-off*" is an entity legally separated and is not an extension of the public research institution; "*spin-off*" must exploit the knowledge derived from scientific/academic activities; the "*spin-off*" activity must aim at generating profit and commercialization of technology.

In other words, "spin-off" companies are innovative enterprises created by "detachment" from a larger entity, for example, a new company created by a scientist or group of scientists from research institutions / universities or from a company with scientific activity. This is one of the most interesting and challenging instruments of technology transfer*: the transfer of people with ideas for products/services from universities or research organizations, but not a transfer to an organization or enterprise that already exists and functions [17]*. This organization must be established simultaneously with the development and implementation of the idea. "Detachment" from the public or private research institution is done in order to continue in the newly created company of the researched solutions till their completion, in order to produce and market the outcomes.

So, if the previous academic and entrepreneurship activity is considered to be incompatible, in present it appears that in many cases they go (must go) hand in hand. In particular, scientists and university teaching staff do not need to sacrifice academic freedom for the opportunity to bring their achievements on the market. Moreover, many successful entrepreneurs and academics from abroad show that it is possible to be part of academia while marketing the scientific achievements.

It's worth noting that "spin-off" companies are created not only within public research programs,they are also created within many large companies with scientific activity. Referring to the "spin-offs" it should be mentioned that "separation" from private company is a strategy and it takes place *when:*

- The parent company feels the need to divide the produced products;
- The need to "translate" into practice the ideas/new (revolutionary) technologies – either because their result to be taken and implemented in the work of the parent company or to be placed on the market.

In both cases the advantages of this strategy are:

1) Flexibility and rapid reaction to the constantly changing demand and market trends. Large companies cannot react and cannot quickly adapt to fluctuating demand and contextual developments as opposed to "spin-offs". In the case of revolutionary innovations, initially, there are needed some unusual approaches both to decisions making process, and to the style of the team: no days off, no limits of the working day, the total gift of self;
2) High motivation of company's employees, increase of the responsibility. Large companies encourage some experts and some teams involved in research not only allowing them to set up businesses such as "spin-off", but offering them money for the rapid development of innovative ideas;
3) Greater opportunities for interaction with the innovation infrastructure agencies, the scientific community and the sphere of production;
4) Reducing expenditures for development, implementation, marketing and technology transfer from the account of specialization, reducing administration and trading costs.

The context of the necessity of "spin-offs" creation. Under the conditions where the competitiveness of enterprises began to depend largely on their degree of innovation, the role of science intensified and relations between business and research have become increasingly noticeable, being subject to fundamental changes caused both by globalization and other factors that converge to accelerate the development of the knowledge market. The most visible changes are the emergence of expanded partnerships between research institutions/universities and businesses and the development of activities in the field of transfer, implementation and commercialization of science results in the socio-economic environment. Both partnerships and technology transfer activities were determined due to lower budgetary resources allocated to research, which in result led to turn research institutions and universities to seek new sources of funding for keeping their researchers / teachers and which now is a natural and legitimate way [20].

However, the large number of existing patents, large stocks of untapped knowledge and changing the development paradigm for innovation led developed countries to seek and create institutional and organizational advantageous conditions for innovation and technology transfer, making them a problematic issue for science and technology policy. The result proved that certain small innovative enterprises (spin-offs) can be the lever that "bind" together science and industry and have the highest potential for growth. They initially assume the risk of transformation of ideas into prototypes, without which it is impossible to evaluate its market perspectives and if is generally appropriate for the market. Namely because of this, large enterprises do not do major investment in innovation because they require at least some guarantee of success [23].

In European countries, the Lisbon Strategy which perceives innovation as an engine for economic change, and the strategy "Europe 2020" provide that each country must consider all possible types of mechanisms and structures for technology transfer to promote the use of research with public funding and maximize the socio-economic impact. The European Commission urged Member States [18] to develop and disseminate *"policy of creating "spin-offs", allowing staff of the public research organizations to engage, if necessary, in the creation of such enterprises – and to encourage in this purpose – to establish clear long-term relations between "spin-offs" and public organization"*.

Another context that favored the necessity of creating a "spin-off" business was the fact that research institutions in their innovative approach have encountered many problems:

1) for the transfer and assimilation of knowledge products in the economy, has proven that large financial resources are needed and also more time for gaining profit;
2) businesses, wanting immediate gains, but lacking of financial resources, proved to be uninterested in taking new knowledge and technology from the academic environment; and more,
3) scientific institutions were not able to react quickly and flexibly to business needs and develop unique innovations and other innovations standardized on request.

These three main reasons determined the weak cooperation among the academic and private sector and the need for the creation of innovative small businesses by researchers, teachers, PhD and master students etc. [22].

Additionally, research institutions and universities, understood, that in order to achieve a genuine economic progress, must themselves "feed the economic engine" cooperating extensively with business and contributing to the development of academic entrepreneurship. Academic entrepreneurship is one of the ways to transfer the results of academic/university research in the enterprise's activity and produce economic and social value for both external stakeholders and members of academia and in which at least one member of academia, maintains the main role [2]. A report published by the Council of European Francophone Rectors (CEFR), expresses clear and unequivocal the point of view of academic authorities about the phenomenon: *Since businesses are defined as the "engine" of the economy, academic/university research must be one of "its fuels" [20].*

In addition, it should be mentioned the context of the development of personal will of scientists to create innovative enterprises, including the need to increase material wealth and "instinct of the creator" *("desire to participate in the further development of its implementation, to be proud of its usefulness for the country and the world" [25]).*

The first "spin-off" companies appeared in the US, the cradle of university entrepreneurship, being promoted in the Silicon Valley and Route 128 next to prestigious universities Stanford and Massachusetts

Institute of Technology, and being a part of the university American landscape till nowadays. In Europe, research institutions and universities just recently realized the proactive role of "spin-offs" in the economic development of the regions where they are located and decided to develop and disseminate a policy on the creation of "spin-offs" and now they are the most common mechanism for technology transfer and commercialization of innovation.

It is worth mentioning also that the American concept of "spin-off" differs from European concept. For instance, in the American approach, a "spin-off" is an entity created by members of the academic community for knowledge transfer and commercialization, which is *an element of intellectual property* created in the parent academic institution. While in the European approach, the concept of "spin-off" is understood as any involvement of academic institutions/universities, their employees, doctoral students in the business and creation of all kinds of businesses *(not necessarily using intellectual property)*. The differences between European and American approaches result in a lower level of entrepreneurship in Europe and the need to support the development of entrepreneurial spirit and skills among European population [9].

Steps for setting up "spin-off" enterprises. "Spin-offs" are usually created at the initiative of university researchers and teachers to achieve technology transfer from research institutions to enterprises and to ensure the development of new areas of business and innovation activities. "Spin-off" projects provide a researcher or group of researchers the possibility to be "away" from public or private institution, where there was developed a research project and obtained results, in order to continue the researched solution till its completion, for the production and realization of the outcomes on the market. These activities are economic in nature, as they consist of production and the marketing of products and services.

The most important steps in creating "spin-off" enterprises [24] are:

1. *Evaluation of the potential market*. At this stage it is very important to know which will be the product/service manufactured/provided by the "spin-off", who will be consumers and market and what is the situation on the market regarding this expected product/service (are there any similar products on market, prices, which is the level of demand etc.). Knowing as many details about the potential market, there could be developed business plans, including plans for information, advertising actions and positioning of the product/service on the market.
2. *Creation of the team*. When creating a "spin-off" enterprise the human factor is decisive and the properly formed team provides virtually 90% of the company's success. It is well known that during the emergence and development of the idea of innovative product/service, the leading role belongs to scientist/researcher. In the preparation phase of transformation, the ideas into products/service and its entrance on the market, the main role belongs to those able to manage business processes, to conduct negotiations with investors, partners etc. Scientists do not always possess such qualities, so only in rare cases the project manager can be also the general manager of the company. Experience shows that investor invests rather in a team than technology, because even the best and most promising idea can be "destroyed" by an incompetent team, and vice versa – a good team is able to successfully commercialize an idea that is not too promising.
3. *Selection of founders.* Not all team members can become founders of the company, while not all founders actively participate in the marketing of scientific achievements. Typically, one of the founders of "spin-off" is the research institution/university or private company with scientific activity, because here goes about commercialization of intellectual property created within it. Also, the founders may be the employees of research institutions/universities or private companies – authors of the idea, as well as other persons who actively participate in promotion. If in the process of creation of a company an investor appears ready to invest in business development, it also can be among the founders. In addition, each founder may hold different levels of participation, depending on the amount invested and participation in the "spin-off".
4. *Development of a business plan.* The business plan is the basis for investment decisions, so it must be carefully prepared and includes the project summary, the organizational plan, marketing plan, production plan, and financial plan.
5. *Making contracts with the organization of research/university*. The final stage is the negotiation with the public research institution or a private company with scientific activity (institution/parent company) and the conclusion of lease contracts (premises, equipment etc.) and services (financial, accounting, human resources, promotion etc.) [21].

Attracting investments in "spin-off" enterprises. The initial capital for the creation of the enterprise is made of the own savings of the team and non-refundable state grants. For example, in Russia there are state grants supporting programs to create small businesses through the innovative sphere through the Assistance Fund of development of small enterprises in the technical and scientific sphere [27] as well as regional government programs.

Although in some countries public research institutions participate partially in the financing of the creation of businesses (usually around 25% of statutory capital in case of holding of own funds), there is not possible to count on them for the purposes of investment as they are non-profit organizations and do not have the means to financially support the "spin-offs". In a document of the University of Iowa (USA) "Policy on Accepting Equity" it is directly stated that the university does not prefer to invest in created companies, focusing on other forms of support (rights to exploit intellectual property for the use of machines and premises, indication of the public institution as the main beneficiary, use of the logo and other symbols etc.). However, in exchange for financial contribution to the establishment of "spin-off", the parent institution can receive a share of profit. However, the financial contribution may not come from resources allocated to research directly or indirectly by the state, if only there are conditions in which there are used instruments dedicated to the support of "spin-offs" within technological and innovation incubators or science and technology parks.

In many cases, understanding the importance of financial investments for creation and development of "spin-off" companies, near the public research institutions there are created venture funds to attract professional venture companies, and sometimes, even the state.

Also, in "spin-off" companies, foreign investors may also invest, such as business angels or corporate investors interested in developing "spin-off" in their own interest, in exchange for equity shares in the share capital of the company.

Periodically, the "spin-off" must present the participants and the founders a progress report, economic and financial documents, as well as plannings for the next year. Annually, the parent institution's management should perform an assessment on its participation in the "spin-off" [13].

Some obstacles which hinder the creation and development of "spin-off" companies. While "spin-off" companies prove to be an effective tool to increase the number of SMEs and to implement and market the knowledge, there are some obstacles to their creation and development [8]. First, entrepreneurs from academia must possess a rare blend of skills – traditional skills of scientists, including inner forces, rigor and technical skills and traditional skills of businessmen, including the ability to recognize business opportunities and create value for consumers, and the ability to assume risks. The effectively combination of these qualities and skills is important to the success of *"spin-off", but is not always a feature of the academic environment*.

Secondly, *the academic and university culture itself is a serious obstacle* in the way of academic entrepreneurship and "spin-off" business development. In many countries, traditional science education does not include entrepreneurship. At the same time, it believes that doctoral and postdoctoral studies should focus entirely on research and in no case on entrepreneurship. Thus, even in an environment favorable to entrepreneurship academic challenges of making a person become both a world-class researcher and one that sells its own achievements are seen as incompatible.

However, *lack of entrepreneurial component in university education and lack of entrepreneurial skills in academics*, in many cases, is perceived as a problem, at least as regards to their practical experience in entrepreneurship [23]. Although most countries report that teachers and researchers are offered some training in entrepreneurship, is urgently needed an improvement, and a systemic approach in this area.

Other barriers may be considered: *weak methodical and informational support; insufficient funds and shortage of skilled human resources; lack of infrastructure for innovation or an imperfect, poorly functioning innovation infrastructure; high economic risk*. In addition, in some countries there are legal impediments that do not allow academic staff to participate to scientific and business creation and development of commercial activities.

The benefits of creating "spin-off" enterprises for organizations with scientific activity and regions. In recent years, civil servants from ministries, academic institutions and universities from all countries are extremely interested in promoting the creation of "spin-offs" which are based on published research as "spin-offs":

- Exploit the intellectual property of universities and other public and private research organizations;
- Increase the effectiveness of public funds use, aimed at developing innovations;

- Provides an inexpensive and non-confrontational channel for technology transfer and commercialization of research results of science in production;
- Improve the financial situation of research institutions/universities and private companies involved in scientific activities;
- Halt the brain drain abroad.

These companies are designed to contribute to innovation, growth, employment (job quality) and income generation. They are perceived to be flexible and dynamic, giving rise to new areas and markets and playing an essential role in the development of high technology clusters [1]. Businesses such as "spin-off" have a multiplier effect in the diffusion of knowledge and technology, including hastening of the speed of implementation of research results. They have a strong positive influence on local economic development; encouraging entrepreneurial behavior among researchers and inventors involved in the marketing of research results; they are also a more profitable trading form than licensing; they reduce development, transfer and commercialization costs of technology [12], [25].

General policy framework for supporting the creation of academic/university "spin-offs" in the main European countries, including Russia. The attention paid in recent years to become more competitive economy, to SMEs and entrepreneurship has created an environment to develop the spirit, culture and entrepreneurial skills, including through a better exploitation of basic science and technology, and to facilitate the actions of the players involved (universities, research institutions, schools of engineering and entrepreneurship, enterprises with scientific activity etc.). Public authorities, aware of the need to increase scientific and technological performance, sought to develop policies and introduce mechanisms that would create favorable conditions for the emergence of an environment conducive to innovation and technology transfer and the development of the knowledge-based economy. First, laws were passed that allowed to lift legal restrictions that previously prevented research/university staff to participate in creating a business, develop and commercialize their accomplishments or provide business expertise. These laws allowed the research staff to temporarily leave the public service in order to participate in creating a business that will develop their idea or its realization for a certain period. They also allowed the researchers to provide scientific support for a business, to hold a shareholding in the capital of innovative companies and to be a member of the management board, while continuing to be a public servant.

Secondly, in order to develop research results in their fields of activity and to strengthen relations between science and industry, research institutions/universities began to create structures that support the creation and development of small and medium-tech enterprises, such as technology transfer offices, innovation centers, scientific and technological parks and innovation incubators to host innovative companies and support their development. These structures promote the dissemination of innovation, creating premises, providing equipment, materials, knowledge, know-how and public research to businesses and individuals.

Third, there was introduced a tax framework favorable for innovative firms and a legal framework adapted to the situation of innovative companies, as it turned out, that the existing framework was inappropriate for young businesses with high risk and high growth potential, in which researchers develop their findings.

For example, appeared the law on innovation and research **in France**, adopted on 12 July 1999, the main aim of which was to transfer knowledge, publicly funded by industry and *"promoting the creation of innovative technological enterprises"* [10]. This law allowed researchers, teachers and students to participate in the creation, reconciliation and management of innovative companies and to participate in the capital of created companies [7]. Researchers can start a "spin-off" business without losing the status of public servants, they can return to their entity in case of failure or participate in creating enterprise without leaving the laboratory working [6].

In Germany the creation of innovative enterprises such as "spin-off" was promoted especially since the end of 1998 through the EXIST Programme (competition for new business creation by the scientific community) as a part of the "High-Tech Strategy for Germany" and funded by the German Ministry of Education and Research (BMBF) with the support of European funds [5]. In Germany researchers have the right to open a "spin-off" business and return to scientific work at any time in case of failure.

In the same year, 1998, the **UK** government published the White Paper on competitiveness ("Our Competitive Future: Building the Knowledge Driven Economy", DTI, 1998) [19], which highlighted role of authorities, research and business in improving the competitiveness, and in 2000 – the White Paper on

research and technology transfer ("Science and Innovation: Excellence and Opportunity") [3], which highlighted the crucial role of authorities in encouraging the exploitation of knowledge and new technologies. There were also promoted a series of government programs to support and encourage the creation of "spin-offs", which can be grouped into six main chapters: Status researchers, intellectual property, entrepreneurship training, competitions, innovation incubators and initial capital.

In **Italy,** in order to strengthen competitiveness of *"technological industries and to increase the share of innovative production and employment of highly qualified work force"* by Legislative Decree no. 297 of 27 July 1999 [4] researchers from academia and teachers university were allowed to "fall off" from public institutions to create "spin-offs" and the White Paper of the Ministry of Industry from November 2000 defines the mobilization of financial resources for technological companies created by scientific research. The researcher is entitled to leave its laboratory for a period of four years without losing the status, then having the chance to return and continue its activity.

Later in 2009, the Federal Law № 217-ФЗ was adopted in **Russia,** which allowed research institutions and universities to create small companies for practical application of the results of intellectual activity. The purpose of this law is not only to create innovative small enterprises, but enterprises that would produce competitive products and generate profit. The law provides the ability to attract third party as founders of "spin-off", with the condition that the share of participation of the scientific institution in the capital of J.S.C. will be over 25% and of the LLC – over 33% [26].

Conclusions and recommendations. "Spin-off" businesses are a new business model and one of the most effective and most significant trading mechanisms and direct transfer of knowledge from universities and public research institutions, or large companies with scientific activity. They are small businesses based on innovations and new technologies whose intellectual capital originates from organizations with scientific activity. These undertakings are designed to contribute to innovation, growth and jobs at the local and national levels. They are flexible and dynamic, have great potential for growth, giving rise to fields and markets, and playing a key role in the development of high-tech clusters.

Having an important place in the innovation process, promoting the creation of "spin-off" enterprises must be part of a set of policies which favor an entrepreneurial climate and encourage networking between universities, industry and public sector. Policy objectives, aimed at creating "spin-off" enterprises by scientific/scholarly staff should include:

- Creation of favorable conditions for the emergence of an environment conducive to innovation and technology transfer and the development of the knowledge economy;
- Improvement of the mechanisms for transfer of knowledge between science and industry by promoting "spin-off" strategies that serve as facilitators of effective links between innovation infrastructure agencies, the scientific community and the sphere of production;
- Adoption of an appropriate legal and regulatory framework to stimulate individual researchers and research organizations financed from public funds to establish new "spin-off" businesses. In this regard, it is easier for the governments to take the political decision to support the creation of "spin-offs" than to promote collaboration research and development with companies, as "spin-off" strategies allow a better control over the results of research projects publicly funded at the academic level;
- The adoption of laws that would allow to lift legal restrictions for research/university staff to participate in creating a business and develop and commercialize achievements, to participate in the capital of innovative companies and to be a member of council management, while continuing to be a public servant;
- Provision of infrastructure to support the creation and development of technologically advanced small and medium enterprises, such as technology transfer offices, innovation centers, scientific and technological parks and innovation incubators to host innovative companies and support their development;
- Providing financial support for the creation and development of "spin-offs";
- Introduction of a favorable tax framework for innovative companies and a legal framework adapted to the situation of the innovative firms.

The "spin-off" phenomenon appeared for the first time in the US and is relatively new to many countries in Europe. In the Republic of Moldova, the term "spin-off" is little known and is not developed. Local science faces various problems; the most pressing is the problem of funding and the economic exploitation of scientific results obtained by scientific institutions and universities. The gaps currently

existing in innovation policy and technology transfer, including scientific-technological parks and innovation incubators prevents the creation of "spin-off" enterprises and at the same time inhibits the growth of the knowledge-based economy. To address these issues, following the example of developed countries, the country should pursue the way of innovation, transfer and dissemination of knowledge to the socio-economic environment, to develop and adopt clear and stimulant policies of these activities.

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MOLDOVAN TAX ADMINISTRATION: 25 YEARS OF EXPERIENCE AND FUTURE CHALLENGES

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The Republic of Moldova, since independence, decided to consolidate its place among the democratic nations and open to reform economy in order to integrate it in european and international circuit. Reform of national economy was oriented towards substitution of an old, outdated and almost collapsed socioeconomic system by one capable to ensure the continued progress in society.

Thus this reform could be done mainly through fiscal legitimacy and enforcement of tax administration, which may best be achieved through establishing clear, transparent, and predictable rules and procedures, especially in the administrative aspects of the tax system. With this paper we aim to examine the tax authority changes for last 25 years. Research methodology is based on the dialectic-conflictual model, whose approaches helped to bring the essence of the debate by applying methods of induction, deduction, observation, analysis and synthesis.

The analysis are based on either qualitative or quantitative indicators. Results reveal the weaknesses of Moldovan tax administration system in order to understand its areas of strength. The research can be used by: taxation and regulatory authorities for elaboration of new legislation and improvement of the existing legislation; investors for evaluation of taxation efficiency in investment projects; didactic personnel in teaching specialty disciplines at economy universities.

Key words: *Tax Reform, Tax Administration, Tax Audit, Integral Tax Information System and Tax Ombudsman.*

De la proclamarea independenței sale, Republica Moldova a decis să-și consolideze locul printre națiunile democratice prin reformarea economiei, cu scopul integrării în circuitul european și internațional. Reforma economiei naționale a fost orientată spre înlocuirea sistemului socio-economic vechi, depășit și incapabil să asigure progresul continuu al societatății.

Astfel, această reformă putea fi realizată doar prin legitimitate și administrare fiscală, capabilă de stabilirea unor reguli și proceduri clare, transparente și previzibile. În această lucrare avem drept scop să examinăm modificările suportate de administrarea fiscală în ultimii 25 de ani. Metodologia de cercetare se bazează pe modelul dialectic-conflictual, abordarea căruia a influențat scopul propus, prin aplicarea metodelor: inducție, deducție, observare, analiză și sinteză, având la bază indicatori calitativi sau cantitativi.

Rezultatele lucrării dezvăluie punctele slabe ale sistemului de administrare fiscală din Republica Moldova, cu scopul de a le înțelege pe cele forte. Cercetarea poate fi utilizată de către: organele fiscale și cele legislative – în procesul de elaborare a legislației noi și de perfecționare a celei existente; companiile în evaluarea eficienței fiscale a proiectelor de investiții; cadrele didactice în cadrul instituțiilor de învățământ economic superior în procesul de studii la disciplinele de specialitate în domeniul fiscal.

Cuvinte-cheie*: reformă fiscală, administrare fiscală, control fiscal, sistem informațional integral fiscal și Ombudsman fiscal.*

С момента обретения независимости, Республика Молдова, решила закрепить свое место среди демократических наций реформируя экономику, с целью интеграции в европейские и международные контуры, а также в процессе глобализации. Реформа национальной экономики была ориентирована на замещение старой, устаревшей и почти разрушенной социально-экономической системы не способной обеспечить дальнейший прогресс общества.

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Эта реформа могла быть достигнута только через налоговое администрирование, которое достигается путем установления четких, прозрачных и предсказуемых правил и процедур. В этой статье мы рассматриваем изменения налоговой администрацией за последние 25 лет. Методология исследования базируется на диалектическо-конфликтной модели, применяя методы дедукции, индукции, наблюдения, анализа и синтеза, основаные либо на количественных или качественных показателей.

Результаты работы раскрывают слабые стороны налоговой администрации в Республике Молдова, с целью понять её сильные стороны. Научные исследования, могут быть использованы: налоговыми и законодательными органами в процессе разработки нового законодательства и совершенствования существующего; компаниями при оценке налоговой эффективности инвестиционных проектов; учебными кадрами высших экономических учебных заведениях в процессе обучения по специализированным предметам в области налогообложения.

***Ключевые слова**: налоговая реформа, налоговая администрация, налоговая информационная система, налоговый аудит и омбудсмен.*

JEL Classification: H0; H25; H32; K34.

Introduction. The tax administration landscape presents daunting challenges for both taxpayer and tax authority. Key challenges include the growing number of taxpayers and growing volume of goods and services, the evolution of the digital economy and of sophisticated financial arrangements and the large amount of potential revenue lost due to aggressive forms of tax avoidance and evasion. Those challenges facilitated the Information Technology modernization efforts, development of the Compliance Risk Model and restructure of Moldovan Tax Administration. A forward-looking country can become effective only through extensive investments in tax compliance[1]. This supports the importance to improve information reporting and tax audits from a high level of confidence and generalization [1, p. 51-110][2], IT modernization efforts and development of a Tax Ombudsman. This paper highlights the necessity for further chalenges in this area.

Firstly, we characterize the structure of Moldovan Tax Administration in order to highlight the main changes in Tax Administration system (Section 2). In this Section we provide statistical information on the evolution of tax administration staff and efficiency of tax audits. Next we identify the Information Technology efforts under which the Integral Tax Information System is possible (Section 3). Peculiarities of ensuring tax law procedures regarding Accounting and tax reporting liability and Tax Ombudsman are provided in Section 4. The article focuses primarily on the situation faced by Moldova in the last 25 years. A large amount of statistical data provided by Mains State Tax Inspectorate, Ministry of Finance information and other sources of technical expertise were collected, synthesized and analyzed.

The structure of the Moldovan tax administration (MTA)

Curently, tax administration activities are based on coherent and comprehensive legislation (even if only now it has a distinct Fiscal Procedure Code under enactment), mainly set in Tax Code, Title V since 2002, with technical structures sufficient to ensure the right collection and control of state revenue.

The remarkable developments of the Moldovan Tax Administration can be summarized in Table 1. Moldovan Tax Administrations represent the activity of government authorities empowered and responsible for ensuring full and duly transferred budgets of all levels of the amounts of tax liabilities, as well as carrying out criminal prosecution actions in case of the existence of circumstances providing tax violations.

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[1] *Moldova is spending more than a percent of net tax revenue per year in collecting their taxes.*

[2] *According to Besley and Persson, in the process of administrative infrastructure development the countries are able to move from collecting around 10% of GDP in taxes towards collecting around 40%.*

Table 1

Moldova: Main Changes in Tax Administration system, 1990-2014

1990	Creation of city and district state tax inspectorate
1992	Adoption of the Law on the State Tax Service. Adoption of the Law on the tax system outline
1994	Elaboration and approval of the Laws on VAT and excises
1997	The tax Code entered into force, which, at that moment, included 2 titles: General Provisions and Income Tax
2001	Approval of Title V of the Tax Code: Tax Administration
2003	Tax audit preselecting mechanism
2004	Organization of the first contest at the national level for "The best taxpayer of the year"
2006	Approval of the "Development Strategy of the State Tax Service for the years 2006-2010", and initiation of the entreprenorial patent reform of 2010
2007	Implementation of Computerised Informational System "Tax Cadastre". Adoption of the Law on carrying out tax administration and capital legalization. Tax Amnesty Creation of the Tax Anti-Fraud and Strategic Management Departments. Creation of the Center of Taxpayers' Assistance
2008	Implementation and exploitation of the Computerised Informational System "e-Declaration". Creation of the S.E. "Fiscservinform". Organization of the first edition of the Contest for taxpayers' motivation. Implementation of the Performance Appraisal System for STS staff. Implementation of Information System "BARCOD". Improve penalty system for non-compliance
2009	Approval of the "Development Strategy of the State Tax Service for the years 2011-2015". Implementation of a computerized record keeping STS's actions. Amendment of tax planning controls from annual planning to biannual. The STS information system has been connected with: Customs Service, Information and Security Service, Ministry of Home Affairs, Financial Control and Inspection Service under the Ministry of Finance, Enforcement Department under Ministry of Justice, the Centre for Combating Economic Crimes and Corruption CCECC
2010	Centre for Professional Training of the STS' staff. Implementation of tax electronic services' portal: www.servicii.fisc.md. Development of Integrated Tax Information System Plan
2011	Implementation of a Compliance Risk Model. The standardized forms of primary documents with special regime starts to be printed by taxpayers themselves
2012	Implementation of AIS "Creation and circulation of electronic documents between STS and the financial Institutions". Organization of Tax administration of the wealthy persons
2013	Compliance Program based on "Tax officials - in taxpayer service" approach. New tax services added: Tax calendar, Newsletter of the legislation and Generalized basis of tax practice. Methodical and Practical Guide on tracking tax arrears; AIS "Online ordering of standardized forms"
2014	Single Call Center (nr. tel. 0-8000-1525). AIS "e-Invoice"; Voluntary Compliance program based on "More for more" approach

Source: Elaborated by author based on MSTI annual reports and Ministry of Finance data.

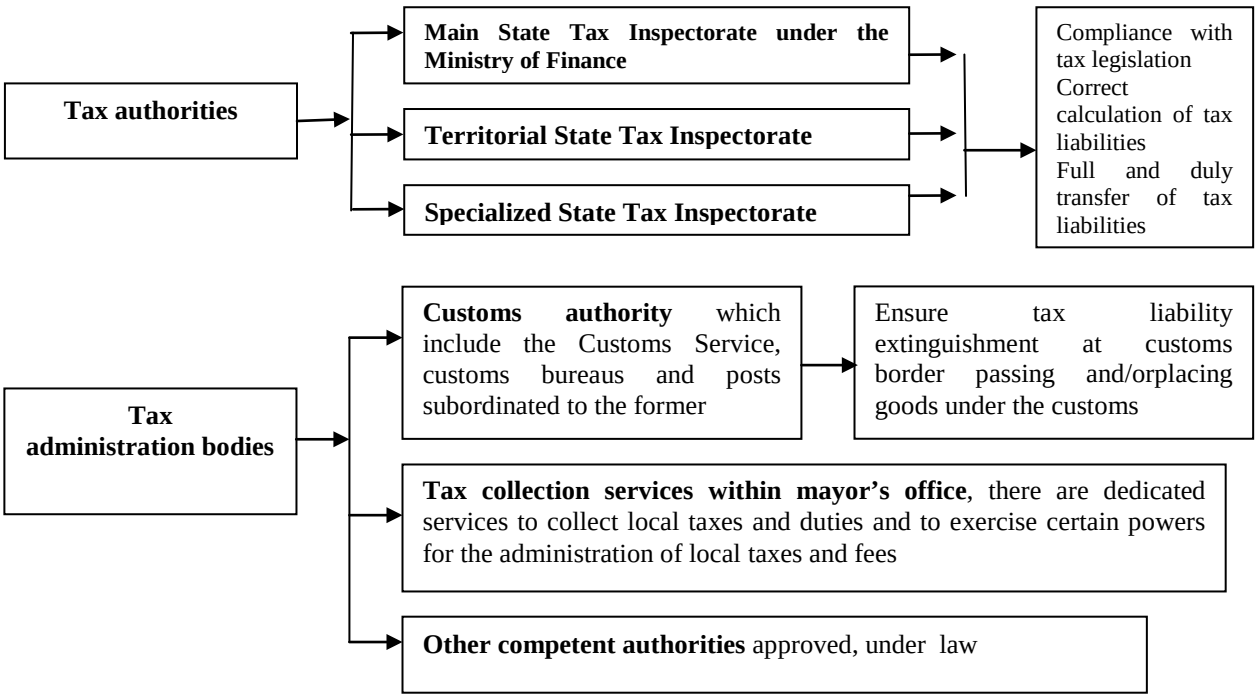

Fig. 1. The structure of Moldovan tax administration system

Source: Elaborated by author.

Main State Tax Inspectorate (MSTI) is the principal tax administration authority. Besides MSTI,the Tax Code states other bodies responsible for tax administration including customs authority, tax collection services within mayor's office and other competent authorities. Figure 1 provides for an overview of the structure of the Moldovan tax administration system and its main tasks.

On efficiency of tax administration, we can make conclusions by analyzing data (below) on fiscal control.

Table 2

Evolution of tax audits in the Republic of Moldova, 1994-2014

Year	No. of businesses registered at the end of the period	Including (thousands)			Results of controls (mill. MDL)	
		No. of audited taxpayers	No. of violations	Detection, %	additional calculated payments (mil MDL)	including penalties
1994	70.536	22.766	7.637	33.55	89.9592	53.8813
1995	96.984	25.211	10.012	39.7	222.872	98.776
2001	-	31.765	20.715	65.23	213.819	112.842
2002	593.1	22.889	11.138	48.66	268.6987	131.061
2003	618.2	24.544	13.362	54.44	367.0833	144.805
2004	641.7	29.830	17.674	59.25	304.4021	85.3547
2005	645.4	43.3	32.5	75.1	321.4	135
2006	659.4	62.0	45.1	82.7	349.1	139.1
2007	674.7	42.1	25.3	60.1	237.7	60.0
2008	679.6	38.4	21.1	54.9	201.1	94.7
2009	683.8	53.5	36.3	67.9	449.5	185.4
2010	686.2	66.8	41.9	62.7	498.0	253.1
2011	702.3	71.9	45.7	63.7	517.0	256.4
2012	688.117	63.527	43.670	68.7	595.96	344.7
2013	289.284	74.029	40.118	54.2	653.0	362.1
2014	689.580	60.523	-	53.0	743.4	457.9

Source: Elaborated by author based on [2], [3] and [4] data.

Fiscal control is a logical consequence of the tax administration tasks, because tax audits allow verification of whether all taxpayers meet their correct, complete and timely tax obligations. The share of annual audited taxpayers out of total number registered shows a decrease from 32 to 10% within 1994-2014 period. In absolute terms it is almost three times more from 22.8 to 61 thousands. Additionally, calculated amounts of taxes, fees and other payments as a result of controls increase also, with more than 9 times from MDL 89.96 million in 1994 to 743.4 million in 2014, mainly because of penalties that are applied on one to one ratio, which means that for each additional calculated EURO is added another EURO as penalty. Improvement and tax audit system development[1] resulted in an increase of outcomes derived from tax audits from 33.55% in 1994 to 53% in 2014 (the highest rate of 83% was registered in 2006). However, this does not demonstrate a positive impact on the share of tax violators and taxpayer compliance. The increase in tax violations is more a result of growing tax evasion and tax avoidance phenomenon, legislative changes, and political and economical instability.

Improvement of the tax law procedure is one of the main tasks of MTA. Thus, with the 2007 fiscal amnesty were observed measures regarding to discipline the taxpayer, increasing the fines and penalities for tax evasion, insistent tracing of tax debts, including the requirements for financial institutions allowing access to the confidential information about their clients[2].

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[1] *The tax audit activity was strongly influenced by: reorganization of controlling bodies in 2002 and 2014; implementation of preselection methods based on risk assesment since 2003 and contraposition of tax audits since 2004; implementation of a new method of estimating the taxable income of the wealthiest individuals in 2012. The indirect estimation method provides the Moldovan tax authority with possibilities for gathering information about taxable income of individuals from any sources.*

[2] *According to the Law on amending and completing some legislative acts No.177-XVI of 20.07.2007, a tougher sanctions system was approved, including pooling a number of fines, while at the same time increasing them and introducing some new (e.g. Art 262[1] and para. 2[1] , Art. 254 of Tax Code).*

Along with changing the MTA structure, broadening duties they perform, and clear obligations and responsibilities set by adopted subsequent legislative acts, changing the staff structure which was also absolutely necessary.

Table 3

Evolution of tax administration staff, 1990-2014

Staff	Year
1160	1990
1310	1991
1650	1992
1650	1993
1980	1994
2310	1995
2517	1996
2970	1997
2970	1998
3162	1999
3170	2000
2905	2001
2620	2002
2294	2003
2248	2004
2248	2005
2248	2006
2196	2007
2081	2008
1939	2009
1939	2010
1942	2011
1892	2012
1982	2013
2126	2014

Source: Elaborated by author based on MTA annual reports data.

If we refer to the dynamics of the STS staff changes, the number of staff units gradually increased from 1160 units in 1990 up to 3170 units in 2000. Since 2001 there has been a decrease in the number, reaching 2,126 units in 2014 (Table 3). At first glance, the tax system of Moldova is similar to those used by tax administrations of many other countries around the world.

However, according to the IMF, its main weakness lies in the fact that it consists of a network of 35 regional tax offices with a total of 2,126 employees. In time, the MSTI should seek to merge the current 35 local tax offices into a maximum of six–eight modernized facilities. This measure would result in a set of regional offices large enough to operate effectively across a number of districts. Retaining the current number of rather small tax offices is not only costly, it also imposes a risk to uniformity of the implementation of tax laws throughout Moldova, as it is harder for small offices to develop and maintain all recent knowledge, share experience, and specialize in all aspects of the tax administration.

Information Technology (IT) and Integral Tax Information System (TIS)

Development of an ITIS, from the standpoint of the users, both tax authority and taxpayers, is the core objective of IT modernization efforts of the Molovan STS. The design of the system addresses effective applications for various types of taxes levied in the Republic of Moldova (e.g. income tax, VAT, real estate tax, etc.). In order to help meet the government's critical, and ever increasing needs for sufficient tax revenues, STS's modernization efforts through technological improvements are crucial to meet all major challenges (e.g. replacement of the manual system with the e-tax system, facilitate voluntary compliance by adding new services for the taxpayers).

These efforts were supported by tax administration reform: in 1991 – developing the computerization program of the STS; 1996 – setting the tax inspectorate offices to e-mail and unification tax filing system; 1998 – application Information System database; 2007 – implementation of the Computerized Informational System "Tax Cadastre"; 2008 – implementation of Information System "BARCOD", implementation and exploitation of the Computerized Informational System "e-Declaration" and creation of the S.E. "Fiscservinform", 2010 – implementation of the tax electronic services' portal: www.servicii.fisc.md and development of the Integrated Tax Information System Plan.

Development of an Integral Tax Information System is the main task of MTA, which is performed by State Enterprise "Fiscservinform"[1]. S.E. "Fiscservinform" aims to provide easily accessible tools and services for collaboration and interaction between citizens, and the private sector and public administration in Moldova (Table 4). There were 33 electronic serices provided by STS, at the end of 2014.

Table 4

Public authorities and Taxpayer services

Public authorities	
MSTI internal pages – intern.fisc.md, "Enforcement of tax obligations", "Authorized office's Audit"; "Exchange operations' record keeping", "Record keeping of the standard forms of primary documents with special regime"; "Creation and circulation tax documents between STS and financial institutions", "Case management for STS activities (inspections, appeals, legal review and VAT refund)", "Risk Management Compliance", "Fiscal cadastre", "Authorized entrance", "RSCAPA"	
Legal persons and Individuals	
Electronic reporting tax services	"Electronic Declaration" – including "Request for refund of income tax overpayment" and "Quick Declaration", "Collection information from indirect sources", "General Register of electronic invoices", AIS "e-Invoice" etc.
Online access to the information services	"The current account of the taxpayer", "Checking of cash voucher", "Checking of tax liability", "Checking of invoice (VAT)", "Electronic register of applications and decisions on VAT refund", "Online ordering of standardized forms", "e-Request", "Online audience", "Download forms", "Taxpayer information", "Property record", Tax Auto Calculator, Fiscal calendar, Spreading the message etc.
Additional Services	Certification and issuance of electronic and digital signatures, electronic mailing notices etc.

Source: Elaborated by authors based on tax electronic services' portal: www.servicii.fisc.md.

Succesful implementation of IT services is analyzed in Table 5. Statistics show a growing number of reports processed by the Automatized Information System "Electronic Declaration" from 1,062 in 2009 to 908,618 in 2014 or of total tax reports is 46% in 2014.

Table 5

Evolution of tax reports processed by STS, 2009-2014

Year	**Total documents**		**Manual (paper support)**		**Quick Declaration**		**Electronic Declaration**	
	Users	**Docs.**	**Users**	**Docs.**	**Users**	**Docs.**	**Users**	**Docs.**
2009	204.248	1.848.354	204.203	1.845.304	566	1.988	49	1.062
2010	211.742	1.921.981	208.852	1.845.904	9.101	73.064	789	3.013
2011	222.082	1.944.479	214.579	1.618.592	20.894	279.244	7.593	46.643
2012	235.522	2.095.277	213.900	1.074.672	25.734	256.015	21.487	764.590
2013	252.798	1.991.245	227.008	993.651	20.970	77.324	27.923	920.270
2014	-	1.963.284	-	985.929	-	68.737	-	908.618

Source: Elaborated by author based on MTA 2013 and 2014 annual reports data.

[1] *The company specializes in developing and implementing advanced information technologies, management and processing of fiscal data, facilitating the exchange of information and documents between tax authorities, taxpayers and public authorities, accessing tax information resources.*

The use of IT is not a choice, but a necessity of modern tax administration. However, there are many strong reasons to have an Integral Tax Information System based on modern IT tools (e.g. Strengthen the Organization and its Administration, Control Tax Evasion, Improve Collection of Tax Arrears, Facilitate Voluntary Compliance). In this order, the IT solution "landscape" has the leading role in supporting the functions for an efficient tax administration. Even though, the IT reform of tax administration in Moldova has achieved some important progress to date, significant challenges remain for the coming years.

Peculiarities of ensuring tax law procedures

Accounting and tax reporting liability is provided by Art.8, para. 2, letter c) of the Tax Code. Reporting liability includes other documents besides the tax reports[1]. Reporting obligations also include the tax reports, accounting records and other keeping document. This is done for the purpose of ensuring the integrity of accounting records and to perform control actions for some fiscal periods prior to the due date for both taxpayers and third parties[2]. Submissions can be done based on paper support as well as in electronic format[3]. While the tax burden is below average in the region, the administrative burden is estimated as being huge [5, p. 2][4].

However, it has to be mentioned that there are no systematic legal rules for tax accounting and accounting records in the tax law. There isn't a single legal framework for tax reporting as a basis to account for tax payments. In each of the sections of the Tax Code there are defined accounting requirements not related to each other, which complicates the work of the business [5, p. 5][5].

Currently modifications of the National Accounting Standards (NAS) [6][6] resulted in many inconveniences, by forcing companies to adjust their accounting software, ultimately increasing their administrative and compliance costs. Nevertheless, it has been recognized that the new NAS, which correspond to International Financial Reporting Standards and EU Directives, will bring an undeniable benefit for entities and other stakeholders (founders, state organizations etc.) by keeping consistent accounting and obtaining accurate economic information in the near future.

Tax Ombudsman. There is no specific provision in the Moldovan tax law dealing with the Ombudsman Institution [7][7]. It is suggested that the Republic of Moldova gives serious consideration to the Institution of Tax Ombudsman [8, p. 161]. The establishement of a special office of the Tax Ombudsman will ensure that taxpayer rights are defended, that taxpayers subject to controls or audits know their rights and responsibilities, and to provide a means for the taxpayer to register complaints

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[1] *Tax legislation of the Republic of Moldova categorizes as tax reports any declaration, information, calculation, informative note, other document, that are submitted or must be submitted to the tax body, regarding the calculation, payment, deduction of taxes, fees, increases of delay (penalties) and/or fines or other doings related to birth, modification or extinguishment of the tax liability (Tax Code, Art.129, para.9 and 9[1]). The tax report must be submitted by taxpayer for each type of tax or fee within the established term (Tax Code, Art.187, para.1).*

[2] *Moreover, failure to do so constitutes, according to Art.257, para.5 of the Tax Code, a tax violation.*

[3] *According to Art.187 of Tax Code, the tax report shall be submitted using the mandatory automatized methods of electronic reporting, starting January 1st, 2013, by all the VAT subjects.*

[4] *Document turnover for only one transaction involves up to 14 documents, involving much manual work.*

[5] *There is a complex system of adjustment from financial accounting data to tax accounting data – 16 differences on the revenue side and 40 differences on the expenditure side. For every row of the CIT declaration an accounting note with explanation must be created. Beyond that, there are up to 51 different reports that have to be prepared by economic entities. For most of those reports, the addressees and terms of reporting differ, requiring additional time and costs for report management.*

[6] *The new National Accounting Standards (NAS) entered into force on January 1st 2014, with mandatory application since January 1st 2015. During 1997-2014, four financial accounting systems have been used in Moldova: Simplified system, single entry accounting, simplified double entry accounting, classical double entry accounting. NAS No.62 "Single entry accounting" approved by order No.104 as for 27.11.2002 of Ministry of Finance; NAS No.4 "Accounting for small business enterprises" aproved by order No.32 as for 03.03.2000 of Ministry of Finance; NAS No.5 "Presentation of Financial Statements" approved by order No.174 as for 25.12.1997 of Ministry of Finance.*

[7] *The Ombudsman institution has been operating in the Republic of Moldova since April 1998. According to Law No.52 of 2014, the Republic of Moldova switched from previous system, with several Parlamentary Advocates, to the model of one single Ombudsman with general competence and, within the same office, a special – autonomous – Ombudsman for the protection of children's right.*

with the MTA, including reporting improper behavior by STI officers. In addition, the role of the Ombudsman should be expanded to include mediation of tax conflicts [9][1] and, if necessary at the conclusion of mediation, an assistance role, such as guiding a taxpayer in applying for a remission of tax, penalty, and interest in difficult cases.

The taxpayer does not have a choice in whether or not to pay taxes, it is compulsory and, at the assessing and collection level, it can be confrontational. This can confuse taxpayers' perception of whether the treatment during an appeal will be fair and impartial. Third party opinion would be particularly valuable to the small and medium taxpayer, since tax officials have access to legal advice and counsel.

Nevertheless, the Ombudsman can be at the assistance of the tax administration also. As a result of any investigation, he can suggest changes in policy, services or procedure.

Conclusions

In the hope "to develop into a modern efficient European tax administration"[2] [10, p. 15.], MTA has to adapt its legal and social environment first. In Moldova this implies amongst others:

- Merging the current 35 local tax offices into a not more than six-eight modernized facilities;
- Establishing clear, transparent and predictable rules, especially in the field of taxes;
- Education of future taxpayers;
- Introduction of efficient incentive-orientated policy measures;
- Development of an Integral Tax Information System;
- Establishement of a special office of the Tax Ombudsman etc.

In this regards, further improvement in tax collection, by promoting voluntary compliance among taxpayers, and therefore administration are needed[3]. No country, including Moldova has a perfect set of laws and only comparative studies might review systems' weaknesses and strengths.

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[1] *The tax advantages of mediation have been highlighted following a survey among 1,000 respondents from small and medium business communities carried out with the support of the Netherlands Embassy in Ukraine and Moldova in the MATRA KAP program in 2010.*

[2] *The key strategic direction of the MTA is "to develop into a modern efficient European tax administration that will provide the most optimal environment for taxpayers, so that they comply with their fiscal obligations in an adequate manner".*

[3] *It has been recognized that to ensure fiscal discipline and efficient management of public financial resources, the main possibilities for raising revenues should not be by raising taxes, which can reinforce compliance problems, but improving collection and therefore administration.*

MANAGEMENT OF SPORT COMPLEXES

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The actuality of the investigated theme. Nowadays, human evolution, including his intellectual development, proves the fact that especially the creation manpower and the employment was the solution of all life's ambitions in society. So, the fact is that in reality, man is the most important capital of the society. Also, in an individual's life, the practice of sport plays a significant role and that's why the initiation, the launch and the management of sports complexes activity reveal the existence of specific management features that we will identify and explain in the current study. The aim of the research refers to the elaboration of a theoretical base of the management of the sport complexes, to the pointing of the factors that influence the efficient existence and function of a sport complex in our country and to the determination of the responsibilities that have a manager who directs successfully the activity of the sport complexes. The investigation is based on theoretical methods, such as: scientific documentation, analysis, synthesis, comparison and on empirical research methods, like: study of researched literature and observation. The results of the research indicate the fact that the profitability of a sport complex must assure a particular structure to avoid the bankruptcy risk and also, that the administration of the sport complexes activity must keep in view the reliable functions of the contemporaneous management.

Key words: *management, sport complex, advantage, investment, profit, politics of practicing a healthy lifestyle.*

Actualitatea temei investigate. Astăzi, evoluţia omului, inclusiv dezvoltarea lui la nivel intelectual, demonstrează că anume forţa umană de creaţie şi de muncă a fost soluţia tuturor ambiţiilor vieţii în societate. Astfel, cert este că omul constituie, în realitate, cel mai important capital al societăţii. De asemenea, în viaţa individului, un rol colosal îl ocupă practicarea sportului şi, tocmai de aceea, iniţierea, lansarea şi gestiunea activităţii complexelor sportive relevă existenţa unor trăsături manageriale specifice, identificate şi explicate în actualul studiu. Scopul cercetării vizează elaborarea unui fundament teoretic al managementului complexelor sportive, evidenţierea factorilor care influenţează existenţa şi funcţionarea eficientă a unui complex sportiv în ţara noastră şi stabilirea responsabilităţilor unui manager care dirijează cu succes activitatea unităţilor sportive. Metodologia cercetării este constituită atât din metode teoretice, ca: documentarea ştiinţifică, analiza, sinteza, compararea, cât şi din metode empirice de cercetare, precum: studierea literaturii de referinţă şi observarea. Rezultatele investigaţiei subliniază faptul că rentabilitatea unui complex sportiv trebuie să asigure o anumită structură pentru a ocoli riscul falimentării, iar gestiunea activităţii complexelor sportive trebuie să ţină cont de funcţiile fiabile ale managementului contemporan.

Cuvinte-cheie: *management, complex sportiv, rentabilitate, investiţie, profit, politici de practicare a unui mod sănătos de viaţă.*

Актуальность исследования. Сегодня, развитие человека, в том числе на интеллектуальном уровне, указывает на то, что именно его творческий и рабочий потенциал являются решением всех жизненных амбиций в обществе. Итак, безусловно, человек является самым главным капиталом в обществе. Кроме того, огромную роль в жизни человека занимает спорт, и именно поэтому, создание, внедрение и управление деятельностью спортивных комплексов свидетельствует о существовании определенных управленческих качеств, которые выявляются и объясняются в данном исследовании. Целью исследования является разработка теоретических основ менеджмента спортивных комплексов, выделение факторов, влияющих на существование и эффективное функционирование спортивного комплекса в нашей стране и также на установление обязанностей менеджера, который успешно управляет деятельностью спортивных комплексов. Методология исследования состоит из теоретических методов, таких

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как: работа с научными документами, анализ, синтез, сравнение, а также из эмпирических методов исследования: изучение справочной литературы и наблюдение. Результаты расследования подчеркивают, что рентабельность спортивного комплекса должна обеспечить особую структуру, которая позволит избежать риск банкротства, а управление деятельностью спортивных комплексов должно учитывать надежные функции современного менеджмента.

Ключевые слова: менеджмент, спортивный комплекс, рентабельность, инвестиции, прибыль, политика продвижения здорового образа жизни.

JEL Classification: M12; G32; O22.

Introduction. Social evolution, that man knows today, is constantly checking the schedule for the identification and development of different modes of activity to be included in its service. The development, at the intellectual level demonstrated that man is the key to everything, that creation manpower and employment were the solution to all life's ambitions in society. The fact is that man is, in reality, the most important capital of the society. Physical, biological and intellectual capacities make up the driving force of the human capital.

Societies that are in continuous development pay a great attention to the maintenance and development of physiological capacities of the population. Realization of these objectives can be achieved by:

- Promotion of the policies of practicing healthy lifestyle;
- Preparation of the methodical-teaching framework in physical education and sport;
- Training of managers and economists involved in the “sports industry”;
- Development of the medical framework for the prevention, diagnosis and treatment of diseases;
- Creation, development and improvement of material and technical base of stadiums, sports complexes, recreational land, sport schools etc.

For the purpose of maintaining and supporting arguments given above, we find that the role of sports complexes has a great and even vital importance in the social life of the individual.

Initiation, launch and management of sports complexes activity highlight management features through the direct involvement of contemporary management functions.

According to the organizational management, administration and functional preservation of sport complexes require the attraction of different types of resources, *such as:*

- Material resources (buildings, equipment, facilities, inventory etc.);
- Financial resources (sponsorships, investments, donations etc.);
- Human resources (coaches, trainers, managers, economists, doctors etc.);
- Information resources (media, teaching materials, information technologies, information boards, posters etc.).

So, given the mentioned issues, we conclude that the manager has the following duties and responsibilities, aimed at operating with resources of the sport complexes:

- Maintenance of sport complex according to technical standards;
- Upgrading and equipping of sport complexes with equipment and materials as required by performance sport and sports for all;
- Organization and motivation of the staff management and maintenance of subordination;
- Identification and monitoring of programs for the efficiency of sport complexes from the technical and economic point of view;
- Management of activity of promotion of services provided to the public;
- Creation and promoting sports organizations (federations, clubs, sports schools etc.).

“A sport organization is a social entity involved in the sports industry, directed toward a goal with a well-structured system activity and a relatively identifiable boundary”.

In this definition we attest five elements, which will be explained below:

1. ***Social entity:*** all sports organizations are made of people or groups of people who interact to perform the essential functions of the organization.
2. ***Involvement in the sports industry:*** what differentiates sport organizations of other organizations, ie their direct involvement in one or more aspects of the sports industry, for example, by obtaining sporting goods or services. If other types of sport organizations may be involved in other types of relationships, such as sponsorships, though this is not directly an entity in the sports industry.

3. ***Centre directed towards a goal:*** all sports organizations exist for a specific purpose, such as making profit, encouraging participation in a particular sport or winning Olympic medals. The objectives of a sport organization are usually harder to obtain by an individual but by the members working together. Sport organizations have many goals and individual members may have objectives that differ from those of the organization. Therefore, good management aims to coordinate the organization's member's activity and the common objective to achieve a positive result.
4. ***A very structured activity system***: the interaction of people or groups of people in sport organizations do not appear "randomly"; we would rather talk about work systems very well structured, such as marketing, product and service development, financial management and human resource management. The main functions of a sport organization are divided into tasks or smaller groups of tasks. The mechanisms used to coordinate these tasks ensure the objectives of sports organizations.
5. ***Identifiable boundaries.*** Sport organizations must possess relatively identifiable boundaries to distinguish their members from non-members. Members of sport organizations usually have an explicit or implicit agreement with the organization, understanding that they get money, status or other benefits for their involvement.

According to those reported previously, we certify that managers of the sport complexes need a formal preparation in management and practice of training, if they are to become effective managers. Implementation of the power, of the authority and leadership attributes can help the manager to perform administrative tasks in a more productive manner.

Of great importance for the development of the Moldovan society has physical education and sports, as well as development and promotion of a healthy lifestyle.

Since Moldovan transition to another system of organization of society, of the state (transition to a society with a market economy – the process which determines the balance between supply and demand), more frequently we encounter the concepts: "sport industry", "sports business", private and public partnership in the sphere of physical education and sport. Given the created requirements, all subjects involved in the sport industry are forced to solve very different objectives and requirements compared with existing ones so far. For example: ensuring financial stability of the organization without being differentiated the following aspect: sport organization is a representative of the trade or is a "structure of the state". An important component in the work of several organizations related to sport industry are "sports buildings", which, together, represent the fundamental resources of the sport industry and, therefore, constitute a growing interest for the investment program, and respectively, a subject of business-projects.

In the Republic of Moldova we increasingly attest professional sport clubs, whose main objective is the organization of sport "shows"; sports and leisure clubs - attracting people to practice healthy sport by using proper and efficient sport equipment from gyms (e.g. gym, cardio-hall, shaping hall or basin).

Currently, the Republic of Moldova, realizing the great importance of development of mass and performance sports without proper infrastructure conditions, does not have a well-defined program in the construction, renovation of sports buildings and their adjustment to European standards. Apart from this, sports buildings are not exploited with enough performance, which can cause their degradation. A good part of the realization of the National Programmes should be borne by the state. Other investments in sport should include private investment, and the provision of services in marketing.

Among the possibilities to attract private investors, we believe that the main objective is the return of investment. Otherwise, investments risk turning into donations. When operating sports complexes, it would be essential to take into account both the interests of investors and those of the owners. Profitability and profit from sport complexes can only be ensured through programs, strategies, management processes and efficient operation.

In this context, we affirm that the managerial roles are essential in the management of sports complexes. One of the biggest specialists in American management is Henry Mintzberg, who performed multiple researches to describe the activity of managers. H. Mintzberg has collected a lot of data about managers' activities. Analyzing the data, the American researcher has identified three general types of roles:

- Interpersonal roles;
- Informational roles;
- Decision roles.

Any administrator, who runs a sports complex, will have to take at the right time, three different management types. However, the manager must take into account the need to coordinate the sporting performance activities with those of the sport for all type.

Conclusions

In conclusion, we note that the practice of sport by the population is directly dependent on the overall economic situation of the country, the time and financial readiness of those who are called to participate, voluntarily, for personal benefit recreational and sporting activities. Since Moldovan transition to a market economy, an important condition for activating the sport industry is the existence of managers' performance prepared and trained to a high level of professional and that possess extensive knowledge in the market economy. Profitability of sport complexes is directly proportional to the professional training of employees at all levels of service.

Unfortunately, currently, the Republic of Moldova does not prepare managers and specialists in the sports industry and there is an acute need for effective functioning and masterful management of the sport complexes.

So, analyzing the main factors influencing the existence and operation of a sports complex in our country, we conclude that at the modern stage of development of the "sport industry" in order to achieve profitability of sports complexes is necessary to take into account the multitude of factors, from planning and designing the construction of the sport complex, which will operate in market economy conditions and increased competition. For this reason, the project must be oriented towards the efficiency of the building and the interests of investor and the owner.

Thus, after completion of construction, the operation period follows in which, as mentioned above, the owners must continuously follow their own economic interests and practical profitability of the object, otherwise the risk of bankruptcy appears.

Profitability of a sport complex, currently in Moldova should be structured as follows:

- Being the unique sport complex in a certain location and date;
- Being an object that is of interest for the population;
- To meet the requirements of sports federations, which receive state funding and support;
- Being the official arena of more sport clubs;
- To be placed in close proximity of living quarters and main traffic routes of transport;
- To have well-trained specialists in marketing, which will organize annually 100-120 activities: competitions, concerts, exhibitions, fairs and other mass events, including various commercial events.

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ANALYSIS OF FINANCIAL FLOWS IN FOOD INDURSTRY ENTERPRISES

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In the present study it was used the analysis of food industry and the financial flows generated by them. The analysis was based on information from the financial statements of these entities, and the study of evolution: food industry output, number of enterprises and employees in food industry, import and export of food production. Following the undertaken analysis are highlighted some shortcomings and made some concrete proposals need to be considered in the sustainable development of the food industry.

Key words: *financial flows; food industry; food industry output.*

În cadrul prezentului studiu s-a recurs la analiza întreprinderilor din industria alimentară şi a fluxurilor financiare generate de acestea. Analiza s-a fundamentat atât pe informațiile din Rapoartele Financiare ale acestor entități, cât și pe studiul evoluției volumului producției industriei alimentare, numărului de întreprinderi și angajați în industria alimentară, importului și exportului producției alimentare. Ca urmare a analizei întreprinse sunt evidențiate unele carențe şi formulate propuneri concrete, necesare de a fi luate în calcul la dezvoltarea durabilă a industriei alimentare.

Cuvinte-cheie: *fluxuri financiare, industrie alimentară, volum al producției industriei alimentare.*

В рамках данной статьи автор осуществил анализ пищевой промышленности и финансовых потоков, генерируемых ими. Анализ был основан как на информации из финансовой отчетности предприятий пищевой промышленности, так и на эволюции ряд показателей таких как: объем производства пищевой промышленности, количество предприятий и работников в пищевой промышленности, импорт и экспорт продуктов питания. После проведенного анализа выделены недостатки и сделаны конкретные предложения, которые должны быть учтены при устойчивом развитии пищевой промышленности.

Ключевые слова: *финансовые потоки, пищевая промышленность, объем производства пищевой промышленности.*

JEL Classification: G30; F3; F4; F14; Q17.

Introduction. The level of economic development of a country influences directly financial management decisions within the enterprise. Usually, economic growth contributes to enhancing the welfare of population, consumption and consequently demand. In order to achieve these goals, enterprises increase their production capacity to sell more in order to meet increasing demand. All these help to boost borrowing of funds and demand for financial resources from economic agents.

The economic growth is a process of increasing the national economic dimesions based on combination and more efficient use of factors of production, process determined, on the one hand, by a series of direct factors as quantity, structure and quality of human potential, natural resources, capital etc., on the other hand, by a set of indirect factors as scientific and technological progress, rate of investments, international economic changes etc.

In contrast, the economic downturn is a process of contraction of economic dimensions of a certain country and is manifested by a lower efficiency of use of available resources and a lower gross value added. The evolution of a country's economy influences directly other sectors of national economy and determines the business prospects in a certain society for a significant period of time.

Basic content. It must be mentioned that the evolution of the Moldovan economy, over the last five years, according to the National Statistics Bureau, is supported by an increase approximately in all branches of the national economy. In particular, gross domestic product (GDP) increased in 2014

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compared to the previous year (2013) to 10.94% (111,501 mil. lei: 100 510 mil. lei x 100 -100) and 55.11% (111 501 mil. lei: 71 885 mil. lei x 100-100) compared to 2010 (Figure 1).

In general, a stable macroeconomic environment of a country, external conditions, economic growth, banking sector stability and, not least, increase in population's welfare constitute factors that influence development of the most important sector of national economy, namely industrial sectors within that country.

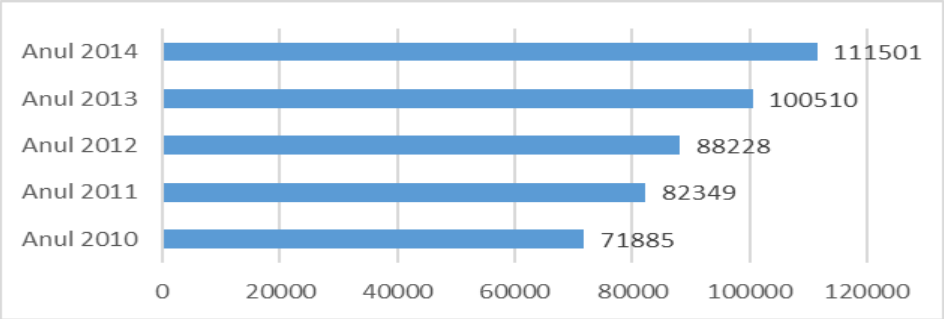

Fig. 1. Evolution of GDP in current prices in the period 2010-2014, mil. lei
Source: Prepared by author based on National Bureau of Statistics data.

In the Republic of Moldova, on the background of national and international turbulences that have materialized into decreasing intensity of economic agents' activity, income reduction of both the individuals and the legal entities, significant drop in imports and remittances, freezing investment projects, instability of the banking system especially during the years 2013-2014, the appearance of a functional stability was preserved as a subject of active interventions of the National Bank of Moldova and attracted financing from the International Monetary Fund.

In this study, the food industry enterprises were selected for analysis of financial flows. The reasoning selection from all areas of activity of the domestic industry, the choice of the food is dictated by the following factors:

- the food industry is one of the main sectors of national economy directly involved in ensuring food security of our country, in the formation of export potential and has a positive impact on the dynamics of country's economic growth. Currently in the domestic economy, food industry brings together dozens of sub-sectors, the most important being the production of meat products, wine, sugar, dairy products, oils and fats, bakery, confectionery etc.;
- the food industry is not monopolized, such as the electricity;
- the majority of food businesses are found approximately in the same external conditions for development;
- food industry is in a slump for a long time, which worsens the unfavorable external economic situation linked to the global financial crisis in 2008-2009 and the crisis in the domestic banking sector in 2013-2014.

In addition, it should be mentioned that like any other industry, the food industry is inherent in a lot of features. In particular, products manufactured by food companies belong to the group of essential goods and therefore are in constant demand (for food budget is consumed half of the revenue of the country's citizens). The sector is closely related to agriculture; respectively the increase of the efficiency of enterprises' operation in the food industry is impossible without solving also the problems/ challenges that are present in agriculture. As a final link of the technological chain, the food sector must provide better storage and processing of agricultural production, transforming it into high quality goods. However, the issue of compliance with quality and environmental safety of food products for the domestic economy remains quite acute. Unfortunately, both, for the domestic producers and consumers the price continues to be the most important , but not the quality of served food products. Security standards laid down in state standards remain unchanged, but because of inefficient state control, the domestic products of low quality continue to be produced and the semi-finished products of dubious quality are still imported.

The importance of this sector to the national economy results also from the share held by food production volume in overall industrial output. Although during the years 2010-2013 there were positive trends of increased food production, yet its growth in recent years has been quite modest (Figure 2).

Fig. 2. The evolution of the food industry production during the years 2010-2014, mil. lei
Source: Prepared by author based on National Bureau of Statistics data.

In particular, in 2013 compared to 2012, the food production volume increased by 7.32%, but in 2012 compared to 2011 – by 6.34%. Furthermore, during these periods the food industry increased production due mostly by higher prices, and less because of higher production volumes. Compared to the previous year (2013) in 2014 was a decrease in the volume of food production from 39 024.3 mill. to 36 781,1 mill. lei or 5.75%.

It also notes that if in 2010 the production of the food industry had a share of 41,71% of country's industrial production (11736,6: 28140,1 x 100), then in 2012 it increased to 42.87%. However, from 2013 there had been noticed a slowing position of food production industry in the total sum of overall industrial production, so this year the food production industry had a share of only 27.51% of the country's industrial production. Although in 2014 compared to 2013 the situation had slightly improved (food production had a share of 32.22%), though the position of food production in total industrial production was below the 2010 level.

Among the main *objective factors* that caused the reduction of production volume of the food industry in the analyzed period may be mentioned:

1. loss of traditional markets in CIS countries;
2. reduction in agricultural productivity, which reduced the supply base of raw material for food industry enterprises;
3. obsolete technologies also as a result of the high production costs, and therefore a lack of competitiveness;
4. increase in raw material prices as a result of reduced agricultural productivity and outdated technologies;
5. increased competition from foreign producers that was imposed because of their relatively low cost (especially producers in Ukraine) or the promotion and imposition of trademarks (producers from EU countries).

Likewise, can be mentioned a series of *subjective factors* that contributed to the contraction of the food industry in recent years, such as:

- lack of success of the privatization program, which has failed to bring the financial resources for boosting the production in the former Soviet enterprises in the food industry;
- poor preparation of the management teams in most businesses in the food industry;
- inconsistent public policies that have not supported the industrial production, but only some individual companies.

As a result of the over 300 industry enterprises producing wine in the former MSSR, today are viable only less than 90. From about 100 businesses and production departments of canned food industry, today operates only about 80. Large zoo technical complexes had practically disappeared, being replaced with farms where the livestock is much smaller, based more on principle of existence, and not scientifically organized processes.

To this end, the finding is that in the food industry in the period 2010-2014 it had been showed a negative trend of reducing the number of businesses and employees within them (Figure 3). Thus, if in 2010 were active 1487 food industry enterprises, with a headcount of 32,611 people, in 2014 the number of businesses dropped to 1202 units or with 19.17% and the number of employees decreased to 25 006 persons or with 23.32%.

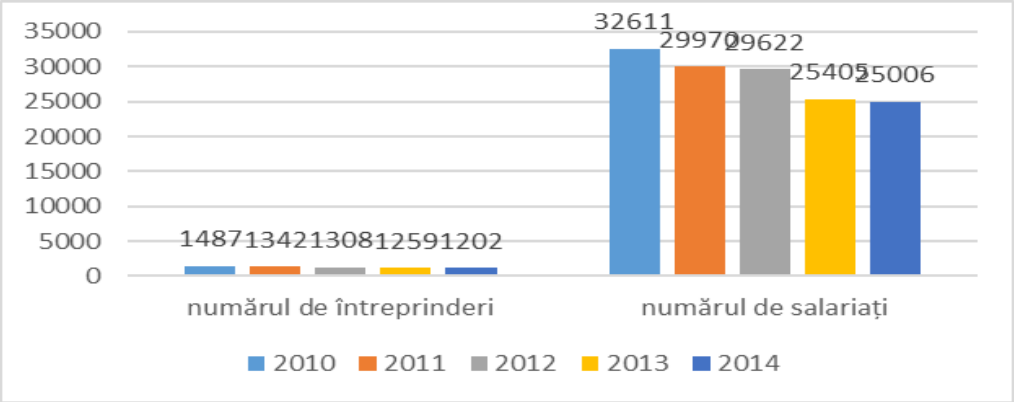

Fig. 3. The evolution of businesses and employees in the food industry in the period 2010-2014 in Moldova

Source. Prepared by author based on National Bureau of Statistics data.

Among the reasons of reduction of number of enterprises and number of employees it can be mentioned the fact that most businesses (about 98%) in the food industry are part of small and medium enterprises and as a result they are not able to resist to the external challenges of the autochthonous national economy in the past years. In our opinion, only large enterprises have the resources needed to implement modern technologies, advertising campaigns for promoting their own products, and not the least, to compete effectively with imported food products. Small business cannot develop new technologies, implement projects to promote on the international markets, benefit from economies of scale, after which all manufacturers of modern economies are running. Thus, without a sufficient number of large enterprises, a sector of the economy tends to be eliminated and lose the competitive battle.

Thus, without a sufficient number of large enterprises, a sector of the economy tends to be eliminated and lose the competitive battle.

Structurally, the food industry is still dominated by a few sectors such as wine production, milk production, meat production and meat products, sugar, vegetable preservation and production of bread and pastry (Table 1).

Table 1

The evolution of the main production sectors of the food industry in the period 2010-2014

	2010	**2011**	**2012**	**2013**	**2014**
Food and beverage, total mill. lei, *including:*	11738	14200	15588	16223	11850
- Production, processing and preserving of meat and meat products	1474	1925	2435	2645	2895
-processing and preserving of fruit and vegetables	1043	1822	1608	1775	1893
-manufacture of vegetable oils and animal fats	997	1306	1625	477	721
-manufacture of milk products	1249	1391	1534	1706	1995
-production of mill products	152	225	219	310	184
-production of bread, bakery products and pastry cakes and fresh pastry	1115	1304	1370	1494	1153
-production of sugar	1058	1096	936	1383	1176
-manufacture of cocoa, chocolate and sugar confectionery	481	543	546	606	633
-manufacture of distilled spirits	511	604	925	1036	972
-production of wine	2023	2074	2315	2674	2246
-manufacture of mineral water and soft drinks	324	397	401	374	424
-manufacture of food products	1152	1338	1478	1744	1567
Food and Drinks Industry, total, %, *including:*	100.00	100.00	100.00	100.00	100.00
-production, processing and preserving of meat and meat products	12.56	13.56	15.62	16.30	18.43
-processing and preserving of fruit and vegetables	8.89	12.83	10.32	10.94	9.97
-manufacture oils and vegetable and animal fats	8.49	9.20	10.42	2.94	8.08
-manufacture of dairy products	10.64	9.80	9.84	10.52	11.84
-manufacture of mill products	2.65	2.82	2.66	1.91	2.55

	2010	2011	2012	2013	2014
-manufacture of bread, bakery products and pastry cakes and fresh pastry	9.50	9.18	8.79	9.21	9.78
-manufacture of sugar	9.01	7.72	6.00	8.52	9.92
-manufacture of cocoa, chocolate and sugar confectionery	4.10	3.82	3.50	3.74	5.34
-manufacture of alcohol drinks	4.35	4.25	5.93	6.39	8.20
-manufacture of wines	17.23	14.61	14.85	16.48	14.95
-manufacture of mineral water and soft drinks	2.76	2.80	2.57	2.31	3.58
-manufacture of other food products	9.82	9.41	9.50	10.75	13.22

Source: Prepared by author based National Bureau of Statistics.

If wine production in recent years experienced a significant decline, other sectors have recovered, but under the influence of price increases and less due to higher production volumes. In particular, in 2014 over the previous year food industry as a whole in 2013 recorded a decrease in production volume by 26.96%.The production volume has decreased on particular activities: production of milling with 40.65%, bread and bakery products – by 22.82%, wine production – by 16.00%, manufacture of drinks – 6.18%.

At the same time there has been an increase in the output of the food industry in the following activities: manufacture of oils and vegetable and animal fats – by 51.15%, manufacture of dairy products – by 16.94%, producing mineral water and soft drinks – by 13.37%, production and processing of meat and meat products – 9.45%, processing and canning of fruits and vegetables – 6.65%, manufacture of cocoa, chocolate and sugar confectionery – 4.46% etc.

It should be mentioned that while the trends of decrease in the share of production sector in the food industry and industrial production noted a loss of food business position in the local market compared to importers. Imports of cheaper food has complicated the situation further to the food industry.

Thus, in 2010-2013 imports of food production increased from 309 mill. USD in 2010 – 403 million. USD in 2014 (Figure 4).

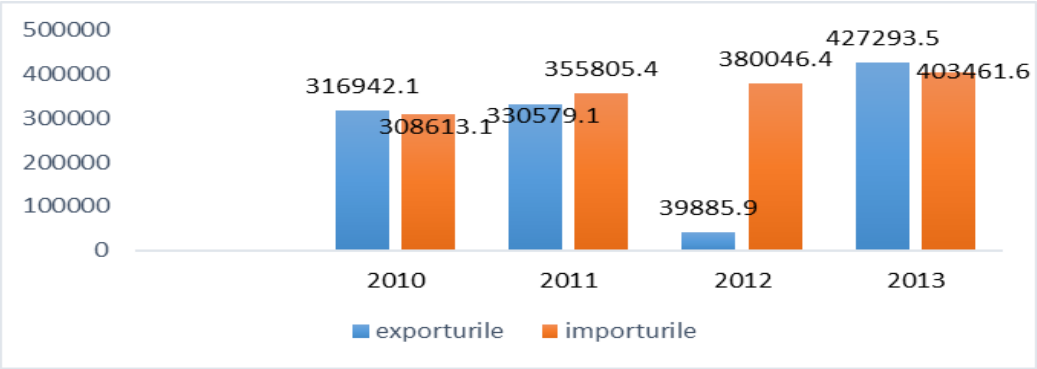

Fig. 4. The evolution of import and export food production over the period 2010-2013, mill.
Source: Prepared by author based on National Bureau of Statistics data.

At the same time export of food production has increased from 317 mil. USD in 2010 – 427 million. USD in 2014. If food production in 2010 had 20.56% (316 942.1: 486.6 x 100 1541) of total exports, then export food production in 2014 is only 17.60% (427 293.5: 2428303 x 100) of total exports.

In 2013 food exports were lower than imports, which also affected much of the industry outlook. Considering the low competitiveness of the food industry barriers for exports to Russia, Belarus and Kazakhstan we believe that in coming years the gap between imports and exports may increase to imports. Overall the food industry over the past five years has lost importance and related economic flows have decreased as a percentage of total financial flows in the economy.

Conclusions. Food industry enterprises had hard times during this period. Competition with foreign producers, the loss of traditional markets, the lack of a clear strategy to promote its products, increasing production costs due to high prices of energy products caused the industry to lose of its importance. As a result the financial sector in the country has significantly reduced agri-food sector's funding as sector fragmentation, lack of competitiveness has increased funding risks. Thus, in addition to operational issues, food industry enterprises were faced with major funding problems.

Focusing on a detailed analysis of the agrifood sector in Moldova, we conclude the following difficulties:

a) low level of modern technology for food processing;
b) low processing and, consequently, low efficiency;
c) lack of processing capacity;
d) inaccessible capital for restructuring and upgrading of processing;
e) low degree of vertical and horizontal integration between process and primary production;
f) the absence of implementing food safety standards and food quality standards;
g) the low level of implementation of modern management and marketing methods;
h) limited access to developed markets;
i) competitive advantage related to lower labor costs will gradually decline, so will be a need to increase productivity.

To address these difficulties Moldovan government adopted a Decree No. 1149 on 05.10.2006 Industry development strategy for the period until 2015 "and the decision on 04.06.2014 nr. 409, "On adopting the national strategy for agricultural development and country for the years 2014-2020", under which it is proposed to be launched processes of restructuring and modernization of food sector, with additional financial support to strengthen vertical and horizontal integration and implementation of food safety requirements and quality food. These activities will involve financial support for investment in processing facilities, modern buildings, modern production lines, including all infrastructure support" [45]. In the documents data is indicated that because of the lack of conformity of significant elements of agricultural and food processing sector with EU requirements on food safety and quality requirements of the domestic food sector, it limits access to European Union markets.

However, EU standards and other international standards for food safety is a precondition for successful global trade of agricultural products and placing high value on international markets Large investments will be needed to modernize production technologies in line with EU requirements, as it was done in the new Member States. Current shortcomings in food safety management system of the country is the most serious impediments to access and presence of Moldovan agricultural products more competitive in international markets, and national public health considerations.

Food Safety Strategy and the new legislation initiated the transparency and credibility of the system. At the same time, to identify the resources needed for investments laboratory in accordance with the development strategy of the system of laboratories in the food and feed chain in Moldova for the period 2013-2015. Also, border inspection posts and other infrastructure will demand for significant investments to be equipped according to EU requirements.

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EVOLUTION OF REGULATIONS FROM ROMANIAN BANKING SYSTEM –ROMANIAN COMMERCIAL BANK

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Alongside with the economical globalization, the difficulties of economic nature became so varied due to the growth of relations. The article proposes to analyse the behavior of the Romanian Central Bank based on annual reports as a result of changes emitted by the National Bank of Romania. First of all, it is highlighted the benefit brought by this guideline for credit institutions as well as for clients, regardless of their field of activity. Therefore, this article tries to offer a valid answer to the question whether the improvement of product and services offered by RCB (Romanian Commercial Bank), in conformity with the cautious changes lead, on one side, to financial stability but on the other side to the attraction of an impressive number of clients.

Key words: *changes, innovation, banking system, bank run, factoring.*

Dificultăţile de ordin economic, alături de globalizarea economică, au devenit generale din cauza amplificării relaţiilor atât de variate. Articolul îşi propune să investigheze comportamentul Băncii Centrale Române, pe baza rapoartelor anuale, în urma diverselor reglementări emise de Banca Naţională a României. În primul rând, studiul analizează contribuţia respectivelor norme atât pentru instituţiile de credit, cât şi pentru clienţi, indiferent de segmentul lor de activitate. În acest sens, articolul încearcă să ofere un răspuns valid la întrebarea dacă îmbunătăţirea produselor şi serviciilor, oferite de BCR, în conformitate cu reglementările prudenţiale, se soldează, pe de o parte, cu stabilitate financiară şi, pe de altă parte, cu atragerea unui număr impresionant de clienţi.

Cuvinte-cheie*: reglementare, inovare, sistem bancar, rulaj bancar, factoring.*

Наряду с экономической глобализацией, экономические трудности приобрели общий характер посредством усиления разнообразных отношений. Статья нацелена на анализ поведения Центрального Банка Румынии, на основании годовых отчётов, в результате различных нормативных и правовых актов, выданных Национальным Банком Румынии. В первую очередь, статья анализирует преимущество, которое дали эти нормативные и правовые акты для кредитных учреждений, а так же для клиентов, независимо от их сферы деятельности. В этом смысле, статья стремится правильно ответить на вопрос, ведет ли улучшение продуктов и услуг, предоставляемых Центральным Банком Румынии, в соответствии с нормативными и правовыми актами, с одной стороны, к финансовой стабильности, и, с другой стороны – к привлечению значительного количества клиентов.

Ключевые слова: *правовые нормы, инновация, банковская система, факторинг.*

JEL Classification: E58; F3; G21; G28; H76; O31.

Introduction. The present puts at our disposal a globalised society with a variety of economic possibilities, which offer the proper frame for obtaining a free transaction. In the area of financial system, the banking authorities occupy an important role from the point of view of a good functioning of economic institutions as well as the whole economic system. Therefore, throughout time a constant worry was manifested for the realisation of a functional banking system, adequate for being able to offer a variety of products and services which can answer the high demands of potential clients, from the very beginning of the banking existence and until this moment.

The subject of the article is of actuality, being in a harmony with the decisive realities form the past couple of decades, but also in capacity with the elucidation of importance that the identification factors

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and processes which lead to the innovation activity on the Romanian banking market. On the other hand, I decided to develop this considerable theme and through the view of occurrences that took place in the past years in the banking field, occurrences that primarily brought the concept of "innovation" in a variety of not accessible at all administered combinations.

The competition, at a general level, appears in any community, under the assembly of social links. The concept of "competition" discloses many agreements, however the fundamental plan in which competition occupies an essential position is the economic domain. The progress of economic activities is subordinated by the existence of actual and undisputed competitions between competitors.

The summary of specialty literature. The banking change could be ordered after the causes of banking guidelines in economic changes and social changes. The economic changes represented limiting processes of power on the market. Social changes, also named the changes of security, the viability of the banking sector, it is reported at a general level with respect to client sustainability. (Majone, 1996)

A significant contribution for guaranteeing the financial stability also has the macro-prudential supervision. Even though there is no definition for such term admitted at a general level in a piece of work dating from 2009, offered by Borio and Drehmann, edited by the Bank of International Regulations researches the possibility of the definitions of financial stability, distinguishing three identical notions of these definitions:

- To begin with, these definitions treat the financial system per assembly, excluding particular institutions;
- On the side, the financial system is not appreciated properly, but it evaluates the advantages and economic costs (the economic welfare) and certain terms such as "real economy" (economy activity);
- Hence the definitions offer information regarding the financial instability.

Both in the case of banks as well as monetary organizations it is a necessary change because those are linked in the short, medium and long run to the monetary flows. If a single influential institution would cease its existence, it will rapidly affect the other entities on the market. This case was observed in 2008, when once with the bankruptcy of Lehman Brothers the crisis began[1]. Another argument that enforces the change in this area that is beneficial is the fact that: loans are done by the common consumers, through deposits, economic accounts or pension funds.

A severe repercussion both for retail clients as well as administration in the case of a bank collapse taking place it would be due to the fact that their rights to information is limited. Therefore, it is tried to block the possible "bank runs" **(substantial withdrawals of deposits)**, moments in which scared by certain arrangements that could have taken place the depositors choose to quickly empty their deposits offering a not so happy ending to that certain bank[2]. For backing up its clients, but also for preventing certain "bank runs" and systematic crises the government should always be prepared to take action in such situations. In the case of certain gain of another official "bail-out" **(it represents the action of sending the capital, cash, in an economical institution which is in difficulty with the purpose of enclosing the possibility of bankruptcy or insolvency)**, the administrators of banks could be encouraged to expose themselves long enough trying to accumulate winning as important as possible giving the impossible insolvency.

Regarding the nominee for the Nobel prize for economy, Jean Tirole, one of the subjects approached periodically in his work is that, in a utopian situation the changes have to give special attention to the viability of the system, therefore managing to enclose the moral hazard which can indicate the probability of the arrival of a new crisis[3].

Certain authors, such as Rochet and Tirole (1996), consider that banks will be supervising one another to overcome o possible systematic crisis on a decentralized interbankery market.

This desideratum is limited or repealed by government initiatives, which claim that they will offer help to any bank on the verge of insolvency. This study indicates that certain systems of regulations can solve such situations.

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[1] ***Noam, Eli, "Fundamental instability: why telecom is becoming a cyclical and oligopolistic industry", Columbia University, Information Economics and Policy 18, 2006, pag. 272-284***
[2] ***Tirole, Jean, "Market power and regulation", pag. 37***
[3] ***Tirole, Jean, "Market power and regulation", pag. 39***

Even though no real verification over the bank exists due to the fact that the depositors are little and dispersed the main function of regulation is the one that portrays the interest of clients investigating banks.

After many other specialists of the banking system, Berger and Hannan 1998, for a peaceful existence in this area, the management of the bank should embrace projects that imply a minimal risk or to activate the cotes of efficiency for risk reduction. According to other researches done by DeYoung and others in 1998 and by others in 1999, indicate the fact that competition is attracted by deregulation offered the banks a stimulant regarding the more efficient functioning.

Other research done by Keeley in 1990 and Kwan Eisenbeis in 1996 prove that the growth of competition can augment the banks' incentives by gradually rising up the risk factor, which represents a potential threat regarding the security of banks and payment system.

Another two researchers Tirole and Farhi (2012) highlight the tendency of the financial unities to absorb significant credits on short term and to place them in the same way. Due to the fact that all the representatives on the market depend on the governmental bail outs the systematic risk is increasing.

These take into account certain political regulations that have as a base: interest (for example: the decrease in interest rate during the period of crisis for backing up the refinancing) and transfer politics (for example: during period of crisis unlimited exchanges between financial institutions). There are also certain optimal politics that serve as composing the cash reserve, but valid politics of interest rates as well. Those two give a particular attention to the equitable introduction of macro-prudential regulation.

The institution which possesses the most realistic and precise information regarding its own actives is the bank and with the possibility of reselling those actives would be appreciated as unprofitable. In this case the market price diminishes greatly and the banks with valuable actives choose to keep them, therefore becoming incapable of subsidizing the investments.

The European Central Bank, one of the regulation institutions, that participates directly on the market of financial actives, to overcome such a situation it is decided that they purchase them. From this governmental proposal the banks with unstable actives will be able to profit, a difficult situation for the contributor. An essential choice in Tirole's point of view to improve the politics in this domain is to ransom the weakest actives and to assure the banks' subsidizing with a medium quality of the actives by keeping them in a balance sheet. Hence the prosperity of the markets will be maintained on the market but only the actives with the high grade of quality[1].

The evolution of the Romanian banking system in the context of banks' behavioral changes – the case of the Romanian National Bank. According to the definition given to the National Bank of Romania under the Law number 58 from 1998 the term on regulation is defined as a "normative act emitted by the National Bank of Romania in enforcing the current law which is imperative for all the banks"[2]. In the complex process of transformation an essential role is played by the relation regulation – innovation. In this case I will analyse those that are to follow starting from the banking Law number 58 from March 1998 what modifications were made in the behavior of the Romanian Commercial Bank. Through the activities permitted to banks in this law there are also financial leasing activities, hence RCB establishes a specialized leasing subsidiary, which was up and running in the month of April 2011, although as observed from the bank's reports, RCB places external factoring services beginning with the year of 1998.

Regarding the previously mentioned banking Law this establishes the way of functioning of the banking activities from Romania both at the level of banks as well as the National Bank of Romania. Hence the banks can undertake activities such as:

- Acceptance of deposits;
- Lending credits, factoring operations and discounting the effects of commerce, including forfeiting;
- Emission and managing payment and credit instruments;
- Payments and discounts;
- Funds transfers;
- Warranty emission and commitment assumptions;

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[1] ***Tirole, Jean, "Market power and regulation", pag. 40***
[2] ***Law 58 form 5 March 1998 – Banking law***

- Transactions in own account or in clients' account ***with:***
- Monetary negotiable instruments (checks, bill of exchange, deposits certificates);
- Currency;
- Derived financial instruments;
- Precious metals, objects made up of these, precious stone;
- Transferable securities;
- Intermediation in placement of transferable securities and the offering of services linked to these;
- Clients' portfolios administration, in their and on their own risk;
- Custody and administration of transferable securities;
- Depositary for collective placement entities of transferable securities;
- Renting safety boxes;
- Financial-banking consultancy;
- Warrant operations[1].

Another important element done by RCB in 2001 was represented by perfecting the organizational structure this beginning to be led by clients but, also the appearance of a new department preoccupied with managing external projects.

An important activity done by the Romanian Commercial Bank was the disconnecting of transactions with compensated transferable securities, attribution being given to the Romanian National Bank. Therefore, it controlled important transactions which by the end of the year brought a stable market cote at the level on volume of discounting transactions to be 13.6%. Even the technological sector is aligned with the international regulation guidelines, trough the intermediary Banktrade product which guarantees the external payments (letter of credits, collections, warranties, payment orders).

A final purpose of RCB was represented by the estimating, controlling and decreasing the risk of credit. Hence for the credit estimation risk, the bank hands out an intern rating credit model, namely two dimensional, but also a computerized eco-financial analog procedure with those used from international banks. A scoring analysis model was used by the bank for measuring the risk of credit with respect to the natural persons. The bank also gives its clients' obligations higher than 200 million lei to the Central Banking of Risks (CBR). Hence regarding the supervision of credit risk with respect to its fundamental clients which were highlighted significant exposures, the bank fixed certain maximum risk exposure cotes (higher level possible at which the bank could lay out its respective client) and supervised the permanent adaptation of duties to those with risk cotes set.

Another indicator which was well watched by the RCB was the risk of cashing. In this case as a result of the introduction of Guideline number 1/2001 regarding the cashing of banks by the Romanian Commercial Bank, it was needed to adjust fundamental objectives with respect to cashing risk depending on the new implemented regulations. Hence the bank emitted laws and action initiatives regarding the information lines of placements, maximum estimation points of cashing risk for a single person, and for the type of indicators whom help such risk is supervised.

Permanent restructure of bank activity and ways through which this can go on with activity imposed firmly as exigency the careful supervision of operational risks. Hence having the goal of reduction the operational risk, but also the credit risk the Romanian National Bank – Central Payment Incidents (CPI) data base is examined in the moment of opening of new accounts for clients or when demands are investigated for varying loans. The Romanian Commercial Bank supervises continuously that the ability indicators remain in minimal points stipulated by the careful guidelines of "the Romanian National Bank respectively 8% for the fitness rate of the capital calculated as a report between own capitals and net exposure from the actives of accounts of settlements and extra settlements and 12% for the solvency indicator calculated as a report between own funds of the bank and net exposure from the active accounts of settlements and extra settlements"[2].

Regarding the currency risk, in conformity with the Romanian National Bank guidelines, the bank estimates daily the value in lei of actives and passives. More administrative councils were created thanks to the banking law which examines the essential risks, controlled by the leading members of the bank.

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[1] ***Law 58 form 5 March 1998 – Banking law***
[2] ***www.bcr.ro – annual report 2001, page 44***

From these we remember:

- The credit committee – it examines and authorizes the loan demands, it sends warranty letters such as the evaluation of procedures for retrieving claims;
- The risk committee – the consultancy authority that examines the causes appearances of banking risk and recommends certain protection policies;
- The planning committee of actives and passives that serve as sustainment of shareholders and depositors.

Nonetheless the activity of the Romanian Commercial Bank is promulgated by the banking Law number 58/1998, this was changed and united under Law 485/2003, which introduced certain governmental corporative guidelines, representing the indispensable legal climate to distinguish the supervising function from the leading one.

As a consequence, regarding the exigencies imposed by RNB, on one side the area that prevents money stealing (under Law 656/2002 for preventing and sanctioning money laundering, as well as establishing certain prevention and combating measures of financing terrorist acts, and on the other side regarding the customer knowledge guidelines (through guideline 13/2003), the Romanian Commercial Bank emitted a few proper rules from which the following can be mentioned:

- Determining the identity of clients;
- Denouncing doubtful operations, of cash transactions and international displacement higher or equal to 10,000 euro;
- Retention and storage of data and acts;
- Educating the personnel in the area of prevention of money laundering and subvention for acts of terrorism;

Compared to the monetary risk in 2003, RCB initiated necessary procedures for establishing the permanence of some low currency cotes according to the established RNB guidelines: maximum 10% of bank's own reserves for any level of specified adjusted currency and maximum 20% of bank's own reserves with respect to the total currency position.

In the year 2004 RCB started a new tactic regarding cash management, having guaranteeing the necessary cash for paying bank's debts with any occasion as a goal. The main criteria which the tactic was based upon were: the daily management of bank's cash and the minimal imperative reserve of RNB; prevision of minimum 6 months for the minimum reserve necessary and the current account of RNB; supervision continuing registration and refunding done by the branches through the current RNB account.

Next year RNB started a program which envisioned establishing the quantitative effect that Basel II will be able to retain with respect to the necessary parameters of credit institution capital. In the year 2005, the Romanian Commercial Bank, as a prime credit institution on the line of progress applying the Basel II procedure it had to expose the achievements for the introduction of the Basel exigencies. Hence RCB tried to introduce a capital placement model on business axis, which includes the most developed procedures of Value at Risk for the market Risk and the procedure standardized for the operational risk. At the same time, it evaluates the performance alongside with the risk through an intermediary essential indicator RAROC (Risk Adjusted Return on Capital), but also the price adjusted on the capital, appreciated as "economic added value".

Given the essential qualities of the RCB, with respect to accomplishing the international guidelines, of laws and ordinances emitted by the RNB, this was introduced, in the year 2006, a new action referring to preventing money laundering and financing terrorism. The initiative represented an addition to law 656/2002 for preventing and sanctioning money laundering, as well as for implementing some measures for combating and preventing the financing of terrorism acts by implementing some procedures which served as campaigning terrorism subvention.

Therefore, the management of communications proves about clients linked to money laundering and financial terrorism eradication was undergone in discrete conditions; the bank held the responsibility identification of the client in multiple situations: at the beginning of a new business, when data was coming up regarding a possible plan of money laundering or terrorism subvention, even when slight presumptions of such possible acts occurred; the bank's obligation of obtaining certain data to determine the true identity of a person which benefited from the activation of representatives.

In 2007 RCB continued to improve its top bank positions. Therefore, it changed its allowance credit limits. This position served as preventing and limiting the possible risk from the loan operation of corporate clients, but also latent operational risk to the additional risk credit which also had an impact on

the fitness bank capital, alongside with the careful regulations of the Romanian National Bank and the exigencies of the Basel Agreement II.

The bank estimates the market risk through the prototype evaluation Value at Risk, in conformity with the Basel II exigencies. Therefore, the KVar function was introduced and the VaR measured for essential departments with the goal of recommending fitting limits to supervising market risk.

Conclusions. Even though the banking globalization had positive effects, one of the negative effects was the universalizing of criminality. There were periods in which the banking sector accomplished functions on a fund of instability and incertitude, which often led to varying risks and to certain severe malfunctions to which banking activities were exposed. The prestige and stability of credit institutions is thanks to their skills to cope with perturbation and controversies, regardless of their criminal origin or that it reports to the effect of globalization or economic crisis. And that is why banking regulation appeared.

This piece of work analyzed the evolution of the Romanian banking system starting from the banking Law 58/1998 regarding the behavior of credit institution. The banking system was and will be maintained in a dispersed friendly risk and innovation area. However, only certain banks which will manage to adapt to the new guidelines and regulations of the Romanian National Bank will be able to survive and exist on the market, hence risking to be absorbed or enter insolvency.

I will round up with a quote from Aristotel: “The justice’s virtue is made up of moderation, then the regulation is made up of wisdom”, which tells us the main idea of this study that everything must be done in the banking system based on strict regulations serving as both financial stability as well as consumers’ protection.

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PUBLIC-PRIVATE PARTNERSHIP IN UKRAINE AS ONE OF THE MECHANISMS TO OVERCOME THE CRISIS TRENDS IN SCIENCE, TECHNOLOGY AND INNOVATION

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The Ukrainian scientists have problems with the financing of innovation in the economic and political crisis. The intensification of the use of public-private partnerships can help to solve this problem. The aim of the article is to research the current state of public-private partnerships in science, technology and innovation sphere in Ukraine. The method of this article is based on analysis of the key national public-private partnership publications and Ukrainian national data. The main result is to present ways of development of public-private partnership in order to survive the Ukrainian science and increase innovation economy.

Key words: *Ukraine, Public-private partnership, PPP projects.*

În contextul crizei economice şi politice, oamenii de stiinţă ucraineni se confruntă cu probleme ce vizează finanţarea inovării. Intensificarea utilizării parteneriatelor public-private poate contribui la rezolvarea acestei probleme. Scopul acestui articol este de a cerceta starea actuală a parteneriatului public-privat în domeniul ştiinţei, tehnologiei şi inovării în Ucraina. Metoda utilizată se bazează pe o analiză a principalelor publicaţii naţionale privind parteneriatul public-privat în Ucraina şi statisticile ucrainene. Rezultatul principal este de a propune modalităţi de dezvoltare a parteneriatului public-privat pentru a asigura supravieţuirea ştiinţei ucraineane şi de a spori economia de inovare.

Cuvinte-cheie: *Ucraina, parteneriat public-privat, proiecte PPP.*

Украинские ученые в условиях экономического и политического кризиса испытывают проблемы с финансированием инноваций. Интенсификация использования механизмов государственно-частного партнерства может способствовать решению этой проблемы. Целью статьи является исследование текущего состояния государственно-частного партнерства в научно-технической и инновационной сфере в Украине. Использованный метод базируется как на анализе ключевых национальных публикаций о государственно-частном партнерстве в Украине, так и украинских статистических данных. Основным результатом является предложение путей развития государственно-частного партнерства для обеспечения выживания украинской науки и повышения инновационной экономики.

Ключевые слова: *Украина, государственно-частное партнерство, проекты ГЧП.*

JEL Classification: H54; L32; L33.

Introduction. Ukrainian economy needs to move from resource-based economy to an innovation model increasing energy efficiency, overcoming every year widening technological gap between the developed countries. Public-private partnership (PPP) successfully helps to solve the problem of modernization of the economy. One of the key objectives on the way of integration of Ukraine into the EU is to maintain and develop scientific, technological and innovation potential of the country.

Trend on the reduction of national scientific and technological capabilities has been negative since 1991 in Ukraine. Ukraine had 313 079 researchers in 1990 and more than four times less – 69 404 in 2014 [1]. The specific weight of R&D in the GDP was 1.35% in 1996 and only 0.7% in 2014. Causes are the lack of adequate public financing, liquidation of enterprises with a high share of high technology products, reduction of scientific developments in the military-industrial complex, underestimated prestige of scientist profession in the society. Funding for science was 0.29% of GDP in 1991 and would be less than 0.2% in 2015, which equates Ukraine on this indicator to underdeveloped countries.

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Organization for Economic Co-operation and Development (OECD) determines that PPP in science, technology and innovation is any official relations or arrangements at fixed/unlimited period of time between public and private stakeholders in which both sides interact in decision-making and investing limited resources such as money, personnel, equipment and information for specific purposes in a particular field of science technology and innovation [2]. PPP in science, technology and innovation is possible to consider as institutional and organizational alliance between the public and private business to implement joint projects in science, technology and innovation with the aim of development scientific, technological and innovation national capacity. There is a sufficient legal base for the development of PPP mechanisms in Ukraine. Basic laws are the Law of Ukraine of public-private partnership and the Law of Ukraine of concessions. However, there are no certain adopted laws that stimulate the implementation of PPP in science, technology and innovation. Despite the laws, there are no legislative incentives for this type of innovation in research and educational organizations and no developed practical mechanisms for protecting private investors with long-term, complex and socially necessary PPP projects.

The Ministry of Economic Development and Trade is the state institution responsible for the implementation of PPP projects in Ukraine. The State Agency of Investment and Management of National Projects and the Ministry of Infrastructure also deal with the development of PPP projects.

It is necessary to take various national programmes, action plans, concepts of development for the direct implementation of PPP in Ukraine. The Institute of Economy and Prognoses at the National Scientist Academy jointly with the experts of PPP development programme (USAID) promoted and accepted the concept of establishing of PPP in Ukraine in 2013-2018. Annually the main problems of these programmes are the lack of funding, the failure of the state authorities to fulfill the approved tasks and plans.

Ukrainian scientific organizations try to cooperate more closely with various international organizations to intensify the use of PPP in innovation projects. Under the aegis of both European and various international organizations were implemented centers of PPP, programmes of PPP mechanisms of development and the programmes of technical assistance and modernization of various sectors of the economy. An example of such cooperation is the accession of Ukraine to the EU Horizon 2020. This Programme with a budget of € 13 095 million aims at the development of nanotechnology, biotechnology, new materials development and promotion of innovation in high-technology industries. The goal of Programme is to overcome barriers that hinder innovation in cooperation between the state and private companies in PPP projects. Ukraine received 95% discount on the entrance fee and the first annual fee for participation in this Programme is distributed in the following years.

The World Bank, the European Bank for Reconstruction and Development (EBRD), European Investment Bank and others are the international organizations that support the development of PPP in Ukraine.

According to the State Service of Ukraine for Regulatory Policy and Private Enterprise Ukraine had 480 business centers, 79 business incubators, 50 technology parks, 538 leasing centers, 4 148 non-banking financial institutions, 226 foundations of business support, 3 034 investment and innovation funds and companies and 4 238 advisory institutions at the beginning of 2014 [3]. Probably a tenth of those organizations that can support PPP carries out productive activities. These projects do not work without real programmes of state support, tax incentives and the interest of the regional authorities. Tools for private funding startups in Ukraine are extremely weak or not used in long-term projects in the innovation sphere.

Ukraine had 243 projects on PPP principles at the end of 2014 [4]. Among them 210 are concession contracts and 33 cooperation contracts. Table 1 provides information about the distribution of PPP projects in Ukraine in the spheres of economic activity.

Table 1

Distribution of PPP projects in Ukraine in the spheres of economic activity

The scope of economic activity	**Number of projects**
Waste recycling	116 projects (47.7% of total)
Collection, purification and distribution of water	79 projects (32.5% of total)
Construction and maintenance of roads, railways, runways at airports, bridges, trestles, tunnels and undergrounds, sea and river ports and their infrastructure	17 projects (7% of total)
Production, transportation and supply of heat	7 projects (3% of total)
Production, distribution and supplying of electric power	5 projects (2.1% of total)
Search, exploration of mineral resources and mining	3 project (1.2% of total)
Management of real estate	2 project (0.8% of total)
Tourism, leisure, recreation, culture and sports	1 project (0.4% of total)
Operation and maintenance of irrigation and drainage systems	1 project (0.4% of total)
Other areas	12 projects (4.9% of total)

Source: Data of the Ministry of Economic Development and Trade of Ukraine.

Within the Law of Ukraine of special regime for innovation activity in technological parks in 1999, began a period of intensive development of these innovative structures that have all the possibilities to implement PPP projects. Tax benefits allowed technology parks to spend funds, earmarked for payment of income tax, VAT, import duties on high-tech equipment and for their own innovative projects. The new government abolished the privileges provided in 2005, arguing that the firm registered in science are involved in schemes of evasion of customs duties and taxes. Despite the fact that sales of innovative products within the implementation of innovation projects of technological parks amounted to approximately US $ 1.5 billion from 2000 to 2009, cancelled incentives have not been replaced by any state support and currently technological parks activities are insignificant in Ukraine [5]. Public financing in many countries in the industrial parks is from 50% to 90% of the cost of research and development. For example, the state finances around 50% of the cost of research and development in the USA and in China funding can reach 90%.

The scientific parks also have significant potential to promote PPP projects directly in science, technology and innovation. The Scientific Park "Kyiv Polytechnics" appeared at the National Technical University of Ukraine "Kiev Polytechnic Institute" in 2007. The main objective of the project is to establish a system of interaction between business, University and Scientific Park. Scientific Park has database of innovative projects, conducts scientific conferences, trainings, establishes business school and youth business incubator. The results of the work of the Scientific Park on project financing are insignificant. The Scientific Park "Kyiv Polytechnics" signed only 13 partnership agreements for the implementation of innovative projects and implemented 18 agreements on scientific-technical works for US $ 338 000 in 2013.

Conclusions. Now many innovative projects using PPP arrangements had to be slowed down or closed owing to the political and economic processes in Ukraine. In fact, for the near future, Ukrainian scientists will not be able to count on the needed budget funding for their research. It is necessary to intensify the search for private investors for the development of PPP and improvement of the level of the innovativeness of the economy. Cooperation with EU countries, international economic organizations and banks of development is one of the possible sources of financing of PPP in Ukraine. Objective process is the gap of technological links, scientific cooperation with the Russian Federation. It is very important to pay attention to the search for new partners for scientific collaboration in China, Asian countries that are experiencing economic and technological rise. The absence of government guarantees and prospects for making a profit is not conducive to the effective involvement of business in PPP projects. The government must implement existing scientific developments in the sphere of energy saving, production and transmission of electricity, infrastructure development within the PPP projects. Fuel and energy complex of Ukraine requires complete modernization and innovation. It is necessary to attract resources of both bigbusiness in global PPP projects and to use such mechanisms at the municipal level. Both the National Academy of Sciences of Ukraine and the entire field of science and education require reforms. There is a need for the creation of scientific and technology parks based on leading technical universities of Ukraine. Now government financing of science goes mainly to finance salaries of scientists and utility payments. Without the use of this set of measures, implementation of mechanisms of PPP for the development of scientific and innovational potential the negative trends in Ukrainian science will continue to prevail.

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EVALUATION OF LIVING STANDARDS IN RURAL AREAS IN THE REPUBLIC OF MOLDOVA

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Actuality. this paper presents a characterization of living conditions of the population from the national rural areas. The study of rural development is conditioned by the need to signal particularly acute social and economic problems faced by the people living in rural areas. Objective: Identification the determinant factors of rural poverty and to highlight measures to improve the living standards of the rural population. Methods: The investigation was conducted using the monographic method, the study is focused on a well-defined social field. Results: The standard of living in rural areas is in a continuous decline, there is a trend of population aging and the depopulation of villages is caused by the migration process. Promoting a realistic policy of improving living conditions in rural areas, changing attitudes towards the village, raising the prestige of the farmer is absolutely appropriate to improve the socio-economic and cultural development of the country.

Key words: *rural area, living standards, rural development, rural area, living conditions.*

Actualitatea. Lucrarea de faţă prezintă o caracterizare a condiţiilor de viaţă ale populaţiei din mediul rural naţional. Abordarea subiectului privind dezvoltarea rurală este condiţionată de necesitatea de a semnala problemele de ordin social şi economic deosebit de acute cu care se confruntă populaţia care locuieşte în mediul rural. Scopul. Identificarea factorilor determinanţi ai sărăciei rurale, precum şi evidenţierea măsurilor de sporire a nivelului de trai al populaţiei rurale. Metode. Investigaţia a fost realizată prin utilizarea metodei monografice, studiul fiind axat pe un domeniu social bine determinat. Rezultate. Nivelul de trai din spaţiul rural este într-o degradare continuă, se observă tendinţa îmbătrânirii populaţiei, iar procesul migraţional a cauzat depopularea satelor. Promovarea unei politici realiste de îmbunătăţire a condiţiilor de viaţă în mediul rural, de schimbare a atitudinii faţă de sat, de creştere a prestigiului agricultorului este absolut oportună pentru redresarea social-economică şi culturală a Republicii Moldova.

Cuvinte-cheie: *spaţiu rural, nivel de trai, dezvoltare rurală, localitate rurală, condiţii de viaţă.*

Актуальность: Данная статья представляет собой характеристику условий жизни сельского населения по всей стране. Изучение развития сельских районов обусловлено необходимостью решения острых социальных и экономических проблем, с которыми сталкиваются люди, живущие в сельской местности. Цель: Выявление основных факторов сельской бедности и мер для повышения уровня жизни сельского населения. Методы: исследование проводилось с использованием метода монографического исследования сосредоточенного на четко определенной социальной сфере. Результаты: Уровень жизни в сельской местности непрерывно снижается, наблюдается тенденция старения населения, а депопуляции деревень вызвана процессом миграции. Проведение реальной политики по улучшению условий жизни в сельской местности, по изменению отношения к деревне, по поднятию престижа фермера абсолютно необходимо для социально-экономического и культурного развития страны.

Ключевые слова: *сельская местность, уровень жизни, сельское развитие, условия жизни.*

JEL Classification: R20; O18.

Introduction. The level of living or the standard of living of the population represents the material, cultural and social conditions of the population. The standard of living is characterized by a set of synthetic indicators related with: the size of population's income; volume and quality of goods and

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services consumed; conditions of work and rest; the quality of health and social assistance; the degree of education development; public access to science, art and culture etc.

Reducing poverty in rural areas, which is now so widespread, continues to be a particularly important issue, including the Republic of Moldova. However, there is no single approach to rural development and poverty reduction, sustainable for all countries. A number of European researches showed that, compared to EU countries, Moldova ranks last referring to many indicators related to the living conditions of the population.

In this context, this paper includes comments on recent trends and attempts to increase the living standards of the rural population in the Republic of Moldova.

The main objective of this paper is to identify the determinant factors of rural poverty and to highlight measures to improve the living standards of the rural population. The analysis of living standards of the population, especially in rural areas, continues to be hampered by lack of adequate data.

Methods. The researches reflected in the article are based on the data of the National Bureau of Statistics. The investigation was conducted using the monographic method, the study is focused on a well-defined social field. Through the method of secondary analysis of statistical data and relevant literature socio-economic assessment of the national rural communities was undertaken.

Results. The development of rural areas is a complex and actual problem which involoves both the conservation of the rural area from the economic, social, cultural, ecologic point of view and the necessity to modernize rural life. In the Republic of Moldova rural area covers the biggest part of the country's territory. The surface of Moldova is 33846 km^2 of which rural area covers 31239 km^2 or 92.3%. Rural population constitutes 2047,9 thousand persons representing 57.6% of the total population (Moldova in figures, 2015).

During the transition to a market economy the territorial administrative organization of the Republic of Moldova has undergone several changes. Currently, the Republic of Moldova is divided into 32 districts, including 61 towns and 1575 villages and settlements in villages. In large cities of Moldova social welfare and infrastructure are more or less acceptable, while in small towns and villages there are no conditions for a decent life.

Social problems in rural communities differ from one region to another, from one place to another. The needs of the population of a village differ significantly from those of the population of a small city, and of the inhabitants of large cities. There are numerous problems referring to drinking water supply, provision of gas, development of roads, provision of houses with amenities, and in recent years there appeared the problem of air pollution. Social and economic problems that have affected rural areas, impose socio-economic research and evaluation of rural communities to help enhance development processes.

The structure and level of equipment of dwellings in rural areas. Housing conditions are an important indicator of welfare. Unlike urban areas, where housing has only the function of habitat, in rural areas the dwelling is only a part of the household, which is a "microunit" of production with mixed function, human habitat and a number of constructions serving as economic activity. In rural areas, the most common type of housing is the individual house (Lup, A. et al., 2011).

Broadly rural household consists of the following main parts: residential and housework house, areas of intravilan land, livestock compartments, compartments for agricultural processing, storage annexes, workshops and recreation departments. Depending on the specific structures other individual components may occur (Otiman, PI, 2000).

Housing facilities with the main commodities reflect the comfort of the living space. Thus, most of the urban households have several utilities inside the building (networks of hot water, heating, gas network, sanitary, sewer etc.), which is not specific for rural areas. Households in rural areas are far less equipped with living commodities than those in urban areas. Apart from electricity, which has a 100% coverage in the Republic of Moldova, rural households lack hot water, heating and sewage systems. In urban areas, 89.3% of households have access to the installations of water provision, 74.9% have bathroom inside the house, 89.7% have sewage system and 79.7% have a bath or a shower. In rural households only 38.0% have installations of water provision, 10.5% have a bathroom inside the house and 36.0% have sewage system. Public water supply systems operate in 57 urban and 77 rural areas. Other consumers use water for drinking and household purposes from wells. In most cases the quality of water from these sources does not meet the state standard 2874-82 "Drinking water". About 10% of the samples in urban and 16% in rural water supply systems are contaminated (Development Strategy for Agriculture and Rural Areas of Moldova 2014-2020).

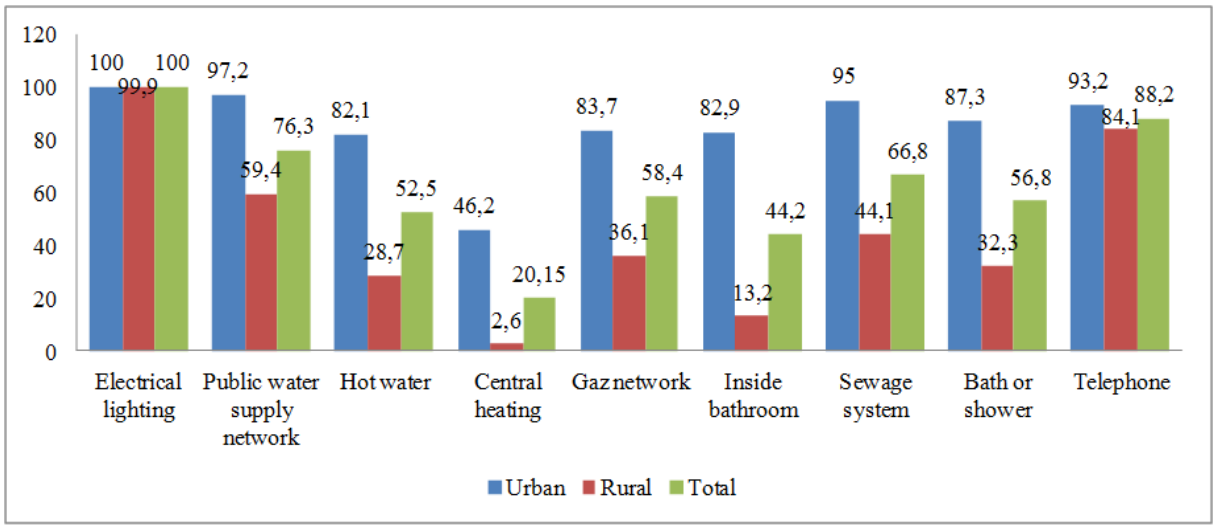

Fig. 1. Providing households with main facilities in 2014,%

Source: Prepared by author based on the data of the National Bureau of Statistics, Household Budget Survey.

It should be noted that not all the houses that have water supply system (38%) also have a bathroom. Inadequate rural housing provision with bath also shows a low level of hygiene of the residents in rural areas. This low level of hygiene with poor nutrition demonstrates much higher rate of death, in particular, the infant death. (Bajura, T., 2007).

In 2014 in urban areas there were recorded 8.7 deaths per 1000 inhabitants, while in rural areas – 12.9.

Compared with urban households whose homes are better equipped with appliances, rural houses have inferior equipment. Thus, in urban areas, 100 households have on average 108 TV sets, while in rural areas there are only 99 TV sets. The refrigerators are present in 93 of 100 urban households, while in rural areas there are only 84. The number of cars per 100 households in urban areas varies between 21 in urban area and 20 in rural areas, at the same time in rural areas people use bicycles more frequently.

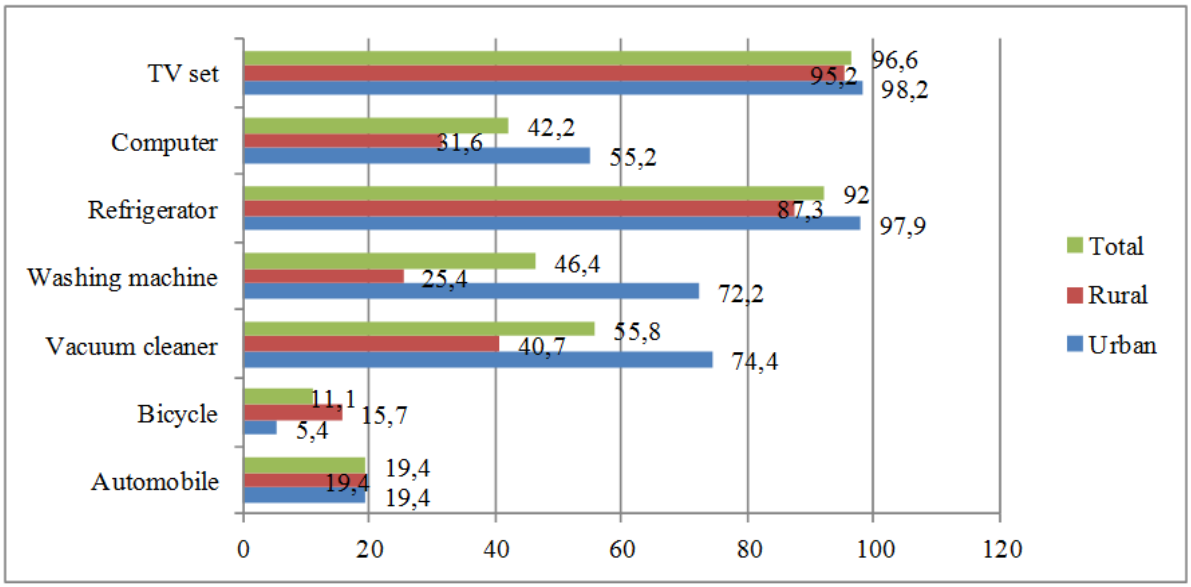

Fig. 2. The endowment of households with durable goods in 2014,%

Source: Prepared by author based on the data of the National Bureau of Statistics, Household Budget Survey.

The quality of the habitat, of the way of life depend heavily on technical equipment of rural areas. Along with infrastructure, technical equipment means all the prerequisites to have in rural areas technical living conditions similar to those in urban areas.

The incomes and consumption of goods and services in rural households. The standard of living of the population can be determined based on the incomes and expenses incurred by the population. Depending on income levels different needs can be achieved either pressing needs such as food or housing, and necessary needs, but which (because of lack of money) may be waived: periodic medical care, spending holidays, cultural needs etc.

According to the National Bureau of Statistics, the rural population's disposable income in the first quarter of 2015 constituted in average per person 1503.2 lei per month, which is lower by 817.9 lei per person in urban areas. In rural areas, the most important source of income is the employment (25.5%), but its contribution is almost 2 times less than in urban areas. At the same time, the incomes obtained from individual agricultural activity constituted 19.0% of total disposable income. The rural population compared to urban areas is dependent to a greater proportion on the transfers from abroad, their contribution being 0.4% compared with 0.1% in urban areas. Social benefits have a larger share in rural areas.

The structure of disposable income of the rural population in the first quarter of 2015 is reflected in Figure 3.

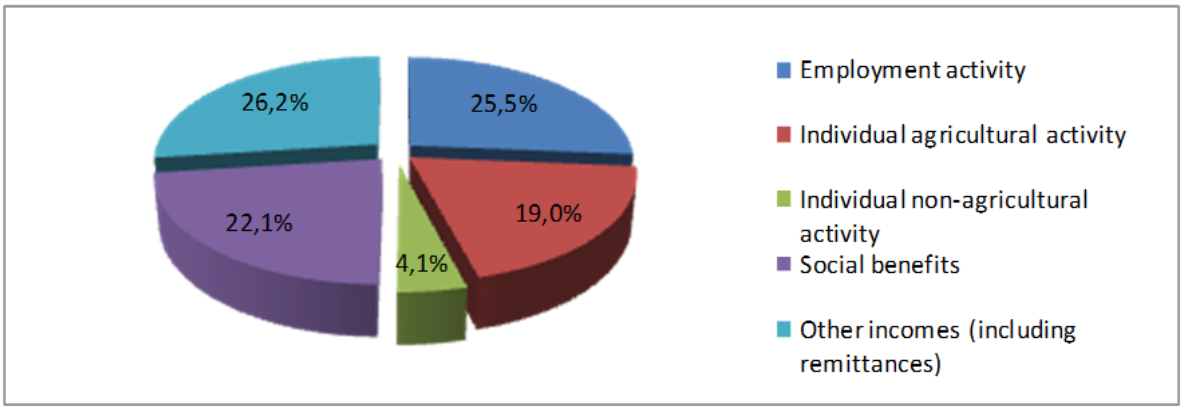

Fig. 3. The structure of disposable incomes of the rural population, %

Source: Prepared by author based on the data of the National Bureau of Statistics, Household Budget Survey.

The average monthly consumption expenditure of rural population in the first quarter of 2015 constituted in average per person 1591,1 Lei, respectively 751,7 Lei or 1.5 times less than in urban areas. The largest share of the expenditure belongs to traditional food consumption needs – 44.5%, of which 17.4% of the consumption expenses represent products from individual agricultural activity. For house maintenance a person on average allocated 15.8% of total consumption expenditures, and for clothing and footwear – 12%. Other expenses were directed to health, transport, communications, housing facilities, education, recreation etc. (Figure 4).

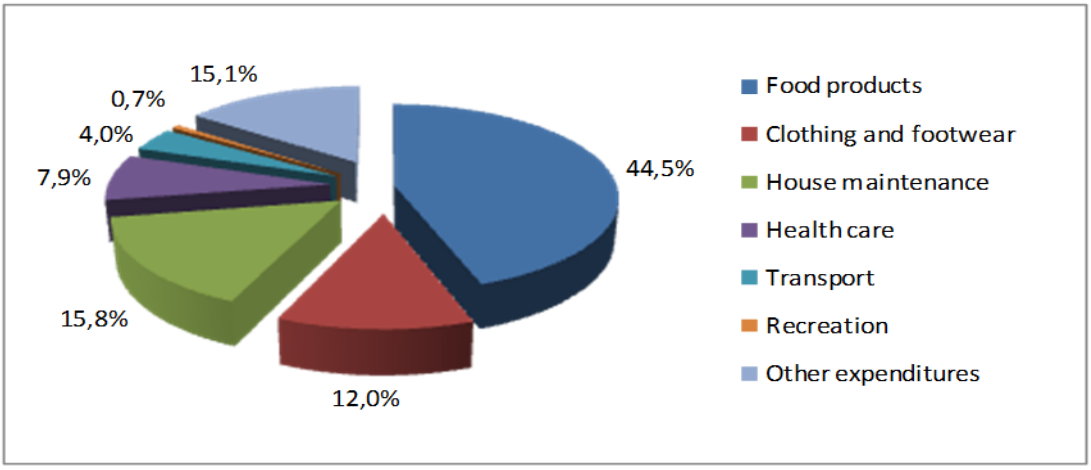

Fig. 4. The structure of consumption expenditures of rural population, %

Source: Prepared by author based on the data of the National Bureau of Statistics, Household Budget Survey.

The reason that food consumption has a higher weight in the consumer basket is caused by low incomes of the rural population, which is forced to devote much of resources for food and less for other goods or services. We can see a completely unsatisfactory level of income and consumption of the population in rural areas.

Regional disparities by area (urban-rural) concerning human development. One of the indicators expressing the standard of living is the human development index (HDI), which is a quantitative measure of the degree of success of a country to develop human capital (Lup, A. et al., 2011).

Human Development Index (HDI) comprises three core elements:

- longevity – is measured by life expectancy at birth, which is directly influenced by the development of the country;
- educational environment - is calculated as an arithmetic average between literacy degree among the adult population (representing two thirds) and the gross enrollment rate in education at all the levels (one third);
- standard of living - as a measure of standard of living Gross Domestic Product (GDP) per capita is used calculated at purchasing power parity.

The three HDI indicators have equal shares and characterize the overall level of the development of a nation. HDI level ranges on a scale between 0 and 1, the level of human development is much higher since it is closer to the value 1.

The reality of actuality in the Republic of Moldova demonstrates urban: rural disparities quite alarming. The largest discrepancies are found in the basic factors of the quality of life: the quality of health care, the quality of habitat and incomes in rural areas (Table 1).

Table 1

The evolution of some indicators of the quality of life in rural and urban areas in the Republic of Moldova

Indicators	**2012**			**2013**			**2014**		
	total	**urban**	**rural**	**Total**	**urban**	**rural**	**total**	**urban**	**rural**
GDP per capita by purchasing power parity, USD	4220	...	...	4685	...	...	4979	...	...
Life expectancy at birth, years	71.12	73.51	69.55	71.85	74.01	70.53	71.58	74.29	69.89
The birth rate, %	11.1	10.0	11.9	10.6	9.3	11.6	10.9	9.3	12.0
The infant mortality rate, %	9.8	8.2	10.8	9.4	9.6	9.3	9.6	7.4	10.9
Literacy rate, %	99.40	...	...	99.60	...	...	99.70	...	...
The absolute poverty rate, %	16.6	8.2	22.8	12.7	4.6	18.8	12.6	3.9	19.2
Unemployment rate,%	5.6	7.3	3.9	5.1	6.3	4.1	3.9	5.2	2.7
Human Development Index (HDI)	0.657	...	...	0.663	...	...	0.671	...	...

Source: Prepared by author based on the data of the National Bureau of Statistics.

Life expectancy at birth in 2014 compared to 2013 decreased by 0.27 years. Greater decreased life expectancy of the residents in rural areas (0.64 years). At the same time the average life of urban population increased by 0.28 years. In 2014, due to the differentiated level of mortality, average life of urban residents was higher than those in rural areas by 4.4 years.

The birth rate is slightly higher in rural areas fully compensated by higher infant mortality rate in villages, explained not only by material poverty, but also the shortage or even lack of qualified medical personnel.

The urban-rural development regions also differ in terms of human development (HDI). The HDI is not a perfect measure of development because it includes only a few relevant issues and the freedom of choice of indicators is largely constrained by data availability. However, it is obvious that development

does not mean only economic growth. Indeed, a higher economic growth does not turn necessarily into a more accelerated human development: in 2014, the average annual growth in GNP per capita according to purchasing power parity was 6.3%, while the average rate of growth of HDI was only 1.2%.

Consequently, we can mention that in the Republic of Moldova we have large disparities between urban and rural, to the detriment of the latter. Habitat quality ratios are quite lower in rural areas than in urban areas. If we consider that in urban areas living conditions are also poor, we face unfortunate situation throughout the Moldovan countryside.

Conclusions and recommendations. The difficult situation in rural sector involves the need to implement new rural development programs, significant changes in state policy in the villages. Rural policy should support active rural development as a factor of economic growth, mitigating the causes of poverty and moving towards an economic and socially acceptable standard in rural areas.

Studying the socio-economic development of rural communities in the Republic of Moldova, we find that the villages don't have necessary conditions for a decent and agreeable life. The issue of socio-economic development of rural areas is a problem of microlevel. It implies lack of financial administrative and economic autonomy which could lead to a broader update of local problems.

Employment opportunities in rural areas are often precarious, poorly paid. The lack of decent employment opportunities in rural areas is one of the main reasons for rural poverty. Promoting employment in rural areas is crucial to improve living standards in rural areas.

The encouragement of the development of rural entrepreneurship can help increase productivity in rural areas and, on this basis, improve the living standards of the rural population. It is necessary to develop the entrepreneurial spirit of rural residents by developing skills and creating the necessary conditions for the creation of new business.

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THE RISKS OF BITCOIN USE

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Actuality and purpose of work. Bitcoin is a currency that exists only virtually and has appeared due to the global financial crisis and development of technologiesof technologies. Cashless payments become more popular and in this context e-commerce has improved. There were Aanalized the ysis of bitcoin perspectives in the banking system, by emphasizing analyzing the strengths and weaknesses of this currency and the point of view of investors, central banks and commercial banks. The methods used. The methodological approaches used bymentioned in special literature were used. The results of the work. Analysis can be used to improve electronic commerce and cashless payments in Moldova, where cash is still very widely used.

Key words. *Bitcoin, cryptocurrency, blockchain, transactions, bank, investor.*

Actualitatea și scopul lucrării. Bitcoinul este o monedă care există doar în mediul electronic și a apărut în urma crizei financiare globale și datorită dezvoltării tehnologiilor informaționale. Plățile fără numerar devin tot mai populare, în acest context, evoluează comerțul electronic. Este studiată analiza perspectivelor utilizării bitcoinului în sistemul bancar, cercetate punctele forte și punctele slabe ale acestei monede, precum și opinia investitorilor, băncilor centrale și băncilor comerciale. Metode. Suportul metodologic este consituit din abordările folosite în literatura de specialitate. Rezultatele lucrării. Analiza poate fi aplicată în dezvoltarea comerțului electronic și a plăților fără numerar în Republica Moldova, unde numerarul este folosit pe larg.

Cuvinte-cheie. *Bitcoin, criptovalută, lanț în bloc, tranzacție, bancă, investitor.*

Актуальность и цель работы. Биткойн является валютой, которая существует только в электронном виде, которая появилась из-за мирового финансового кризиса и развития информационных технологий. Безналичные платежи становятся все более популярными и развивалась в этом контексте и электронная торговля. Анализ использования биткойн в банковской системе, анализируя сильные и слабые стороны этой валюты, а также точки зрения инвесторов, центральных банков и коммерческих банков. Используемые методы. Методологические подходы, которые используются в специализированной литературе. Результаты работы. Анализ может быть использован в целях развитии электронной торговли и безналичных платежей в Молдове, где наличные средства по-прежнему очень широко используются.

Ключевые слова. *Биткойн, криптовалюта, цепочка блоков, транзакция, банк, инвестор.*

JEL Classification: G24; E5; L81; O30.

Introduction. The modern technologies have changed the world of money and the essence of currency. Moreover, it has generated a new form of currency – cryptocurrency. Among these, the most highlitedhighlighted is the bitcoin.

The bitcoin phenomenon. Bitcoin is a virtual currency – cryptocurrency, invented by Satoshi Nakamoto in 2008. It seems that the disappointments regarding flat currencies – dollar, euro and others have reached a critical point. The evolution of this currency is amazing. At the beginning of 2015 there were over 14 million Bitcoin in circulation (Figure 1).

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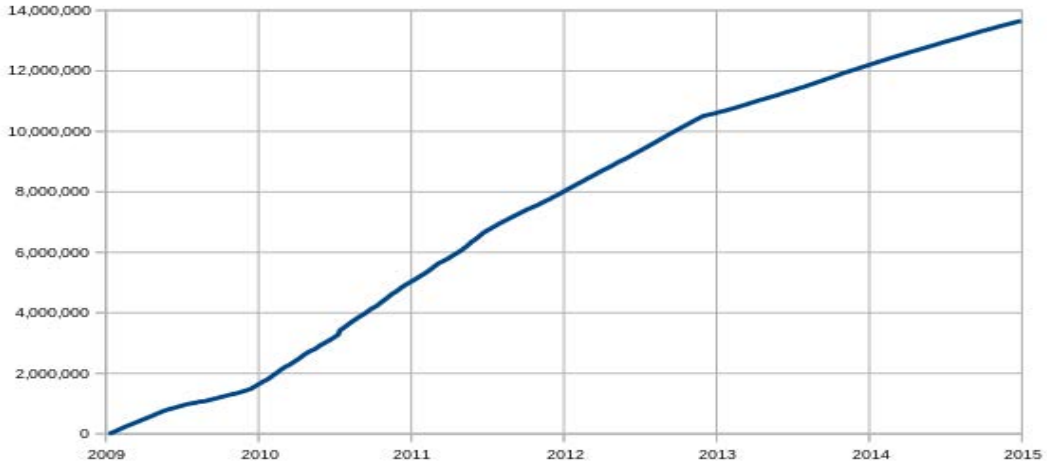

Fig. 1. Amount of bitcoins in circulation
Source: https://en.wikipedia.org/wiki/Bitcoin#/media/File:Total-bitcoins.svg [1].

From 2009, Bitcoin had a stable evolution until 2011, but from 2011 the exchange rate against the US dollar increased from $ 0.30 for a bitcoin (BTC), to about $ 17. In early 2011, a number of issues of entities that conduct transactions in dollars led to rapidly falling prices at $ 5 / BTC. 2011 and 2012 were periods of consolidation, and the exchange rate increased to 14 $/BTC.

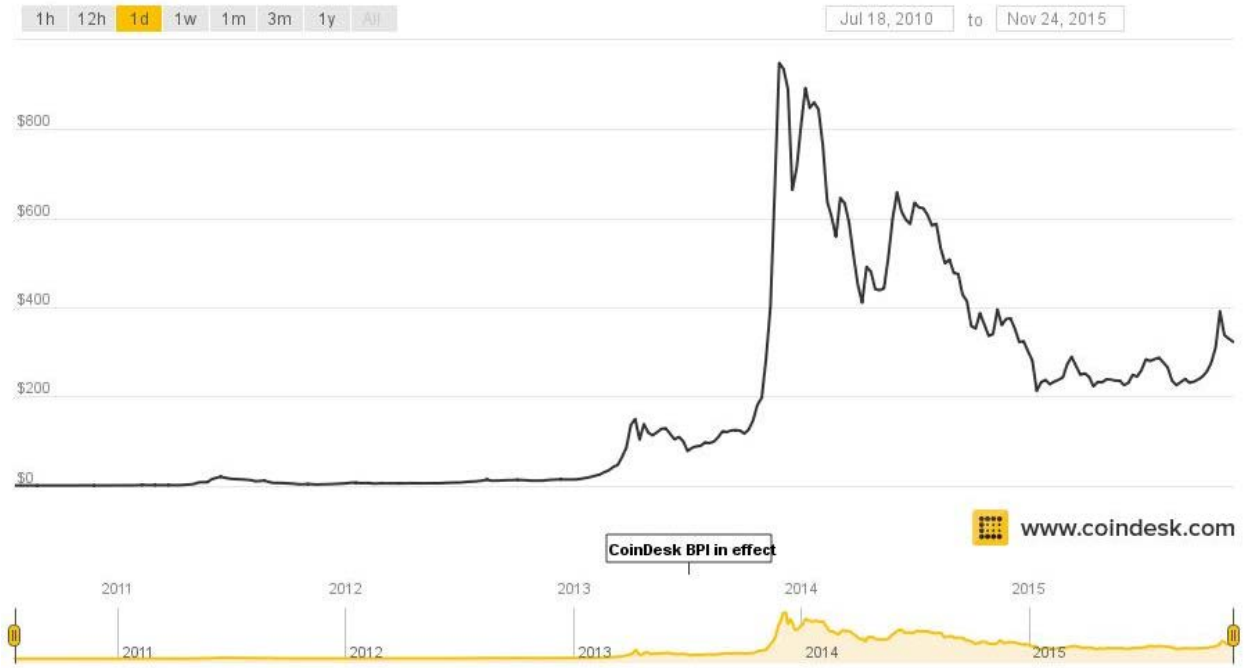

Fig. 2. The evolution of exchange rate, BTC/$ [2]
Source: http://www.coindesk.com/price/.

In 2013, the price of Bitcoin has exploded from 14 $/BTC in January to over $ 1000 in November - December 2013. An important role in this growing had the crisis in Cyprus (after blocking of the accounts in several banks). If 2013 was dominated by small bitcoin network "players", after involving of companies and investors the use of bitcoin has raised. The exploding rise of the exchange rate against the dollar has attracted the attention of authorities in many countries and bitcoin is not recognized as legal payment instrument. The exchange rate has declined steadily and was ranging several months between 550 to 650 $/BTC.

The whole structure is based on the ideas of bitcoin that Nakamoto defined as a chain of digital signatures, it is possible to consider the coin as a token digitally signed by the owner that desires to

transfer the currency. So each user transfer the coin to other subject in the network digitally signing a hash of the previous transaction and the public key of the next owner, the signature is then added to the end of the token.

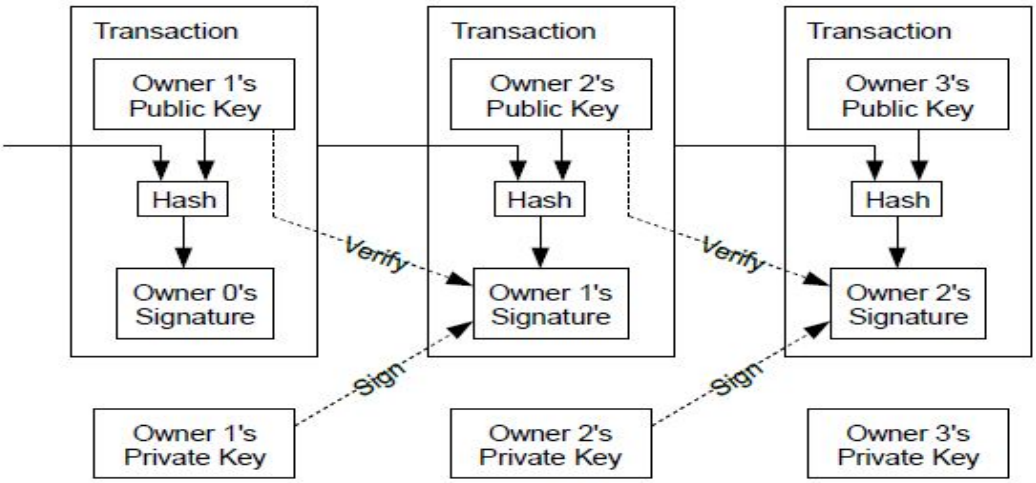

Fig. 3. The scheme of a bitcoin transaction
Source: http://www.4flush.com/bitcoin [3].

Only beneficiary could verify the previous transaction using its private key because the coin has been signed using its public key and this permit it to verify the chain of ownership. The described process has solved the problem of authentication of the payment, but we are not able to avoid the duplication of the transaction, in practice the circuit must avoid that the same coin could be used in multiple transactions.

The model is assured with the task of verifying that each coin is spent only once, this central authority is named “mint”. After each transaction the mint acquires the coin used to issue a new coin, in this way only the coins distributed directly from the mint are valid and only for them there is the assurance that have not already been spent.

Each new transaction is spread to all nodes of the network that collect the information related to the operation into a block. After verifying the time validity of the data the node spreads the block to other elements in the network.

The bitcoin software links to the network and generates the private and public keys necessary to take part to the process. The security of the model consists in the impossibility to exploit user’s private key from its public key, making impossible to impersonate the user. The keys could be moved from a PC to another because are stored in a file resident on the user’s PC.

Each transaction is characterized by beneficiary’s public key, owner private key and of course the amount of bitcoins that have to be transferred.

When a user A transfers the money to another user B prepares an information block which has the public key of B (the address) and the amount of coins to be transferred, by signing with the A private key. The information is then spread in the network and the nodes validate the signatures and the amount of numbers implicated before accepting it. When a node verifies the correctness of the transaction, it sends the details to the network to permit to other entities to verify them to permit to specific machines to add the transaction to a public record of transactions, and these machines are known as “*miners*”. The security level of the model is high, and makes impossible the creation of false transactions, each user can use only the bitcoins he has.

A transaction declares to the network that the holder of a number of bitcoins has accepted the transfer of some of bitcoins to another holder. The new owner can now spend these bitcoins by making another transaction that authorizes transfer to another owner, and so on, in a chain of ownership. Each transaction contains one or more “inputs”, which are debits against a bitcoin account. On the other side of the transaction, there are one or more “outputs”, which are credits added to a bitcoin account. The debits and credits do not necessarily add up to the same quantity.

The inflation program is initially planned for bitcoin and is known to all holders of bitcoin. Thus, inflation cannot be manipulated in order to affect the central spreading of value from ordinary users.

Bitcoin customer nodes transmit transaction, and the system is sending it in the network. Doubtful transactions are rejected by honest nodes. Transactions are free, but a fee could be paid to other nodes to facilitate transaction processing.

The risks of bitcoin use. Use of the bitcoin by banks is also questionable at the moment. But along the way, banks could use this money, such as Goldman Sachs and Standard Chartered, who published their recent reports that could use this money in the future. J. Panachyata, employee of BNP Paribas, says that use of Bitcoin will contribute to the development of global trade, in an article posted on his blog. Also Societe Generale is showing interest in bitcoin – the bank seeks an IT cryptocurrency specialist. Meanwhile, Swiss bank UBS has announced it will open a laboratory that will handle blockchain technology. US bank Goldman Sachs published a report in 2014 on virtual currencies, where is underlined the importance of cryptocurrencies. Spanish bank Santander says that thanks to blockchain technology, the costs could be reduced by 15-20 billion euro annually by 2022. A. Patwardhan from the bank Standard Chartered said that bitcoin will never become an alternative to fiat currencies [4]. Thus, we see that most commercial banks have an optimistic attitude towards this currency, while other analyzes market trends. But the central banks have taken a much tougher position against bitcoin, arguing that the use of cryptocurrencies implies shocking risks. With all its phenomenology, the use of bitcoin implies shocking risks. “Virtual currencies such as bitcoin, include potential risks to the financial system. Virtual currency is not a national currency and any currency and a payment acceptance is not binding legally. However, the virtual currency is not a form of electronic money within the meaning of Law no. 127/2011 regarding the activity of issuing electronic money”, citing a National Bank of Romania release [5].

“The central bank shows that using virtual currency schemes as an alternative payment is potentially risky to the financial system because of lack regulation and supervision, money laundering, terrorism financing, price volatility and lack of adequate security”, citing data from a report recently issued by the European Central Bank [6]. Unlike national currencies issued by central banks, bitcoin is generated by a complex chain of interactions between huge networks of computers worldwide. The coin has been criticized for its anonymous character and absence of regulation, there is concern about the possible use of it for financing terrorist activities or organized crime. Chair of FED, Janet Yellen, said the institution she leads cannot control a virtual currency [7], while countries like Russia and China have strongly restricted the use of bitcoin [8]. And some skeptical investors such as Warren Buffett, who said that in next 50 years the assets will have a higher value than paper money or bitcoin [9]. Famous economist Nouriel Roubini said that “Bitcoin is not a currency. It is a Ponzi scheme and a good conductor for criminal or illegal activities” [10]. Other investors such as Richard Brenson supports the idea of cryptocurrencies, believes in their future and in their potential [11]. If we are analyzing the topic from the security point of view, the issue is very huge. According to a study by Kapersky Lab [12], bitcoins can be stolen by wallet scammers and bitcoin softwares are attacked by malicious viruses.

Conclusions. Virtual currency schemes, such as bitcoin, are not full forms of money as usually defined in literature. Anyway, these schemes may replace banknotes, scriptural money and e-money in some situations. For the tasks of central banks, the materialization of these risks depends on the amount issued for the respective schemes, their bond to the real economy, including through regulated institutions implied with cryptocurrencies schemes, their traded volume and on user acceptance. Participation in such schemes exposes users not only to key payment system-like risks but also to other risks coming from the characteristics of cryptocurrencies. In particular, users are exposed to exchange rate risk related to high volatility, to counterparty risk related to the anonymity of the beneficiary and to investment fraud risk related to the absence of transparency. So there are both general and specific ways in which users could lose their whole virtual money. Some aspects of these risks are peculiar to the cryptocurrency concept and the risks mostly remain unmitigated by legislation, regulation or supervision.

The reactions from governments to the phenomenon are different, partly depending on the part of the world these originate from and on the type of authority. Responses differ from warnings about risks, statements and clarifications on the legal status, licensing and supervision of cryptocurrency-related activities, or the interdiction of those.

To conclude, we can say that the future of bitcoin is uncertain because it exists only in virtual environment and has a decentralized character. Commercial banks see a perspective in bitcoin, but do not rush to accept the payment instrument and analyze trends. But central banks have taken a tough stance against bitcoin, because the currency has a decentralized character and risks, such as money laundering, terrorist financing and anonymity.

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THE NATIONAL SERVICES NETWORK EURAXESS AS AN EFFECTIVE TOOL FOR INTEGRATION IN THE EUROPEAN RESEARCH AREA

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EURAXESS is a unique initiative of the European Commission, which aims to promote the growth of research careers and stimulate the researcher's mobility in European area. The initiative was created to protect and develop the European space of research and innovation and to help the scientific community to improve the career and social development.

Key words: *EURAXESS, European Commission initiative, researcher's mobility, European Research and Innovation areal, career, social development.*

EURAXESS este o inițiativă unică, lansată de Comisia Europeană pentru promovarea carierei de cercetare și facilitarea mobilității cercetătorilor în spațiul European. Inițiativa a fost creată pentru a stimula, proteja și dezvolta spațiul european de cercetare și inovare, oferind comunității de cercetare accesul la îmbunătățirea carierei și dezvoltarea socială.

Cuvinte-cheie: *EURAXESS, inițiativa Comisiei Europene, mobilitatea cercetătorilor, spațiul european de cercetare și inovare, carieră, dezvoltare socială.*

EURAXESS является уникальной инициативой Европейской Комиссии, которая направлена на содействия роста научно-исследовательских карьеры и стимулирует мобильности исследователей в Европе. Инициатива была создана чтобы защищать и развивать европейское пространство исследований и инноваций и помогать научному сообществу в улучшение карьеры и в социальном развитие.

Ключевые слова: *EURAXESS, инициатива Европейской Комиссии, мобильности исследователей, Европейское пространство исследований и инноваций, карьера, социальное развития.*

The European Research Area, in which national science is becoming increasingly present, is by definition an open space where scientific knowledge, technology, and researchers are moving freely. This is why the EURAXESS initiative aims to promote career opportunities and the mobility of European researchers. Currently, forty European states are involved in the EURAXESS network, which acts at European, regional, and national levels. Through EURAXESS, researchers receive information about all aspects regarding the mobility, both online as well as through personal consultants at their respective research facilities. A Pan-European jobs database helps candidates to find vacant posts at research institutes and organizations that promise equitable work recruitment and growth opportunities for the researchers. EURAXESS is based on four pylons:

EURAXESS Jobs – a free recruitment tool by which researchers can find up-to-date information about vacant positions, financing opportunities, and grants from all Europe. Of crucial importance is the posting of one's CV on this platform, thus permitting a feedback from potential employers. On the other hand, companies and research institutes are given the possibility to freely post vacant jobs announcements and to search for valued international researchers. Users can also access national EURAXESS portals of partner countries that contain information regarding jobs, financing opportunities, and personalized services from each country.

EURAXESS Services – a network comprising over two hundred Service Centers from 40 European countries. With a team of well-informed personnel, these centers help researchers (and their families,

every time this is the case) to plan and organize their moving to a foreign country. This personalized assistance is helping researchers to be less stressed about accommodation, visas, work permits, etc.

EURAXESS Rights is offering all the information regarding the *European Charter of Researchers and Code of Conduct for the Recruitment of Researchers*, fundamental documents functioning as guides for good practices, created in order to promote equal rights and obligations for all European researchers, specifying their role, responsibilities, ad rights, but also that of the financers/employers. Thus, attractive research careers, a better employment rate and work conditions for European researchers are assured. The guidelines of the Charter and the Code are equally addressing European research organizations, and public or private universities. The Science Academy of Moldova (SAM), and through it the national science community, adopted the European Charter of Researchers and Code of Conduct for the Recruitment of Researchers in December 2011, agreeing to apply their principles in the field of science and innovation in the Republic of Moldova.

EURAXESS Links – a network established between the USA, Japan, China, Singapore, and India, addressing European researchers working outside the European Research Area. It offers detailed information about research in Europe, European research policies, job opportunities in Europe, international cooperation and transnational mobility. The platform also offers networking web-instruments for researchers.

Our country acceded to the EURAXESS initiative in October 3rd, 2011, when the Center for International Projects of the SAM was designated as host and liaison institution for the EURAXESS Services Network in the Republic of Moldova. The first step for implementing the principles of the EURAXESS mechanism in our country consisted in creating the special portal (www.euraxess.md) for promotion of the initiative, resting on three pylons: EURAXESS Services, EURAXESS Rights, and EURAXESS Links. This was followed by the creation of a national network of local contact points, meant to support the personnel of each one's institution by directly assisting researchers returning to or leaving the institution (presently, the network comprises 25 people). However, a limitation of the local contact points is that they cannot provide services for researchers from other institutions. That is the reason why three national regional EURAXESS centers have been established (Center, South, and North). Another goal of the EURAXESS initiative at national level was to encourage Moldovan research institutes to subscribe to the standards of the Human Resources Strategy for Researchers (HRS4R), a tool that helps employers and financers form the field of research to apply the principles of the Charter and the Code, resulting in receiving the logo "Excellence in Research", thus increasing the international visibility and prestige of the respective institutions. Until now, three institutions from our country received the HRS4R logo: The University of the Science Academy of Moldova, the State University of Moldova, and the National Institute for Economic Research.

Furthermore, the EURAXESS National Service played a major role in organizing science promotion activities across the country, including both editions of the European Researchers' Night (2013 and 2015). Additionally, with direct help from the EURAXESS National Services Network, local public interested in research and creativity experienced an unusual form of dissemination of scientific ideas, called "Science Slam": a form of scientific communication, originating in Germany, gaining popularity around the world by presenting research in a fun, creative, and easy-to-understand manner, therefore "opposed" to classic forms such as conferences or congresses. Recently, Science Slam Moldova reached its 4th edition, increasing its audience and, implicitly, its popularity with each edition.

A major milestone in the recognition of the importance, efficiency, and success of the National Services Network was the inclusion of our country in the "EURAXESS – on tour" program, comprising 34 cities from 16 European countries, including Belgium, Switzerland, France, Montenegro, Portugal, Romania, etc., which reached Chisinau at November 5, 2015, supplying young researchers with information about the necessary steps for the integration in the research and innovation environment provided by the European Research Area.

For more information about EURAXESS and the EURAXESS National Services Network: Dorina Harea, Local Contact Point, Center for International Projects of the SAM, Tel.: +373-22-27-20-24, E-mail: dorina.harea@euraxess.md, 1 Stefan cel Mare Blvd., office 513, Chisinau, Republic of Moldova.

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