

Eastern European Journal of Regional Studies

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Eastern European Journal of Regional Studies

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Innovative Higher Education: Balance between the Cooperation and Competition

Andrius PUKSAS*

Abstract

Nothing is fostering innovations in higher education faster than 'demand for required solution' and 'demand for stronger position or leadership.' The first demand is for friendly cooperation among institutions; the second is for competition. Noticeably, that second demand, highlighting a few important aspects, is closely related to the first one – gaining a stronger position sometimes means a sort of contribution in order to solve related problems. The Vice versa effect, when the successful solution strengthens the position in the market, is also frequent. In order to cover the wide spectrum of demand, both 'solution' and 'leadership' should be understood in an extensive context. Analysis of related preconditions proves that both cooperation and competition are essential elements of the behavioral policy of higher education institutions.

Keywords: innovations, higher education, demand, cooperation, competition

1. Introduction

Every activity directed at improving a current situation or proposing a new solution takes its roots from the demand coming from both inner and external sources. The market in general, its players and possible consumers dictate demand, which is a clear signal to pay attention to those who are dealing with innovations. In most general terms, an innovation is a totally new, or significantly improved, solution for existing or expected problems, inconveniences, and difficulties. In other words, innovation is equal to a solution with some mandatory elements (for instance, the novelty of a solution or the improvement of an already existing solution).

Higher education institutions are among the entities dealing with innovations. Noticeably, dealing with innovations is a very specific level. It ensures contact with knowledge, know-how or at least inspiration for know-how. It is highly expected that higher education institutions have qualified researchers who are able to analyze the demand of the market and propose the proper solutions. Also, it is expected that such institutions have qualified managers who are able to support inner scientific potential. In other words, it is expected that higher education institutions are able to provide ideas, solutions and human resources.

Despite the fact that in some international rankings, which are tightly related to innovations in separate geopolitical regions, higher education institutions are not

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mentioned, a closer analysis finds a clear link between the innovativeness of such institutions and the innovation level of the states represented by such institutions. The success of a country in the ranking of innovativeness is strongly related with the innovativeness of its higher education institutions.

As in other legal entities, the development of innovation in higher education institutions depends on two processes – cooperation and competition. These processes are valid in all institutions and are determined by the market and by the policies of related institutions. Together, those processes have a significant impact on the innovativeness of institutions and the states those institutions act in. A proper balance between cooperation and competition has a decisive impact on the future of institutions and other related subjects. 'Collaboration between higher education institutions is expected to increase, but even more so, the fierce competition between them, which may sometimes lead to the disappearance of some institutions' (Brennan, 2014). Cooperation or collaboration undoubtedly could lead to the situation in which collaborating parties, through their stronger position in the market, are able to push out cooperating entities from this market.

Both cooperation and competition are challenges for higher education institutions, especially for those, who have been supported by the state and grew under greenhouse conditions. The time of self-sufficient institutions has passed away. Now, they are forced to choose with whom to work and who should be observed as a possible competitor. Despite a chosen direction, it is expected that activity of every single higher education institution will bring an added value and will be competitive in the market. Otherwise, it will fade naturally. This makes no sense in providing state funding. Institutions, oriented to innovative higher education, potentially are programmed for success.

How should an innovative higher education be understood? In general terms it is a higher education flexible for innovations on the level of their creation, development and usage. Innovations should be understood in the wider context than they are usually defined. This concept should cover social and technological innovations. The first one is aimed at improving the teaching process and providing support (for instance, an improved working model inside a group of researchers) for working on technological innovations, as well as dealing with emerging social challenges. Previously, society believed that social innovations do not exist.

Further, the cooperation and competition processes in higher education institutions are analyzed with a special focus on Eastern European countries with a comparison to the Baltics, who had the same starting position, and through some political decisions, currently are holding higher positions in the rankings related to innovativeness.

2. Importance of innovations in higher education

It is hard not to underestimate the importance of creating, developing and using innovations in higher education. This comes from the very nature of these institutions. They are expected not only to transfer the knowledge, but also to make significant contributions to the processes related to the appearance of innovation. If an institution cannot propose something new or something that meets the demand, it cannot be

competitive in the market. Only few higher education institutions can expect to avoid the 'natural obligation' to be innovative, and this right for them is granted only because of historical circumstances and reasons – they must be preserved because of their 'glorious past' or because they are simply unique. However, these institutions are taking the appropriate steps to remain visible and prestigious in the market.

The importance of innovations in higher education is determined by the natural necessity of institutions to survive and move forward and by requirements from policy makers. Usually, the basic requirement to be competitive in the national market comes from the national authorities. Becoming a competitive player in the smaller market raises the need to improve the institutions' position in the wider market. The EU requires that the players of the inner market be competitive worldwide. Additionally, a strategic aim of the 'Innovation Union' vision is the investment (not only financial resources) required to achieve this goal. The vision of the 'Innovation Union' is embodied in the main EU strategic documents. Europe 2020, a strategy for smart, sustainable and inclusive growth, presents 'Innovation Union' as one of seven flagship initiatives which are aimed 'to improve framework conditions and access to finance for research and innovation so as to ensure that innovative ideas can be turned into products and services that create growth and jobs' (hereinafter – Europe 2020 strategy).

The EU stresses that innovations are vital for increasing and maintaining European competitiveness in the global economy. Through education and innovation, the EU seeks to strengthen its position globally. The gap between separate member states is not only obvious but sometimes dramatic. Unsurprisingly, the representatives of Eastern Europe are expected to improve their positions. According to the European Commission, 'Innovation Union is the European Union strategy to create an innovation-friendly environment that makes it easier for great ideas to be turned into products and services that will bring our economy growth and jobs.'

The importance of innovations in the EU is clearly expressed in the Europe 2020 strategy, which distinguishes three priorities widely known as 'smart growth,' 'sustainable growth' and 'inclusive growth.' The first one is defined as the development of 'economy based on knowledge and innovation.' The other two also deal directly with innovations. All priorities are aimed at strengthening the competitiveness of the EU. And this could be done only if the contributions from different EU regions are sufficient.

According to Communication from the Commission on European higher education in the world, 'The EU contribution will focus on two policy objectives described hereafter: increasing the attractiveness of European higher education by improving quality and transparency; and increasing worldwide cooperation for innovation and development through partnerships, dialogue and capacity building.' One of the prospective goals of this document marks increasing worldwide cooperation for innovation and development. On one hand, this obliges higher education institutions to pay additional attention to common goals. On the other hand, the results are dependent on the rankings, despite the officially declared goals of every single higher education institution. Those criteria determine the future of such institutions – to continue the activity or to disappear. Further provided data will disclose a dramatic difference between the EU member states. Obviously, institutions from Eastern Europe are not among the leaders of the rankings related to the innovations in higher education.

The strategies of separate countries are similar to Europe 2020 goals. Undoubtedly, a special role is for innovation and education. For instance, the Romanian 2020 strategy focuses on 'improving the quality of investment in research, innovation and education.' The Polish 2020 strategy states that 'in order to increase innovativeness of enterprises, the measures in numerous fields are necessary – removing barriers for conducting business activity, improving the quality of education to provide competent personnel, expanding access to finance, promoting knowledge transfer, developing business environment institutions, stimulating cooperation between science and business.' In the last strategy, policy makers clearly indicate the link between the improvement of education quality and increasing the innovativeness of undertakings. Despite the positions held in different rankings, the improvement of the education system should be among the priorities of each single state.

Among the strategic goals for the EU in higher education is 'enhancing creativity and innovation, including entrepreneurship, at all levels of education and training.' This goal covers all levels of higher education. Principles for Innovative Doctoral Training, a document adopted by the European Commission Directorate General for Research & Innovations, guides innovations for higher education, especially at the PhD level, which is the most promising. Those principles are 'research excellence', 'attractive institutional environment', 'interdisciplinary research options', 'exposure to industry and other relevant employment sectors', 'international networking', 'transferable skills training' and 'quality assurance.'

Every higher education system is sensitive to negative changes whilst any positive effect is achievable only through time. This means that wrong political decisions have a long impact with dire consequences. Any positive changes, including the growth innovativeness requires, should be understood as an investment into the future. Current differences among countries on innovativeness of higher education are determined by wrong political decisions in the past.

The higher education institutions from Eastern European are improving their positions among the innovative institutions in Europe, but the growth rate has been insufficient. Based on data from Reuters, 'The 100 most innovative universities in Europe 2016' was published in June 2016. The results of Eastern European universities are still upsetting: 'Universities in Western Europe claim 60 universities of the top 100, with Northern Europe second with 24, Southern Europe boasting 15 and Eastern Europe just one – Poland's Jagiellonian University, ranked 92.'

The clear view of any ranking is possible only after the disclosure of methodology. It is important to analyze the components taken into account preparing this rating. Reuters made their final evaluation after assessing received data on 'patent volume,' 'patent success,' 'global patents,' 'patent citations,' 'patent citation impact,' 'percent of patents cited,' 'patent to article citation impact,' 'industry article citation impact,' 'percent of industry collaborative articles' and 'total web of science core collection papers.'

It is worth noting that scientists from Eastern Europe traditionally are passive and pessimistic on patenting and protecting their findings. This does not mean automatically that the count of innovations coming from there is too low. Usually, innovations in this region are implemented without claiming a legal protection. In Eastern Europe scientists prefer to protect only technological innovations with

undoubtedly high commercial potential. There are no traditions and trends to protect potentially risky ideas or products. It differs from the attitude to the value of the same results of scientific activity in the USA, Japan and in countries from Western Europe.

On the other hand, the criteria related to patentability and patenting allows for the avoidance of the situation when some institutions call their implemented results innovative without paying attention to the fact that 'such innovations' for some period are not innovative for other institutions anymore. This could happen because of the foreclosure of institutions (nobody conducts research on innovations elsewhere) or the different level of development (something is new only for the concrete institution). In such cases it is possible to talk only about the 'local institutional innovations.'

It is important not to forget that the ranking does not reflect the social innovations. Historically, only a small number of successful social innovations, models, and other intellectual results had been legally protected. This happened because the social innovations:

- a. Are constantly and rapidly changing (one solution comes after another and there is no time to think about the cost formalities).
- b. Usually are understood as a usual solution that does not require additional protection (solution is useful, timely but 'too natural').
- c. Despite the fact that the solution makes concrete processes easier and usually cheaper are not so profitable (affords to protect innovation and the financial return are scaled).
- d. At the same time at least a few similar solutions appear (it is harder to prove the originality of social innovation).
- e. Nor researchers nor higher education institutions are not enthusiastic to have additional expenses (this is common for Eastern European countries).

The importance of innovations in every higher education institution, despite the position in any related rankings, is unquestionable. If the entity involved in higher education cannot propose the innovative training and cannot prepare students to be innovative and creative, the future of this type of institution is questionable. It will be hardly competitive in the market where the same services are provided, taking into account the newest methods and solutions. The opinions that some specialties and educational preparations related to them do not necessarily require an innovative approach are acceptable only on a partial basis. Furthermore two processes, which have a significant impact on the development of innovations in academia, are analyzed.

3. Factors promoting cooperation

Every higher education institution is familiar with its strengths and weaknesses. In case the strengths and weaknesses are unknown or unclear, they at least are predictable from previous practice or the current situation. This entitles the search for a way to: a. use and increase strengths; b. abolish or at least minimize the weaknesses. In order to achieve the highest results, institutions are encouraged to cooperate. This comes from the fact that institutions are not self-sufficient.

What are the main factors and reasons promoting cooperation among the higher education institutions? They should be distinguished by the following:

- a. A wish to fulfill needs and demand in the market.
- b. A wish to be competitive in the market and to keep the current position without

- allowing a competitor to retake it.
- c. A wish to receive funding (some financial support requires proper results, some require cooperation).
- d. A wish to expand current activity and enter into new markets.
- e. Other reasons.

Higher education institutions cannot conduct 'activity for activity' because a process cannot be only for a process. Activity should provide results. The source and the demand for such activity come from the market, which is dependent on: a. society; b. state and other related authorities; c. businesses. In the market where the main criteria for provided services are quality, higher education institutions usually choose cooperation or joint solutions.

In order to survive, higher education institutions are encouraged to cooperate. This comes from the fact that basic funding is not sufficient to stay competitive in the market for a long period. Losing competitiveness leads to disappearance or trials to resurrect cooperation with other institutions.

Competition also fosters cooperation, especially in the markets with a long list of players. The amount of cooperation with foreign partners in order to be competitive in the inner market is constantly increasing.

It is expected that cooperation among the institutions will bring a quality into the study process. Higher education policy makers are encouraging international cooperation: 'Bologna process promotes the development of international cooperation and interculturalism' (Bulajeva, 2013).

Taking into account the interest of the EU to promote cooperation between the member states and to provide funding not only to single institutions, calls for the projects are based on the cooperation among institutions from different states. It is obvious from the analysis of EU policy and already opened calls or planned calls for the projects (for instance Horizon 2020 and others).

Some calls for projects (for instance, 'Twinning' projects) allow higher education institutions to cooperate in order to increase the competitiveness and the innovativeness of lower developed institutions through receiving and providing support, sharing know-how and cooperating on other activities. Practically, it is a tool, which allows the minimization of the qualitative differences between the regions and institutions. The main goal is to make different regions of the EU more equal in the sense of higher education.

Successful cooperation among the institutions from different countries could be named EMP-AIM, which 'is a Partnership of 17 Universities from European countries, Belarus, Ukraine and Moldova, which aims to build a structured and sustainable cooperation between the involved universities and thus to strengthen academic, cultural, economic collaboration between the European and Eastern Europe region countries.' Joint Bachelors, Masters, and PhD programmes are also proper and attractive and an encouraged way of cooperation among the institutions. As previously mentioned Principles for Innovative Doctoral Training provided principles that could be implemented only through cooperation (this could be said not only about 'international networking'). Students are expected to gain transferable skills. Usually, this is possible only through their participation in the activities of at least a few institutions.

In order to strengthen the cooperation among the scientists from different countries and increase the quality of research entire networks were created, for instance, COST or European Cooperation in Science and Technology. Despite the fact that membership in COST is limited to a precise list of countries, initiatives including researchers from Near Neighbourhood countries, is highly encouraged. Taking into account the universality of the science, representatives of other jurisdictions are also welcome to contribute to the network. Such an approach supports the general idea of 'science without borders.' Promoting networking and cooperation allows institutions to increase the quality of services they provide. It also abolishes a foreclosure.

Cooperation between academia and businesses is promoted at the EU and national levels. Businesses are willing to cooperate with academia and receive results that the market is interested in. This is the reason why more than one academic partner is usually involved in such cooperation. Usually, the competition in the inner market determines that higher education institutions are avoiding adding other institutions from their countries and prefer to have a foreign academic partner.

3. Factors promoting competition

Competition is natural and expected not only in the relevant market where the businesses operate, but also in the not so commercialized higher education sector. The reason to ensure competition among higher education institutions is the same for competition maintenance in commercial markets. Higher education institutions propose their services to the beneficiaries, and their possibility to survive depends on their position in comparison with the position of their competitors.

Competition among higher education institutions is directed:

- a. To attract related parties. Usually, higher education institutions are competing to attract students.
- b. To attract investments and funding. Usually, financial support is dependent on the results achieved by each institution.
- c. To maintain the position in the market. Institutions with deeper traditions are interested in showing that they are still strong.
- d. Other reasons.

Competition is usually expected in the market with more than one player. The benefits from competition are obvious – institutions are competing by strengthening the quality of their services, by providing innovative models of teaching, and by launching innovative programmes.

The additional motivation to compete comes from the policy and decision makers. In the case of institutions supported by the state, it is highly important to provide better results than the competitor does. It ensures financial support for a longer period. By providing financial support based on the individual results of every single institution, authorities encourage competition among institutions. Here, institutions prefer to cooperate with foreign partners by that strengthening their positions over the local competitors.

Despite the fact that in Eastern Europe the majority of higher education institutions are receiving financial support from their state, it is highly expected that such institutions will gain more financial independence. The governments encourage

institutions to be active in the market (providing innovative services and launching prospective international programmes) as well as actively participate in international project activities. The same situation also occurs in the Baltics. For instance, in Lithuania, 'while previously universities have received all funding from the national budget on the basis of the results of the previous years, recently the funding system has changed from basic funding to quasi-basic funding and introduction of competitive funding. It means that a part of national funds are allocated to universities on the grounds of basic funding and a part of it universities have to fund-raise from external sources' (Gudeliene, 2016).

This type of practice is common for the majority of states – institutions are expected to form their budget from external sources (for instance, international projects). The rivalry for relevant sources also fosters competition among the academic institutions. Usually, such competition is visible in the frames of one special country. International competition is expected as well. However, institutions from some countries are practically invisible on the international map.

Competitiveness provides information about the flexibility of each assessed unit to conduct activity in the market, react to changes, to adopt the newest solutions in their daily activities and to compete successfully with other units in the same or related markets. The competitiveness index and flexibility of each country provides information for businesses searching for a proper partner. Furthermore, in Table 1 the data on the competitiveness of selected countries is provided. Chosen countries from Eastern Europe were compared to the Baltics in order to reveal the differences among the countries that a few decades before had similar starting positions but from a political point of view paid different attention to competitiveness.

Table 1. All pillars. Selected countries from Eastern and Northern (Baltics) Europe

Country	Score	Rank	Separately rank in innovation and sophistication factors
Estonia	4.74	30 th	31 st (score – 4.15)
Latvia	4.45	44 th	58 th (score – 3.69)
Lithuania	4.55	36 th	37 th (score – 4.02)
Moldova	4.00	84 th	128 th (score – 2.93)
Poland	4.49	41 st	57 th (score – 3.70)
Romania	4.32	53 rd	84 th (score – 3.48)
Ukraine	4.03	79 th	72 nd (score – 3.55)

Source: The Global Competitiveness Index 2015-2016.

The northern region is near the leaders while Eastern European countries are improving their positions by slowly moving up. What is hidden under the provided data? The answer is in the elements assessed. The ranking is based on 12 pillars, which are 'institutions,' 'infrastructure,' 'macroeconomic environment,' 'health and primary education,' 'higher education and training,' 'goods market efficiency,' 'labor market efficiency,' 'financial market development,' 'technological readiness,' 'market size,' 'business sophistication' and 'innovation.' The pillars from 1 to 4 are known as 'basic

requirements,' from 5 to 10 are 'efficiency enhancers,' from 11 to 12 are 'innovation and sophistication factors' (The Global Competitiveness Index 2015-2016. Methodology).

Table 2 shows how the states from Table 1 are ranked in accordance with two pillars related to higher education and innovations. Those two pillars more precisely reflect the impact of academia on the competitiveness of the represented state.

Table 2. Fifth pillar 'Higher education and training' and twelfth pillar 'Innovation.' Selected countries from Eastern and Northern (Baltics) Europe

Country	5 th pillar score	5 th pillar rank	12 th pillar score	12 th pillar rank
Estonia	5.5	20 th	4.0	29 th
Latvia	5.1	32 nd	3.3	62 nd
Lithuania	5.3	24 th	3.7	36 th
Moldova	4.1	79 th	2.6	130 th
Poland	5.1	31 st	3.3	64 th
Romania	4.5	59 th	3.2	75 th
Ukraine	5.0	34 th	3.4	54 th

Source: The Global Competitiveness Index 2015-2016).

Despite the fact that Table 2 represents only two pillars, their impact on the standings of countries is obvious and reveals that countries are holding almost the same positions as in the general standings. This could be explained as well by the fact that other pillars also are interrelated. Measuring innovations in education is also important to pay additional attention to the measurement methods and techniques (OCDE, 2014).

The competitiveness index is one side of the coin. Another side is the innovation index of already analyzed countries. The following is provided in Table 3 with special focus on 'human capital and research.'

Table 3. The Global Innovation Index 2015.

Country	Percentage rank	Rank on 'Human capital and research'
Estonia	0.84	0.79
Latvia	0.77	0.62
Lithuania	0.74	0.71
Moldova	0.69	0.48
Poland	0.68	0.69
Romania	0.62	0.49
Ukraine	0.55	0.75

Source: Selected countries from Eastern and Northern (Baltics) Europe.

Despite the fact that every ranking has its minuses and the objective situation in the market cannot be reflected, the following data reveals some general trends. The situation on 'human capital and research' plays an important role in being innovative in the market. In most cases it is crucial. In other cases it allows the countries to stay at least in the middle of the ranking and not to be among the outsiders (for instance, in the case of Ukraine in Global Innovation Index 2015).

4. Balance between cooperation and competition

Higher education institutions are known as competitive market players and are dependent on the demand coming from different sources. It is hard to deny that 'innovation often requires new forms of collaboration which may sometimes be blocked by the competitiveness inherent to market-led forces; therefore, a good balance between collaboration and competitiveness is essential for good relationships between institutions and the individuals' (Hazelkorn, 2011 and Brennan, 2014). The balance between those two actions comes from the market. Also, it is important to pay attention to the fact that 'increasing cooperation does not contradict the increasing competition that we also noticed among higher education institutions, but the two aspects coexist and manifest themselves as distinct individual and institutional responses at different levels and in different geographic or socio-economic contexts' (Brennan, 2014).

Both cooperation and competition cause a risk to institutions. Competing institutions fight for their place in the market. Cooperating institutions should be assured that their partners would be fair and flexible. Most likely institutions will choose to cooperate on innovations that are easy to implement. The reason for is simple – the more steps required, the more risk that partner would have for a different interest or position. Even in the implementation process, higher education institutions prefer an easier way in order to avoid any additional risk: 'The institutions themselves are most likely to incorporate innovations that sustain the current model, and reject innovations that would require significant change' (Armstrong, 2014).

The proper balance between cooperation and competition is what every institution should find for itself in order to achieve its legally grounded goals.

Cooperation cannot lead to restrictions of competition. If the main aim for starting or continuing cooperation is to increase someone's positions' by 'kicking off' competitors from the market, we cannot talk about the legally grounded policy.

5. Conclusions

As is the nature of institutions, national and supranational systems encourage higher education institution to cooperate and to compete. Both processes should be fair and legally grounded. Only the proper balance between cooperation and competition among the representatives of academia can bring innovativeness into higher education.

The analysis of different ranking systems reveals the importance of innovative higher education for the innovativeness and competitiveness of the countries represented by innovative institutions. The rankings also reveal that the gap among not only different countries but also regions in Europe is huge (the positions of states from Eastern Europe are weak).

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Analysis of the Budgetary Process of the European Union

Andrei PETROIA*

Abstract

The European Union is one of the most significant economic and politic power of the world. Understanding its model of functioning brings us closer to understanding the current situation and the trends of development of the world. The budgetary process is only one of the interesting aspects of the functioning of the European Union. Also, being given the context of the Budget notion, the European Union budget represents an interesting research topic.

The result of the research revealed information regarding the European Union budgetary process. Following the flow of the research, it offers clues to understanding the effectiveness and the success key of this mechanism.

Key words: budget, EU budget, budgetary system, budgetary process, European Union.

JEL Classification Codes: E62, H11, H50, H61, O52

1. Introduction

The topicality of the subject lays in the fact that the European Union is one of the most significant economic and politic power of the world. Understanding its model of functioning brings us closer to understanding the current situation and the trends of development of the world. The budgetary process is only one of the interesting aspects of the functioning of the European Union. Also, being given the context of the Budget notion, the European Union budget represents an interesting research topic.

The purpose of this research is to gather information about the budget and budgetary process of the European Union and to explain as comprehensive as possible how it functions. Also the research aims to present the financial data of the EU budget and to analyze the necessity and means of its adjustment.

The methodological and scientific support was chosen in accordance with the purpose of the research. That's why the main source of information is the web site of the European Commission since it offers first hands information and financial data regarding the subject.

The result of the research revealed information regarding the European Union budgetary process. Following the flow of the research, it offers clues to understanding the effectiveness and the success key of this mechanism.

The structure of the work is developed in accordance with the objectives of the

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research. The research paper consists of an introduction, three chapters and a conclusion.

The conclusion summarizes the findings about the European Union budget and highlights its' importance.

The bibliography consists mainly of the informative sources of the European Commission website as well as the financial information available online.

1. The Budgetary System of the European Union

The European Union has a budget to pay for policies carried out at European level, such as agriculture, assistance to poorer regions, trans-European networks, research, some overseas development aid, and for its administration, including a parliament, executive branch, and judiciary that are distinct from those of the member states. These arms administer the application of treaties, laws and agreements between the member states and their expenditure on common policies throughout the Union. Basically speaking, 5% of expenditure go on administration, 95% on policies.¹ But in order to understand how the budgetary system of the European Union works, it is appropriate to analyze the whole system step by step. First we will take a look on the structure and the legal framework of the EU budget, after that the sources of budget formation and the directions of spending will be analyzed.

The structure of the European Union budget can be analyzed from the perspective of overall structure of the EU budget and the structure of the Commission budget (Section III), broken down into activity areas.

Overall structure of the EU budget consists of:

- General revenue
- Revenue and expenditure by section:
 - Section I – Parliament
 - Section II – European Council and Council
 - Section III – Commission
 - Section IV – Court of Justice
 - Section V – Court of Auditors
 - Section VI – Economic and Social Committee
 - Section VII – Committee of the Regions
 - Section VIII – European Ombudsman
 - Section IX – European Data Protection Supervisor
 - Section X – European External Action Service

The vast majority – 95% of the EU budget – goes to fund concrete activities on the ground in the many areas of EU policy. This expenditure ("operational appropriations") is paid out by the Commission (Section III). However, section III also includes a small amount of administrative expenditure necessary for the Commission to function. All the other sections of the budget deal solely with the administrative expenditure of the institutions.

The Commission budget is broken down into some 30 policy areas or by activity

¹ Wikipedia. Budget of the European Union.

http://en.wikipedia.org/wiki/Budget_of_the_European_Union.

areas, in what is known as 'activity-based budgeting' (ABB). The policy areas (research, employment, etc.) are closely related to the headings in the financial framework (sustainable growth, preservation and management of natural resources etc.).

The budget is divided into:

- titles – one for each policy area
- chapters – one for each activity
- articles – which may be further broken down into items.

Thanks to this nomenclature system of one activity per chapter, the link between policies and the financial resources they require is clear, and the cost of each policy can be estimated from the budget.²

The legal framework of the EU budget.

The EU budget is regulated by 3 types of legal acts:

- EU treaties;
- EU legislation (regulations and decisions);
- agreement between the EU institutions.

The agreements are unique to the budget – they have no equivalent in other areas of EU law.

EU Budget as defined in the following EU treaties:

- Treaty on the Functioning of the EU (Treaty of Lisbon)
- Treaty on European Union

The principles set out in the treaties are implemented in practice by the following legislation:

- decision on the system of EU own resources;
- regulation on the new financial framework for 2007-2013;
- Financial Regulation and its implementing rules.

Also, the EU Budget as defined in the interinstitutional agreement. The purpose of the interinstitutional agreement is to implement budgetary discipline, to improve the functioning of the annual budgetary procedure and the cooperation between the institutions on budgetary matters and to ensure sound financial management.

A number of agreements or joint declarations have been concluded since the mid-1970s. They were incorporated, with certain updates or additions, into the Interinstitutional Agreement concluded in 1999, which in some ways constitutes a 'Charter' of agreements reached by the institutions on the budget. The 1999 Interinstitutional Agreement has been replaced by a new one signed on 17 May 2006 which entered into force on 1 January 2007. The Annex of this agreement establishes the Financial Framework for the period of 2007-2013. Before 1 July 2011, the Commission will present proposals for a new medium-term financial framework (Point 30, IIA). The Multifinancial Framework is now specifically mentioned in Article 312 of the Treaty on the Functioning of the EU.³

Where does the money come from? The EU budget is funded chiefly (99%) from the EU's own resources, supplemented by other sources of revenue. It is based on the

² European Commission. The Structure of the EU Budget.

http://ec.europa.eu/budget/explained/budg_system/structure/struct_en.cfm.

³ European Commission. The Legal Bases.

http://ec.europa.eu/budget/explained/budg_system/legal_bases/legal_en.cfm

principle that expenditure must be matched by revenue and has in-built schemes to compensate certain EU countries. Own resources account for 99% of the budget. According to the rule, they are not allowed to exceed 1.23% of the EU's gross national income (GNI). The remaining 1% of budget revenue comes from other sources of income.

As it was mentioned above, own resources provide the EU's main revenue. There are three kinds of own resources:

1. traditional own resources - mainly customs duties on imports from outside the EU and sugar levies. EU governments keep 25% to cover the cost of collection.
2. own resource from value added tax (VAT) - a standard percentage is levied on the harmonised VAT base of each EU country. The VAT base to be taxed is capped at 50% of GNI for each country. This rule is intended to prevent less prosperous countries having to pay a disproportionate.
3. own resource based on gross national income (GNI) - a standard percentage is levied on the GNI of each EU country. It is used to balance revenue and expenditure, i.e. to fund the part of the budget not covered by other sources of income.

The other revenues that contribute to the formation of the EU budget are revenues such as:

1. taxes on EU staff salaries
2. contributions from non-EU countries to certain programmes
3. fines on companies for breaching competition laws, etc.⁴

When the EU Council and the European Parliament approve the annual EU budget, total revenue must equal total expenditure. In practice, however, actual revenue and expenditure often differ from the estimates. There is usually a surplus, which is used to reduce EU countries' contributions to the budget for the following year.

In the past, some countries felt that they were paying too much towards the budget, compared to other countries. Measures were taken to correct (compensate) these imbalances, including:

- the 'UK rebate' – the UK is reimbursed by 66% of the difference between its contribution and what it receives back from the budget (worth about €4bn in 2010). The calculation is based on its GNI and VAT;
- lump-sum payments to the Netherlands and Sweden;
- reduced VAT call rates for the Netherlands, Sweden, Germany and Austria.

The cost of the UK rebate is divided among EU member countries in proportion to the share they contribute to the EU's GNI. However, since 2002 this has been limited to 25% of its normal value for Germany, the Netherlands, Austria and Sweden, who considered their relative contributions to the budget to be too high. This cost is shared by the other 22 EU members.⁵

Where does the money go? The multiannual financial framework lays down maximum amounts ('ceilings') for each broad category of expenditure. It aims to ensure

⁴ European Commission. Where does the Money come from?
http://ec.europa.eu/budget/explained/budg_system/financing/fin_en.cfm.

⁵ European Commission. Where does the Money come from?
http://ec.europa.eu/budget/explained/budg_system/financing/fin_en.cfm.

EU expenditure develops in an orderly manner, within the limit of the EU's own resources.

Usually, there are set financial framework objectives for a certain period of time, such as: harnessing European economic integration (the "single market") to the broader goal of sustainable growth, by mobilising economic, social, and environmental policies; strengthening the concept of European citizenship by creating an area of freedom, justice, security and access to basic public goods and services; establishing a coherent role for Europe on the global stage – inspired by its core values – in the way it assumes its regional responsibilities, promotes sustainable development and contributes to civilian and strategic security, and so on. The objectives are covered by a range of accounts of expenditures:

1. Sustainable growth
 - 1a. Competitiveness for growth and employment – research and innovation, education and training, trans-European networks, social policy, economic integration and accompanying policies.
 - 1b. Cohesion for growth and employment – convergence of the least developed EU countries and regions, EU strategy for sustainable development outside the least prosperous regions, inter-regional cooperation.
2. Preservation and management of natural resources includes the common agricultural policy, common fisheries policy, rural development and environmental measures.
3. Citizenship, freedom, security and justice
 - 3a. Freedom, security and justice – justice and home affairs, border protection, immigration and asylum policy.
 - 3b. Citizenship – public health, consumer protection, culture, youth, information and dialogue with citizens.
4. EU as global player - covers all external action ("foreign policy") by the EU but it does not include the European Development Fund (the European Council and Parliament rejected a Commission proposal to include it in the EU budget).
5. Administration - covers the administrative expenditure of all the European institutions, pensions and EU-run schools for staff members' children ("European Schools").
6. Compensations – the temporary heading which includes compensatory payments relating to the latest expansion of the EU.⁶

The EU budget has 2 types of amounts:

 - commitments – commitments to pay out funds to specific initiatives;
 - payments – payments forecast for the period covered by the budget.

There are also 2 types of expenditure ceiling:

 - a ceiling for each heading - the financial framework breaks down commitment appropriations (amounts committed but not paid) into broad categories (headings and subheadings), with a ceiling set for each.
 - an overall ceiling for all headings:
 - for commitment appropriations – the sum of the individual heading ceilings.

⁶ European Commission. Where do the Money go?
http://ec.europa.eu/budget/explained/budg_system/fin_fwk0713/fin_fwk0713_en.cfm.

- for payment appropriations (actual amounts to be paid) – the annual ceiling is based on the sum of payments scheduled for each category of commitment appropriations. The ceiling for payment appropriations are also expressed as a percentage of the EU's estimated GNI (based on expected GNI development).⁷

The budget is not allowed to exceed the ceiling of own resources. It means that the total payments ceilings in the financial framework are always lower than the own resources ceiling. The margin between own resources ceiling and the ceiling for payment appropriations allows the financial framework to be tweaked, to cover unforeseen expenses. However, the budget itself must not exceed the limit set by own resources.

Flexibility mechanisms enable the EU to mobilise the necessary funds to react to unforeseen events such as crisis and emergency situations. Their scope, financial allocation and operating modalities are provided in the MFF regulation and the Interinstitutional Agreement. In the current context of reduced expenditure, they also ensure that budgetary resources can respond to evolving priorities, so that every euro is used where it is most needed. Most of the flexibility mechanisms are therefore kept outside the MFF and the funding can be mobilised above the expenditure ceilings.

Emergency Aid Reserve – €221m per year - designed to enable a rapid response to specific aid requirements for non-EU countries that were unforeseeable when the budget was drawn up. Priority is given to humanitarian operations, but the reserve may also be used for civil crisis management and protection if necessary.

EU Solidarity Fund – €1 bn per year - aims to release emergency financial aid following a major disaster in a Member State or aspiring ("candidate") country. Aid is managed by the recipient country, and should be used to rebuild basic infrastructure, fund emergency services, temporary accommodation or clean-up operations, or counter immediate health risks. Max.7.5% of the Fund's annual budget (i.e. €75m) can be used for regional disasters.

Flexibility Instrument – max. €200m per year - provides funding in a given financial year for clearly identified expenses which could not be covered by one or more budget headings without exceeding their expenditure ceilings.

European Globalisation Adjustment Fund – max. €500m per year - aims to help workers reintegrate into the labour market where they have been displaced by major structural changes in world trade.⁸

The European Development Fund (EDF) was created in 1958 to provide aid to certain developing countries/territories that have historical links with certain EU countries. It falls within the broader framework of development cooperation with African, Caribbean and Pacific (ACP) countries. The EDF is not funded from the EU's general budget, but rather from direct contributions from EU countries, the amounts of which are agreed in negotiations. The EDF is generally renewed every 5 years (next renewal in 2013), with a new EDF financial regulation. As the EDF is not included in the EU budget, it is not subject to the principle of annuality (one-year validity). Moreover, since it is a fund there are no time limits for implementing projects (although normally

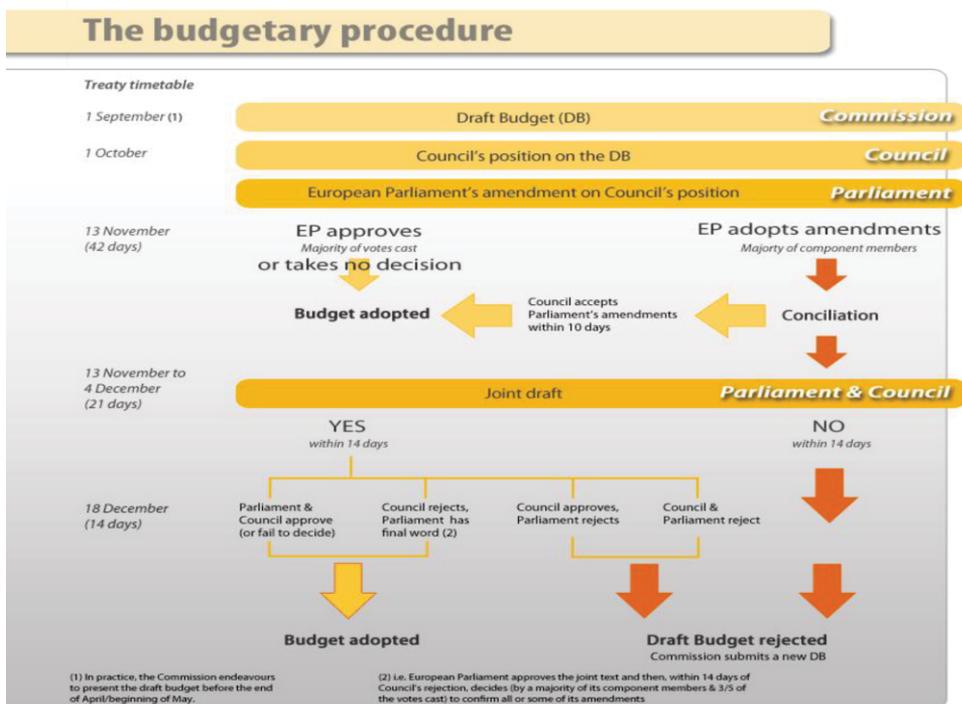
⁸ European Commission. Flexibility Instruments.
http://ec.europa.eu/budget/explained/budg_system/flex/flex_en.cfm#FS.

this will not take more than 10 years).⁹

3. The Budgetary Process of the European Union

Once we got familiar with the general notion and structure of the budget of European Union, the next step is to analyze the budgetary process as well and the measures of the budgetary control. How and by whom is the budget decided and what are the means of the budget execution and control are the main questions that will be answered in this chapter.

How is the budget decided? Based on the multiannual financial framework in force and the budget guidelines for the coming year, the European Commission prepares the draft budget, and submits it to the Council and Parliament. The budgetary authority, comprised of the Council and the Parliament, amends and adopts the draft budget. In case of disagreement between Parliament and Council a specific Conciliation Committee is convened with the task of reaching agreement on a joint text within a period of 21 days, subject to the approval of both arms of the budgetary authority. If the joint text is rejected by the Council, the European Parliament has the right to ultimately approve the budget. This process is well illustrated in the following scheme.



Source: European Commission "The Budgetary Process"

http://ec.europa.eu/budget/explained/management/deciding/decide_en.cfm

⁹ European Commission. The European Development Fund.

http://ec.europa.eu/budget/explained/budg_system/fed/fed_en.cfm.

The annual budgetary procedure as established by article 314 of the Treaty on the Functioning of the European Union lasts from 1 September to 31 December.

All EU institutions draw up their estimates for the draft budget according to their internal procedures before 1 July.

The Commission consolidates these estimates and establishes the annual 'draft budget', which is submitted to the Council and the European Parliament by 1 September. In practice, the Commission endeavors to present the draft budget before the end of April/beginning of May.

The Council adopts its position on the draft budget including amending letters, if any, and passes it to the European Parliament before 1 October. The Council informs the European Parliament of the reasons which led it to adopt its position.

The Parliament has then 42 days to adopt its amendments on the Council's position. The Council may accept the amendments within 10 days and adopt the draft budget.

If the Council does not accept the Parliament's amendments, a Conciliation Committee is set up, composed of the members of the Council or their representatives and an equal number of members representing the European Parliament. The Conciliation Committee is assigned to come up with a joint text within 21 days. If the conciliatory procedure fails, the Commission has to come up with a new draft budget.

Once a joint text is agreed upon by the Conciliation Committee in early November, the Council and the Parliament have 14 days to approve or reject it. The Parliament may adopt the budget even if the Council rejects the joint text. In case the Council and the Parliament both reject the joint draft or fail to decide, the budget is rejected and the Commission has to submit a new draft budget.

If, at the beginning of a financial year, the budget has not yet been definitively adopted, a sum equivalent to not more than 1/12 of the budget appropriations for the preceding financial year may be spent each month.

In the event of unavoidable, exceptional or unforeseen circumstances, the Commission may propose during the year, that the budget as adopted be amended; it does this by submitting draft amending budgets. Amending budgets are also used to enter the balance from the previous year in the budget for the current year. Similarly, the Commission may, on its own initiative or at the request of the other institutions with their own budget section, present a letter of amendment to the draft budget in the light of information which was not available when the draft was established. Both amending budgets and letters of amendment are subject to the same procedural rules as the general budget.¹⁰

Who manages the budget? The ultimate responsibility for implementing the budget lies with the European Commission. But in practice, some 76% of the budget is spent under what is known as 'shared management', with individual EU countries actually distributing funds and managing expenditure.

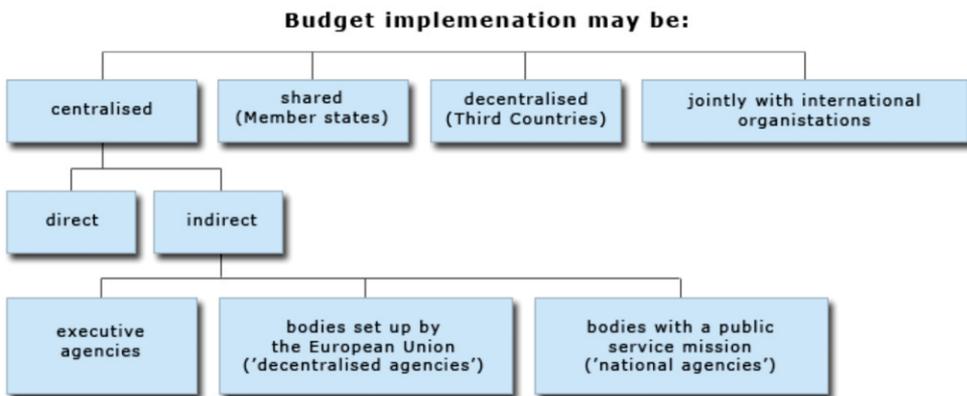
A set of checks and balances is in place to ensure the funds in question are managed properly and in accordance with the rules:

- The Commission must recover all unduly paid funds, whether resulting from error, irregularity or deliberate fraud.

¹⁰ European Commission. How is the Budget Decided? http://ec.europa.eu/budget/explained/management/deciding/deciding_detail/decide_detail_en.cfm.

- National governments are equally responsible for protecting the EU's financial interests. This involves cooperation with the Commission and its Fraud Office (OLAF).

The Commission can manage payments from the budget in 4 ways presented in the scheme 2:



Source: European Commission. “Budget Implementation Ways”

http://ec.europa.eu/budget/explained/management/managt_who/who_en.cfm

- 1.1 Centralised direct management – money is spent directly by Commission staff (selecting contractors and awarding grants, transferring funds, monitoring activities)
- 1.2 Centralised indirect management – external management, often by agencies – used when the Commission can't implement the budget directly. For example, it wouldn't be practical for the Commission to directly award study grants, due to the large number of beneficiaries. In such cases, executive tasks are delegated to agencies, which have their own legal personality (i.e. different from the EU) and are linked to the Commission by an agreement. The tasks delegated to these agencies must be clearly defined and the Commission must put in place tight supervision and control mechanisms.
2. Shared management – budget implementation is delegated to EU countries.
3. Decentralised management – the same but for non-EU countries. This only happens if the Commission is satisfied the countries will follow the rules and the principles of sound financial management, and a clearance of accounts/financial correction mechanism is in place to correct potential irregularities.
4. Joint management – implementation delegated to intergovernmental/international organizations which have internationally accepted standards. A real exception, since it involves transferring EU funds to a 'common pot' with money from other donors, meaning that there is no way to trace exactly how the EU contribution has been spent.

In each of these cases, the Commission must keep tight control over the way the EU's budget is spent and take appropriate steps to enforce the principle of sound financial management.

The EU Directorate-General for Budget (DG Budget) has an important role in

budget adoption and implementation: it helps define the rules for financial management (Financial Regulation), which are reviewed every 3 years, establishes internal control standards, manages the accounting system and prepares the annual accounts. Its financial activities are closely supervised and monitored.¹¹

The EU budget is financed almost entirely through own resources, i.e. funds that belong to the EU but are collected on its behalf by Member States. These funds are credited twice a month to the European Commission accounts opened with Member State treasuries or central banks. From there, the Commission transfers the necessary funds to its accounts with commercial banks, from which payments are made to EU beneficiaries.

The EU's treasury management is based on the just-in-time principle; i.e. the Commission keeps the resources collected from Member States on its accounts held with Member States. It then transfers these funds to the accounts held with commercial banks only to the extent necessary to carry out its daily payments, and so does not 'stock' funds on accounts other than those opened with Member States' institutions.¹²

The Commission uses 2 tools to ensure the sound financial management of EU funds:

- Early Warning System – identifies bodies and individuals representing financial and other risks to the EU, so the Commission can take precautionary measures.
- Central Exclusion Database – database of all bodies and individuals excluded from EU funding for various reasons: insolvent entities, final court judgements for fraud, corruption, decisions of a contracting authority for grave professional misconduct, conflict of interest.

Early Warning System (EWS) was introduced in 1997, at the request of the European Parliament. It covers the contracts and grants managed directly by the Commission and the contracts and grants managed by non-EU countries. But it does not cover the funds managed in partnership with EU member countries (mainly used for the common agricultural policy and the Structural Funds) and the funds managed by international organizations. These funds are monitored through the Central Exclusion Database.

EWS is an operational tool for Commission services, providing them with information on identified risks related to beneficiaries of centrally managed contracts and grants. The system is based on a system of “flags”, identifying the level of risk concerned, from “W1” (lowest level of flagging) to “W5” (highest level). A vast majority of EWS flags (W1 to W4) simply serve to stimulate operational and financial managers to reinforce monitoring of the contract or grant in question or the procurement or grant award procedure. These flags provide information on identified risks such as recovery of certain amounts significantly overdue by a beneficiary, judicial proceedings pending for serious administrative errors/fraud, findings of serious administrative errors/fraud. EWS also serves for recording specific situations that need a defined response from the Commission, like setting off reciprocal debts, suspending temporarily payments for the purpose of further verifications, or executing them to a

¹¹ European Commission. Who Manages the Budget?

http://ec.europa.eu/budget/explained/management/managt_who/who_en.cfm.

¹² European Commission. Treasury Management.

third party following attachment orders binding for the Commission. W5 flags ensure that all operational and financial managers are aware of exclusion from EU funding, based on legal criteria listed in the Financial Regulation, and that new dealings with these beneficiaries are no longer possible. An EWS flagging as such is never the cause of the exclusion, it is merely an indication of the legal situation of the beneficiary, and of which the beneficiary is necessarily already aware of. This category also includes terrorist organizations listed under UN Security Council resolutions.

To protect the legitimate interests of the entities concerned, EWS registrations are not publicly disclosed. Yet a natural person may request (under certain conditions) the Commission services to indicate whether he or she has been flagged up in the system under W1 to W4 flags. On such a request the party in question will be provided with the EWS data which concern them.

Only W5 registrations relating to exclusion situations are communicated automatically to the party concerned. This information is also transferred to the Central Exclusion Database, thus ensuring the protection of all EU funds.¹³

Central Exclusion Database (CED). The EU funds humanitarian and development work all over the world. These funds are managed by a number of bodies (EU institutions, national authorities in EU member countries, authorities in non-EU countries and international organizations), who distribute money to hundreds of thousands beneficiaries.

To protect the EU's financial interests (i.e. EU taxpayers' money), all these bodies have access to a central database of companies and organizations excluded from EU funding because they are insolvent or have been convicted of serious professional misconduct or a criminal offence detrimental to EU financial - the Central Exclusion Database (CED). The data in CED are available to all public authorities implementing EU funds, i.e. European institutions, national agencies or authorities in Member States, and, subject to conditions for personal data protection, to third countries and international organizations.

CED lists legal or natural persons benefiting from EU funds and which are personally under an exclusion case strictly defined in the Financial Regulation:

- insolvent entities (bankruptcy, tax or social charges unpaid);
- final court judgments for fraud, corruption, money laundering and involvement in a criminal organization detrimental to EU's financial interests; judgments for offence concerning professional conduct;
- decisions of a contracting authority for grave professional misconduct, conflict of interest, etc.¹⁴

Once the budgetary process is completed, it is important to analyze the budgetary control system that gives that makes the EU budgetary process efficient.

First of all, here we can talk about the monthly budget implementation reports. Every month the Commission publishes a report online, informing the Parliament and the Council (the budget authority) on revenue received and expenditure incurred – so they can see how the annual budget is being implemented. This information must be available 10 working days before the end of each month. The report contains information on:

^{13,14} European Commission. Protecting EU Interests.

http://ec.europa.eu/budget/explained/management/protecting/protect_en.cfm.

- revenue received, broken down by type. The figures for 'total revenue' represent actual amounts received by the Commission from the beginning of the financial year to the end of the month in question – prior and future budgets are not taken into account.
- expenditure and budget implementation – comparing projected and actual expenditure. The data is presented in 4 tables, showing commitments and payments by financial framework heading and by policy area.¹⁵

Another monitoring tool are the annual accounts and reports, these are: annual accounts, annual activity reports and the synthesis report and the financial report.

The Commission uses a dual accounting system that includes:

- budget accounts - giving a detailed record of budget implementation;
- general accounts – used to prepare the balance sheet and economic result (financial statements). The general accounts provide a picture of the EU budget's assets and liabilities because they are maintained using the accrual accounting principle: therefore, transactions are registered when they are incurred, not necessarily when cash is paid out or received.

Every year the Commission's Accounting Officer must produce the annual accounts for the EU and for the Commission. The EU's annual accounts consist of:

- the financial statements (and its notes);
- the consolidated reports on the implementation of the budget - they include the accounts of the European institutions and agencies.

The goal of these accounts is to provide a true and fair view of the financial situation for a given year. The annual accounts must also be clear, comprehensible and allow comparisons to be made between financial years. The time for preparing and publishing the annual accounts is laid down in the Financial Regulation: 1. provisional accounts are prepared and sent to the Court of Auditors for audit by 31 March, 2. the final accounts are then approved by the Commission and sent to the Court of Auditors and the discharge authorities - the Parliament and Council – by 31 July.

Annual activity reports and the synthesis report. By the end of March every year each Commission Directorate-General must produce an activity report for the previous financial year which includes:

- results obtained and the corresponding amounts spent, compared with the intentions announced at the beginning of the year in the DG's annual management plan;
- a report to the Commission on the performance of the Director-General as authorising officer by delegation. Includes a declaration by the authorising officer, which may contain reserves;
- the DG's annual accounts and financial reports.

The annual activity reports are examined by the Commissioners in their assessment of the Commission's financial situation. They also look at the internal auditor's annual report and the documents on the operation of the internal control systems. They then prepare a summary called a 'synthesis report' detailing actions to be taken to correct any weaknesses identified. This report is sent to the Parliament and Council, and is one of the main documents used by the European Court of Auditors to

¹⁵ European Commission. Monthly Budget Implementation Reports.

http://ec.europa.eu/budget/explained/reports_control/monthly_exec/monthly_en.cfm.

prepare its annual statement of assurance, which evaluates the EU's management of its resources.

The annual financial report reviews the way the budget has been spent and the results on the ground.¹⁶

Another tool of the EU budget control are the internal and external audits.

Every Directorate-General (DG) has an internal audit unit that ensures the DG's procedures comply with the rules. They are free to audit processes, transactions, assets, etc. They report directly to the DG's Director General and also to the Commission's general Internal Audit Service.

Every year there is also an independent external audit of the EU's annual accounts and resource management by the European Court of Auditors, resulting in a report for the Parliament and Council. This report analyses whether individual activities and payments were legal and correct and audits the reliability of the annual accounts themselves, to assess whether they provide a "true and fair" view of the financial situation.

On the basis of this audit, the Court of Auditors issues an opinion – a 'statement of assurance' – on the figures presented and the system and controls in place. The statement marks the beginning of the annual budget discharge procedure.¹⁷

The discharge is the final approval of the EU budget for a given year (following the audit and finalization of the annual accounts). It is granted by Parliament on a recommendation from the Council. Discharge equates to approval of how the Commission implemented the budget in that financial year and the closure of that budget. The decision is based on a review of the annual accounts, the Court of Auditors' annual report (including its official statement of assurance) and the Commission's responses (answering specific questions and providing further information requested). The discharge is the political element of the external control of budget implementation as it represents oversight by the European Parliament and EU Council.

The procedure ends in either the granting, postponement or refusal of the discharge.¹⁸

4. The Presentation of the Budgetary Process of the European Union in Figures

The theory regarding the budget of the European Union as well as the budgetary process have been presented in the previous chapters. The next step of the analysis is to take a look on the budget of the EU in figures. The following data present details of the financial framework for the period 2007 - 2013 and the latest data of 2014.

Table 1 presents the budget of the European Union for the period 2007 – 2013. The column of the Commitment appropriations shows all the objectives towards which financial resources have been planned to be allocated, and on the vertical column per year we can see the total amount of the planned commitments. The table of payment appropriations shows the total expenditures as well as their share in the Gross National

¹⁶ European Commission. Annual Accounts and Reports.

http://ec.europa.eu/budget/explained/reports_control/annual_rep/ann_rep_en.cfm.

¹⁷ European Commission. Audits.

http://ec.europa.eu/budget/explained/reports_control/audits/audits_en.cfm.

¹⁸ European Commission. Discharge.

http://ec.europa.eu/budget/explained/reports_control/discharge/disch_en.cfm.

Income, the available margin and the Own Resources Ceiling in GNI established by the regulations of each particular year.

Commitment appropriations	2007	2008	2009	2010	2011	2012	2013	Total 2007- 2013
1. Sustainable Growth	53,979	57,653	61,696	63,555	63,974	67,614	70,644	439,115
1a. Competitiveness for Growth and Employment	8,918	10,386	13,269	14,167	12,987	14,853	15,67	90,250
1b. Cohesion for Growth and Employment	45,061	47,267	48,427	49,388	50,987	52,761	54,974	348,865
2. Preservation and Management of Natural Resources	55,143	59,193	56,333	59,955	59,888	60,810	61,310	412,632
of which: market related expenditure and direct payments	45,759	46,217	46,679	47,146	47,617	48,093	48,583	330,094
3. Citizenship, freedom, security and justice	1,273	1,362	1,518	1,693	1,889	2,105	2,449	12,289
3a. Freedom, Security and Justice	637	747	867	1,025	1,206	1,406	1,703	7,591
3b. Citizenship	636	615	651	668	683	699	746	4,698
4. EU as a global player	6,578	7,002	7,44	7,893	8,43	8,997	9,595	55,935
5. Administration ¹	7,039	7,38	7,525	7,882	8,091	8,523	9,095	55,535
6. Compensations	445	207	210	0	0	0	75	937
Total commitment appropriations	124,457	132,797	134,722	140,978	142,272	148,049	153,168	976,443
as a percentage of GNI	1,02 %	1,08 %	1,16 %	1,18 %	1,15 %	1,13 %	1,15 %	1,12 %

Payment appropriations	2007	2008	2009	2010	2011	2012	2013	Total 2007- 2013
Total payment appropriations	122,19	129,681	120,445	134,289	133,7	141,36	144,285	925,95
as a percentage of GNI	1,00 %	1,05 %	1,04 %	1,12 %	1,08 %	1,08 %	1,08 %	1,06 %
Margin available	0,24 %	0,19 %	0,20 %	0,11 %	0,15 %	0,15 %	0,15 %	0,17 %
Own Resources Ceiling as a percentage of GNI	1,24 %	1,24 %	1,24 %	1,23 %	1,23 %	1,23 %	1,23 %	1,23 %

Source: European Commission. "Financial Framework 2007 – 2013"
http://ec.europa.eu/budget/figures/fin_fwk0713/fwk0713_en.cfm#cf07_13

The procedures for applying the 2007-13 financial framework were set out in the 2006 Interinstitutional Agreement between the European Parliament, the Council and the Commission. This agreement included rules on adjustments (annual or otherwise) to and revision of the financial framework.

At the beginning of every financial year, the Commission makes a technical adjustment to the financial framework for the following year. This is done for 2 reasons:

- As the financial framework is expressed in constant prices, it must be adjusted each year to take account of inflation, so each expenditure heading retains its initial purchasing power.
- The ceiling of payment appropriations is expressed as a percentage of GNI and so must be updated to take account of actual economic activity, since this must always be below the own resources ceiling. Margin between the ceiling for payment appropriations and own resources ceiling is also expressed as a share of GNI and is updated during the technical adjustment exercise.

By adjusting, the Commission can check whether the amount of own resources

available is enough to cover total payment appropriations. The technical adjustment is based on the most recent data and economic forecasts available and is always presented in Spring before the draft budget for the following year is adopted by the Commission.¹⁹

The financial framework and the interinstitutional agreement have been amended several times since they came into force. Each amendment was made to find financial resources to face unforeseen challenges.

Amendment to the interinstitutional agreement

- Adoption 18 December 2009: Additional payment of almost €480m to the 'food facility' to help developing countries deal with increased food prices. This change did not lead to a change of the financial framework itself.

Amendments to the financial framework

- Adoption 18 December 2007: Additional €1.6bn paid out for: creation of European Institute of Innovation and Technology; Galileo satellite navigation programme (after talks with a private consortium failed in early 2007).
- Adoption 29 April 2008: Transfer of €2.034bn not committed in the 2007-08 budget to subsequent budgets for the Structural Fund, Cohesion Fund, rural development and the European Fisheries Fund.
- Adoption 6 May 2009: €2bn added to the budget to fund projects in 2 areas: energy and broadband infrastructure (European economic recovery plan); common agricultural policy (to deal with issues raised by its 'health check').
- Adoption 17 December 2009: €1.78bn added to the budget to fund projects in: energy and broadband infrastructure (European economic recovery plan); common agricultural policy (to deal with issues raised by its 'health check').
- Adoption 16 April 2010: Automatic adjustment to the amounts paid to countries whose GDP varied by more than 5% from the 2005 forecasts (for the 2007-09 financial framework).
- Proposal for a Decision of 20 July 2010: Additional €1.4bn for the ITER project.²⁰

Next in line is the presentation of the EU budget for 2014. On 29 June 2011, the European Commission presented the Communication 'A budget for Europe 2020' to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.

Due to the tough economic times, seven member states (Austria, Czech Republic, Finland, Germany, the Netherlands, Sweden, and the United Kingdom) argued during the 26 March 2012 General Affairs Council meeting that the EC's proposed overall amount for the seven-year EU budget plan should be reduced by €100 billion, or in the case of Sweden, by more than €100 billion.

On 8 February 2013, European Union leaders agreed to cut the budget by 3.3%; the agreement on the proposed budget by the European Council has yet to be approved by the European Parliament, adopted unanimously by the Council of the European Union and ratified by the national parliaments of all member states; if adopted, it will be the first cut in its 56-year history. The Budget was finally approved by the European Parliament Tuesday 19th November 2013 by overwhelming majority. MEPs voted 537

¹⁹ Financial Framework of the European Commission. 2007 – 2013.

http://ec.europa.eu/budget/figures/fin_fw0713/fw0713_en.cfm#cf07_13.

²⁰ Financial Framework of the European Commission.

http://ec.europa.eu/budget/figures/fin_fw0713/fw0713_en.cfm#cf07_13.

in favor, 126 against and with 19 abstentions.²¹

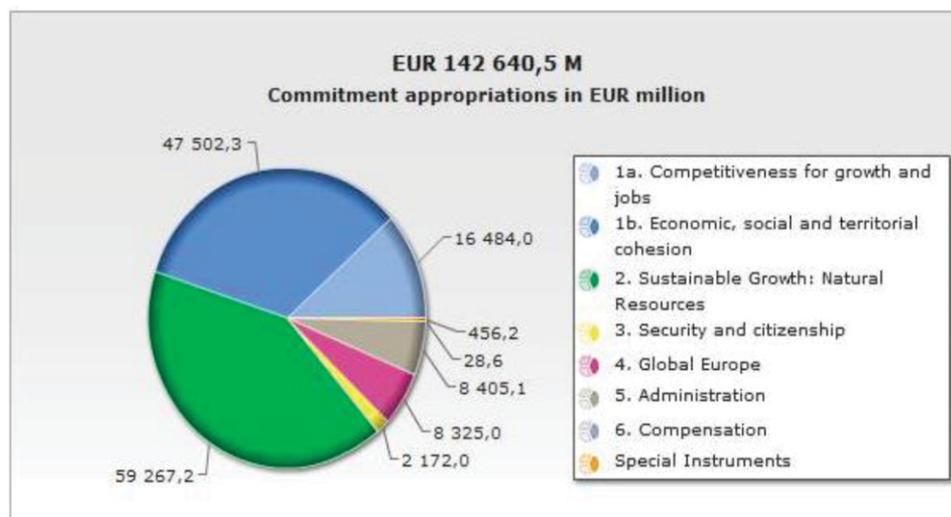
The table 2 shows the amounts of commitment appropriations and payment appropriations for the current year. No information regarding the adjustments is yet available.

Heading	Million €	
	CA	PA
1. SMART AND INCLUSIVE GROWTH	63 986,3	62 392,8
1a. Competitiveness for growth and jobs	16 484,0	11 441,3
1b. Economic, social and territorial cohesion	47 502,3	50 951,5
2. SUSTAINABLE GROWTH: NATURAL RESOURCES	59 267,2	56 458,9
3. SECURITY AND CITIZENSHIP	2 172,0	1 677,0
4. GLOBAL EUROPE	8 325,0	6 191,2
5. ADMINISTRATION	8 405,1	8 406,0
6. COMPENSATIONS	28,6	28,6
SPECIAL INSTRUMENTS	456,2	350,0
Total	142 640,5	135 504,6
Appropriations as % of GNI	1,06%	1,00%

Source: European Commission “Annual Budget 2014”

http://ec.europa.eu/budget/figures/2014/2014_en.cfm

The information from table 2 presented in a different form can be found in graph 1 which illustrates the shares of different objectives in the total budget.



Source: European Commission “Annual Budget 2014”

http://ec.europa.eu/budget/figures/2014/2014_en.cfm

²¹ Wikipedia. The EU Budget 2014 – 2020. http://en.wikipedia.org/wiki/Budget_of_the_European_Union.

As we can see in graph 1 and table 2, the main focus of the budget of the European Union is to promote Sustainable Growth by spending of Natural Resources, this objective takes a share of almost 42% of the budget. The second major objective is to stimulate the Economic, Social and Territorial Cohesion, being allocated 33,3%. These are followed by spendings on Competitiveness for Growth and Jobs - almost 12%, Administration - 5,89 %, Global Europe - 5,83%, Security and Citizenship – 1,5%, Special Instruments – 0,32%, Compensations – 0,02%.

1. Conclusions:

This research paper managed to cover the theory of the European Union budget and the budgetary process and to analyze the latest figures and mechanisms of budget adjustment.

To sum up the information presented above, the Council of the European Union, with ministers from each Member State; the European Commission, as the EU's day-to-day executive and administration; and the European Parliament directly elected by citizens are the three core European Union institutions that are officially designated with responsibility for setting a budget. Basically speaking, the European Commission prepares the draft budget, and submits it to the Council and Parliament.

The budgetary authority, comprised of the Council and the Parliament, amends and adopts the draft budget.

Nowadays, being given the context when there is less money, the only way to cope is to spend it better and more efficiently. This is the age-old principle behind Brussels' approach to the EU budget for the period 2014 – 2020. That is why, the European Parliament agreed on the reform of cohesion policy, as one introducing elements to make it more effective and oriented towards clear results.

The EU made internal control systems more result-oriented and enhance monitoring and evaluation arrangements. Also, they use a wide range of techniques to increase the impact of funding the objectives of the EU, especially for financing innovations.

So, the conclusion is that the European Union budget targets efficient functioning starting at the initial stage of the budget development, all out through the budget execution, and finally at the stage of budgetary control and quality upgrade. Also, the important focus of the EU is to continuously improve the budgetary tools and mechanisms in order to ensure efficient funds' distribution that will help manage the budget in a modern and progressive way and reach objectives more efficiently.

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Mainstreaming Highly Skilled Migration into Development: the case of the Republic of Moldova

Eugeniu BURDELNII*

Abstract

Following the process of globalization, human capital has turned into a major driver of economic growth and countries around the world are up in a global race for “best and brightest”. The countries of origin of highly skilled migrants (HSMs), such as Moldova, represent a country where the impact of skilled migration on development are new issues on the public agenda. HSMs could become the spillovers of development if a state succeeds to implement effective political, social and economic reform, creating a favorable domestic enabling environment for returnees.

Key words: globalization, highly skilled migration, mainstreaming, development, return and reintegration, Republic of Moldova, push and pull factors

1. Introduction

Today, it is estimated that about 60 percent of the world's 214 million international migrants, as defined by the UN, are in the 30 developed or industrial countries that have a sixth of the world's residents and account for 70 percent of global economic output. (Philip, 2012, p. 16). Some 30 per cent of international labour migrants are skilled persons (CODEV-EPFL, 2013, p. 7). Human capital has turned into a major driver of economic growth and countries around the world are up in a global race for “best and brightest” (Czaika and Parsons, 2015, p. 5; Wiesbrock and Hercog, 2012, p.1).

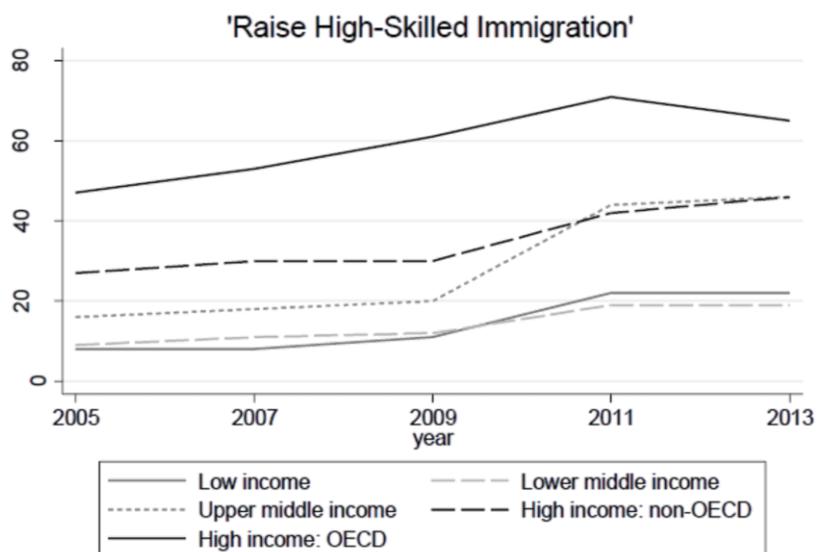
Globalization and the advent of the knowledge economy have created a new context and offer new concepts and perspectives where highly skilled workers and entrepreneurs are in great demand. Their mobility and nexus with development, as well as challenges and opportunities of these processes are increasingly being scrutinized by both academics and policy makers (Tejada et al, 2013, p. 161; Li and Lo, 2012, p.1; CODEV-EPFL, 2013, p. 7; Habti, 2012, pp. 1-3; Wiesbrock and Hercog, 2012, p. 1; Jackson, 2012, pp. 20-21).

As a result, many industrialised countries are changing their policies in order to become more “attractive” for highly skilled migrants (HSMs) (Wiesbrock and Hercog, 2012, p. 1; Philip, 2012, p. 16). Host Governments increasingly express a preference for (top-earning) high-skilled immigrants, since they are widely perceived as net

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contributors to host societies, being economically advantageous, which in turn makes it easier for politicians to pacify anti-immigrant sentiment among voters, making immigration also politically acceptable (Rapoport et al, 2012, p. 1; Parsons et al, 2014, p. 14). Following Czaika and Parsons, as shown in Figure 1, even more countries are now engaging in the intense global competition to attract internationally mobile human capital, by redesigning their immigration regimes, thereby leading to a diffusion of high-skilled migration policies globally (Czaika and Parsons, 2015, p. 6).

Figure 1. Government policy objectives on high-skilled migration, (% of countries) (Population Division)



Source: Czaika and Parsons, 2015, p. 6.

Highly skilled migration encourages interconnections, including through diaspora networks, between home and host countries allowing the transfer of various resources such as skills, knowledge, technology, business and entrepreneurial investment, training, education and research collaborations that reinforce local capacities, inflow of social capital, financial remittances, venture capital, through networks established in the host countries, increased work ethic, stimulation of political debate, the strengthening of civil society through sustaining local organizations, promoting democratization, the enabling and encouraging of education for non-migrants, resolving some structural/infrastructural constraints by a collective action, small-scale contributions to local development, the emancipation of women and minority groups in countries of origin, “productive human relationships” (Ammassari, 2009, pp. 4-5) and, of course, eventual physical return to the home country (De Haas, 2006, p. 1; Tejada et al, 2013, p. 158; CODEV-EPFL, 2013, p. 6; Ammassari, 2009, pp. 4-5; Lowell and Gerova, 2004; Corrêa d'Almeida, 2008, p. 1; Kōu et al, 2015, p. 1646).

Following the strong interlinkage between return migration and development,

the return phenomenon in all its spectrum of manifestations has gained momentum in recent years. However, there is still a shortage of conclusive studies of the specific conditions that facilitate a positive impact of return migration onto development (CODEV-EPFL, 2013, p. 6). For example, beyond possible family reasons there are social (age, level of education, professional expertise, lifestyle, occupational status and monetary resources, social mobility aspirations for offspring, social relationships and networks, etc.), cultural (religion, ethnicity, gender relations, etc.) and political factors determining migrants' decisions to return or not to return back home. Moreover, return migration does not always imply an easy reintegration into the original context; migrants who come back usually encounter difficulties in readapting and dealing with contradictory feelings concerning their place of origin and their chosen country(ies) of emigration (Ammassari, 2009, p. 5), their simultaneous knowledge of and involvement in two or more societies, which make them a potentially effective link between wealthy and poor countries (De Haas, 2006, p. 2). Anyway, these tendencies have coincided with a growing aspiration among government and development agencies to go “beyond remittances” and to support migrants' individual and collective transnational engagement in origin country development, or to 'mobilise' migrants for development cooperation (De Haas 2006, p. 3).

On another pole of discourse on migration and development, the countries of origin of HSMs, such as the Republic of Moldova (RM), represent countries where the impact of skilled migration on development and the role of transnational networks of its nationals are new issues on the public agenda. In Moldova, the mass emigration of skilled human capital, due to severe economic crises and long periods of political turbulence, is a tough challenge that has hindered the advancement of science, research and innovation since independence. Therefore, it appears crucial to address the brain drain challenge in both research and policy discussions about the relationship between migration, transnationalism and development (Tejada et al, 2013, p. 158).

Summarizing the above mentioned, the purpose of this research project was to conduct evidence and knowledge based analysis and to explore the nexus between return HSMs and home country development.

The major objectives of the study were:

- a) To identify the determinants of migration of Moldovan HSM;
- b) To analyze the development impact of highly skilled return migration in the RM;
- c) To formulate specific policy recommendations to maximize development impact of highly skilled migration on home country development.

The research tended to answer the following research questions:

1. What are the main determinants, challenges and opportunities of migration of highly skilled Moldovans abroad?
2. What could be the main determinants for return of Moldovan HSM and their overall potential impact on the development of homeland? How could the return Moldovan highly skilled migrants be better reintegrated in their community/society?
3. What practical recommendations, concrete actions and policies can be formulated to maximize the potential beneficial impact of return highly skilled to development in Moldova?

The extensive research activity occurred in the period September, 14th 2015 – January, 15th 2016, whereas the data collecting phase was carried in the period November, 23 – December, 10th 2015.

The research paper was focused on such research approaches, as analysis of secondary sources of data, such as review of the existing academic literature, policy documents, statistical data, empirical and analytical materials; qualitative data was collected through in-depth interviews. The qualitative research approach allowed for a deeper understanding of the complexities of migration decision-making beyond economic thinking, opening up space for including human agency and socio-cultural context (Kõu et al, 2015, p. 1657), and contributing to a better understanding of the possible drivers and hinders related to decision of a HSM to return to the country of origin and, therefore, having a significant impact on countries development; quantitative data was collected through a questionnaire, targeting Moldovan returned HSM. In all four sections of the questionnaire, there was a mix of both closed and open ended questions in order to offer respondents enough space to provide some qualitative responses whenever required.

Moldovan highly-skilled migration: main characteristics and tendencies

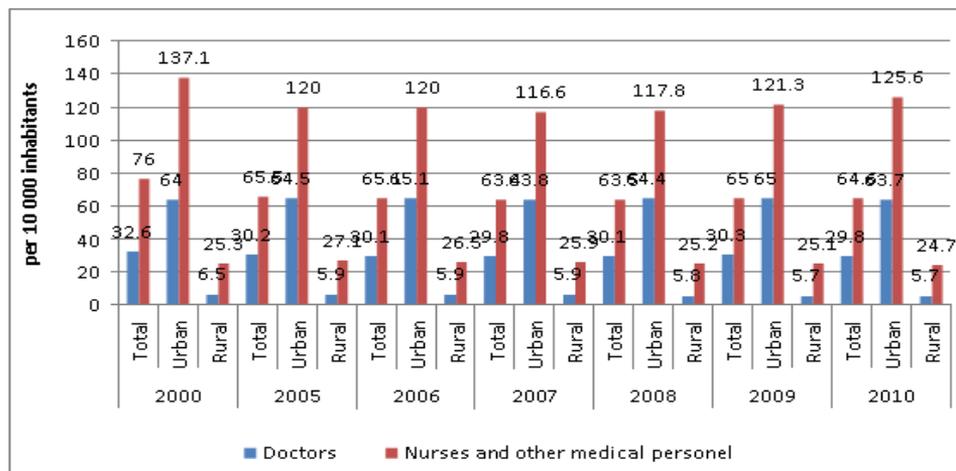
From the very beginning, it is worth mentioning that as many different dimensions of labor migration are frequently analyzed in Moldovan scientific research such as positive and negative consequences of migration; remittances; employment of migrants; demographic questions (age, gender, professional-educational, territorial and regional, ethnic) and socio-psychological, cultural and linguistic aspects of migration; youth questions; the legal and social protection of labor migrants; the state of poorly protected social groups (children, the elderly / seniors); Moldovan policies on labor migration (Mosneaga, 2015, p. 7). However, there are few available analytical studies that examine the determinants of migration of highly skilled Moldovans abroad and the development impact of return HSMs in the RM. This subject has not been sufficiently researched yet, though there are several studies, which cover different aspects of highly skilled migration and development nexus.

From the perspective of main characteristics of Moldovan highly skilled migration, it is necessary to mention that, since proclaiming its independence on 27 August 1991, RM has gone through several migratory periods distinguishable along factors such as push and pull factors, level of prevalence of migration, direction and composition of migratory flows, and duration and legal status of migrants' stay in host countries. Starting with the turn of the century, migration progressively increased to significant proportions compared to the population. (Burdelnii et al, 2013, p. 26).

The main push factors for Moldovan skilled migrants, as for the rest of Moldovan labor migrants, are of economic nature: poverty, lack of adequate employment opportunities and low salaries, improved career prospects, further education and scientific advancement, the search for further training abroad, new research methodologies and to access modern infrastructure (Burdelnii et al, 2013, p. 26), poor scientific and career options, a low quality of life, while higher living standards abroad (Tejada et al, 2013, pp. 168-169), act as a pull factor. However, in case of Moldovan skilled migrants, the determinants of social and political character play also an important role as push factors, namely political and economic instability in the

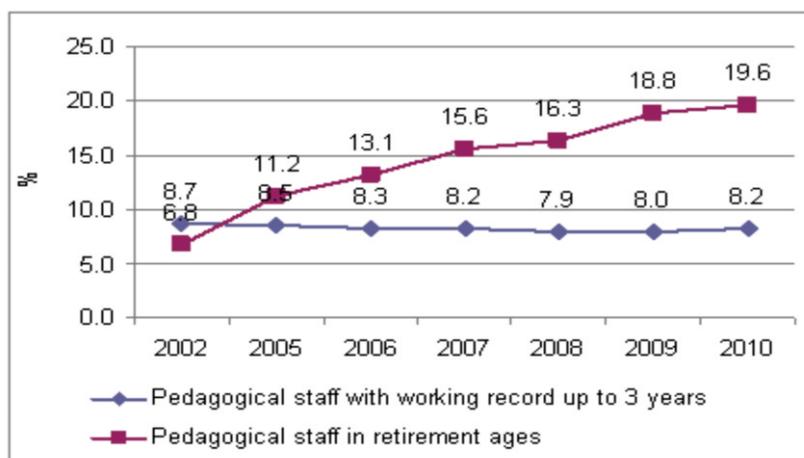
country (Tejada et al, 2013, p. 164); desire to secure a future that cannot be found in RM for either the migrants or their children (Burdelnii et al, 2013, p. 153). These determinants could be explained, in opinion of Olsen, by the fact this part of population is particularly sensitive to bad governance, when “they find the human rights/governance situation in their home country unacceptable. This can have many forms: honest civil servants refusing to be corrupted; lack of freedom to speak one's mind, especially for civil servants; and promotions based on unprofessional criteria”. Moreover, as Bozoki rightly put it, the most talent leaves a country because the present social elite in their domicile countries have emerged from the turbulence of transition often tainted with corruption and a wild, non-ethical capitalism, which created an “oligarchic” concept of state management that cannot be attractive. In this context, the brain drain phenomenon could be interpreted as avoidance of direct social conflict and some kind of silent revolution by those who want to be valued according to their merits and not 'managerial' capabilities that can be perceived as the base for implementing false-transition (Burdelnii, 2010, pp. 134-135).

It should be mentioned in this regard that push factors in Moldova are stronger than pull factors in destination countries, because the home-country context is the main catalyst behind skilled Moldovans deciding to emigrate. Skilled Moldovans mainly choose their destinations based on opportunities offered and less because of geographical and cultural proximity or a shared language (Tejada et al, 2013, p. 164). For instance, public investment in science and technology fell drastically between 1990, when it was 0.73% of GDP, and 2000, when it was only 0.18% of GDP. Science, research and innovation activities suffered major degradation due to a lack of proper funding, adequate wages and up-to-date infrastructure. At a management level, the methods of organizing science remained conservative and the legislative framework had a regressive rather than a stimulating character. As a result, the scientific potential of Moldova fell by 83% in 15 years, dropping from 30,000 scientific researchers in the early 1990s to less than 5000 in 2004. By 1 January 2011, the country had only 5216 employees registered in the research and development R&D area (Tejada et al, 2013, p. 160). Due to low salaries and poor working conditions, more than 12,000 health workers left the health system from 1996 to 2000. About 82 per cent consisted of mid-level medical workers. Consequently, the level of doctors' staffing dropped 14.3 per cent and that of secondary health personnel by 21 per cent. The staffing level for doctors is 29.8 per 10,000 inhabitants, and 64.5 secondary health workers with secondary education. This is a little bit under the EU average level, at 32.3 and 77.5 per 10,000 inhabitants, respectively. Another problem refers to the uneven distribution of health personnel by areas of residence, the number being eight times higher in urban areas (63.7 doctors per 10,000 inhabitants) as compared to rural areas (5.7 doctors per 10,000 inhabitants) (Burdelnii et al, 2013, p. 150).

Figure 2. Distribution of health personnel by areas of residence

Source: Burdelnii et al, 2013, p. 150

Migration of personnel from the Moldovan education system led to a worsening in the teaching process. Due to unattractive salaries, which are among the lowest in the national economy, about 9,400 teachers left the educational system during 2005–2010. Statistical data shows that the share of young teaching personnel in the education sector has been decreasing, while the share of those reaching retirement age is continuously increasing. During 2002–2010, the share of teaching personnel of retirement age has tripled, increasing from 6.7 per cent to 19.6 per cent, and the share of young teaching personnel declined from 8.7 per cent to 8.2 per cent (Burdelnii et al, 2013, p. 150).

Figure 3. Share of young and old teaching personnel in general education system

Source: Burdelnii et al, 2013, p. 150

Additionally, the increasing number of higher education graduates competing for scarce positions is an important push factor forcing skilled Moldovans to search for options abroad. A relatively recent OECD (2012) study shows that 56% of people aged between 15 and 24, and 37% of those with a third level education would leave permanently if they had the opportunity (Tejada et al, 2013, p. 160).

Therefore, we agree with the experts Tejada et al that the skilled migration from Moldova may be understood as the result of individual strategies established to improve personal conditions at both a professional and private level. The families back in Moldova view their departure with a sense of pride for having accomplished their professional or educational project abroad. The emigration process is seen as an achievement, and parents prefer to see their children depart and succeed abroad rather than remain dissatisfied at home under precarious conditions (Tejada et al, 2013, p. 164).

However, it should be mentioned that the „brain waste” phenomenon is characteristic to Moldovan skilled migration. Moldovan migrants incur high rates of human and social capital depreciation. With the exception of those with technical or vocational training, they are rather unlikely to work in similar occupational categories as their skills tend to be specific to their home country and are not internationally portable. In addition, those higher up in the social pecking order in Moldova are unlikely to retain their social status when they migrate abroad. This deters some people and makes migration more selective (Porcescu et al, 2014, pp. 19-20). The data from the European Training Foundation survey on returning migrants show that in Moldova, more than 60 percent of the highly educated returning migrants had worked abroad as unskilled labor (Sabadie, 2010, p. 46). According to a World Bank's survey, about a third of professionals and managers reported that they expected to work at a lower skills level if they migrated to the EU (Sabadie, 2010, p. 50). Here it looks like, that much brain waste in Moldova is a product of post-communist transition with migration channelling abroad “brains” not much demanded at home (Porcescu et al, 2014, p. 18).

1. Problems of return and reintegration of the highly skilled migrants to the Republic of Moldova

From the very beginning, it is necessary to mention that there are no specific numbers of Moldovan labor migrants who returned to Moldova (not mentioning highly skilled ones). The most common answer is 1,000 persons (according to the Ministry of Labor Social Protection and Family of Moldova), while less frequently the number of 2,000 persons is mentioned (IOM data). According to expert Mosneaga, it is unlikely that any of these numbers is reliable, since both are too "rounded-up", and also due to the lack of adequate methodology (Mosneaga, 2013, p. 1). Aside from this, unfortunately, we have not found any definite data concerning the number of returned HSMs in Moldova that, in our opinion, could point to the fact that either the number of returned highly skilled migrants is minor, or this subject does not represent a focus for any comprehensive research yet. We were able to identify just few specific studies, covering the eventual motives of return of Moldovan highly skilled or skilled migrants back to the country. Therefore, this area of research requires any further scientific and analytical exploration.

According to the research team, led by Tejada, the students are the most likely to

return to Moldova (47%), followed by scientists and researchers (35%) and finally by professionals (28%). In overall terms, skilled Moldovans are willing to contribute to Moldova's progress, but are discouraged by the attitude of the Moldovan government, which they feel is not interested in engaging them in development efforts, and also by the hostility of Moldovan society towards scientists abroad. Migrants' deliberate hesitation is significant when they are uncertain about the chances that the future will offer them. Accordingly, the group of experts, conducted by Tejada concludes that the mobility behavior of international students changes according to the opportunities available and perceptions of the environments in the host and home countries, as well as in third countries. The intentions of students to return and those actually doing so may increase if they believe Moldova can offer them a safe and trustful environment with a specific career and future prospects (Tejada et al, 2013, p. 168-169). These peculiarities should be taken into account while designing future return policies, addressed Moldovan HSMs abroad.

Over the past ten years, the Government of Moldova drafted and implemented a series of migration-related reforms in order to maximize the position impact of migration on development in the country, as well as to minimize its negative impact. The focus of policy interventions has shifted from the migration control to exploring new global approaches towards diaspora and migration as key elements for development, according with the vision promoted by some international institutions, such as the World Bank, UN, IOM and European Commission (National Strategy "Diaspora-2025").

The GoM recognized the need for a coordinated and integrated approach to manage migration through the National Development Strategy 2012–2020, which was adopted by Parliament on 11 July 2012 (Vremis, 2012). Broadly speaking, the National Strategy of the Republic of Moldova for Migration and Asylum (2011–2020) and the related Action Plan for 2011–2015 for its implementation aim at ensuring a comprehensive regulatory management of migration and asylum policies. These documents intend to integrate the existing strategic frameworks in this field and mainstream the policies into different strategic planning actions (in the field of education, health, social inclusion, etc.).

The Strategy reflects the efforts of national migration policies towards compliance with the EU's Global Approach to Migration and Mobility, by covering all of its four areas: promoting legal migration, fighting irregular migration, fostering migration for the development of the country and ensuring the right of asylum (Vremis, 2012).

Reintegration and return of Moldovan migrants represent one of the elements present in national legislation. A number of activities have been implemented, such as the PARE 1+1, Programme and National Economic Empowerment Programme for Youth (PNAET), which foresees training in entrepreneurial skills as well as financial assistance for business start-ups. In addition, activities aimed at improving the system for the recognition of skills and qualifications (i.e. National Concept of validation of the informal and non-formal learning, approved in November 2011), and strengthening the local labor market have been implemented, including in the context of the EU–RM Mobility Partnership. The return and retention of Moldovan migrants remains a major

policy objective that is clearly stipulated in the National Strategy of the Republic of Moldova for Migration and Asylum 2011–2020 and the related Action Plan for 2011–2015 (Vremis, 2012).

Action Plan for the years 2014-2016 on supporting reintegration of citizens returning from abroad, approved by Government Decision no. 339 dated 20 May 2014 (Action Plan for the years 2014-2016) is directed to accomplishment of such objectives, as: creating and improving institutional framework on supporting reintegration of citizens returning from abroad; supporting economic reintegration of returned Moldovan citizens through information and counseling; fostering migrants' entrepreneurial culture with the aim of attracting their remittances in the national economy, etc.

Collaboration with diaspora and associations of Moldovan citizens abroad is also important in the context of migrants' return and reintegration. Dialogue with diaspora is the foundation for the programs of attraction and investment of remittances in the economy and social-economic reintegration of migrants. Currently the emphasis is placed upon the protection of Moldovan citizens abroad, the preservation of cultural authenticity, and the stimulation of migrants' return home. In this regard, the Action Plan for support of nationals of the Republic of Moldova residing abroad (Moldovan diaspora) for 2006-2009, the National Action Plan for 2008 for the Protection of the Citizens of the Republic of Moldova abroad, and the Action Plan for National, Cultural, and Social Support of Moldovan Diaspora in 2012-2014, could be mentioned (Mosneaga, 2013, pp. 4-5).

Following the Government of Moldova's policy regarding the relations with the Diaspora and the cooperation with the international partners in the field of migration and development, the Prime Minister's Decree nr. 58-d (of June 7th 2013) creates the framework for the implementation of the “whole-of-Government” approach in the field of DMD (Diaspora, Migration and Development). The Decree stipulates the appointment of Diaspora Focal Points in the line Ministries and State Agencies on a decision-making (Vice minister or Deputy Director) and technical level (Head of Division) in coordination with the Diaspora Relations Bureau (State Chancellery). The main objectives of the framework are: to ensure the consolidation of the institutional capacities regarding the implementation of the State policies regarding the cooperation with the Diaspora; to ensure the efficient interaction between the governmental institutions via a horizontal integration (mainstreaming) of their responsibilities; to implement the transversal and integrated approach (“whole-of-government”) in the field of diaspora policy making, with each participating institution (with an appointed Diaspora Focal Point) responsible of Diaspora, Migration and Development topics within the limits of its mandate (Prime-Minister's Decree nr. 58-d).

With the aim of developing a sustainable and comprehensive framework for cooperation between the state and the Diaspora, based on trust and joint initiatives aimed at facilitating productive options for returning diaspora, the GoM approved National Strategy “Diaspora-2025” and Action Plan for the years 2016-2016 on its implementation (Government Decision no. 200) on 26 February 2016 (National Strategy “Diaspora-2025”). Some of its objectives, specifically 3 and 4, indirectly cover the issue of return of skilled migrants, namely facilitating the procedure of

recognition of remote academic and professional qualifications through the development of information system “Authentication, legalization and recognition of the educational documents”; capacity building of diaspora associations, communities and networks of excellences; recognizing and promoting outstanding and excellent merits of Diaspora members, etc.(National Strategy “Diaspora-2025”).

However, in Moldova, despite a solid institutional set-up and legal framework laying down a comprehensive basis for an efficient migration management system, migration policies are managed by a variety of government regulations and legislative instruments that give birth to the appearance of duplications and conflicts. Strategies and action plans are occasionally overlapping rather than complementary, lack fully developed mechanisms and capacities for monitoring and evaluation, do not tackle migration in a comprehensive way, or provide a clear answer to important questions such as how to maximize migration's benefits and reduce negative social effects. Migration processes are included in specific contexts without fully being mainstreamed in the field of employment and improvement of remuneration for labour, education, health and social protection (Vremis et al, 2012, p. 210). All these statements are relevant to the problems of return of Moldovan HSMs.

According to the results of the IASCI/ CIVIS survey, returning migrants often face problems of reintegration, because of the following reasons:

- Underdeveloped “enabling environment” in the country for launching proper business, due to the lack of access to information and violation of the "rules of game" by the state agencies;
- Adaptation of children who grew up and received education in a foreign country. They had difficulties adapting abroad, and it can be difficult for them to return to their home country. The key problem is knowledge of the language, for the purposes of both communication and study;
- Problems of adaptation to social conditions in Moldova due to the underdeveloped household infrastructure, the existing level of medical services, etc. It should be taken into consideration that while the economic reasons are the main reasons driving a person into labor migration, a person's decision to return could be determined by other factors of societal character. The latter include everyday life, transportation, streetlights, roads, prices, and wages, combating corruption and bureaucracy, taxation, administrative, official actions, an unfavorable environment for functioning of small business, freedom of movement in and out of country, and a visa-free regime. All of this can be generalized in one common notion - an efficiently functioning democratic political system, social state, and developed civil society. Therefore, it is necessary to create the conditions for the return of migrants, if there is a favorable investment climate and reasonable government policy, which takes the needs and the requirements of migrants into consideration (Mosneaga, 2013, pp. 6-7).
- Family issues. Years of migration weaken marriages and family relations. Hence, it is important to provide support in restoring interaction and emotional relationships with relatives, children and parents, etc. (Mosneaga, 2013, p. 5).
- Professional adaptation problems. Repatriates will have to work in Moldova for wages that are significantly lower than those abroad are. This affects the welfare

of the family. It should be taken into consideration that while abroad, Moldovan labor migrants mostly have not been employed according to their training (construction is the most common exception), and have engaged in unskilled labor, losing skills and the profession acquired back home. Thereafter, it is difficult for them to find a job corresponding to their qualifications and training. Taking up employment of an unskilled worker is unprofitable in Moldova (Mosneaga, 2013, p. 5).

Furthermore, the knowledge and skills acquired abroad cannot always be applied in the home country. Currently, Moldova is undertaking certain steps for the recognition of skills and qualifications acquired while working abroad and not certified by any relevant official documents. Another important aspect is that in order to find a well-paid job, one should have access to information, which is mainly available through social connections and informal contacts. The question remains to what extent a person who has just come back home after a long stay abroad have access to such contacts, and whether the Moldovan state can assist its citizens with this issue. Perhaps, according to Moldovan expert Mosneaga, a solution to the employment dilemma can be found via the development of business and small entrepreneurship by the returnees whose finances and energy could improve the situation on the domestic labor market. A wide range of measures and well-developed mechanisms for their implementation is necessary to make it happens (Mosneaga, 2013, p. 6).

Summarizing key issues related to return and reintegration of Moldovan migrants, including highly skilled ones, according to experts' opinions, Moldovans citizens are not sufficiently informed about the existence of institutional programmes that the GoM has recently implemented to engage skilled Moldovans abroad (Tejada et al, 2013, p. 169; Mosneaga, 2013, pp. 4-5). The main reasons for not participating include a lack of interest in supporting the government and a distrust of these initiatives, as well as poor communication and lack of transparency (Tejada et al, 2013, p. 169). Therefore, as part of possible reaction to this reality, adequate policies and communication and outreach campaigns should be perceived as imperative to overcome these shortcomings.

2. Conclusions

Human capital has turned into a major driver of economic growth and countries around the world are up in a global race for “best and brightest” (Czaika and Parsons, 2015, p. 5; Wiesbrock and Hercog, p. 1). Globalization and the advent of the knowledge economy have created a new context and offer new concepts and perspectives where highly skilled workers and entrepreneurs are in great demand, their mobility and both academics and policy makers are increasingly scrutinizing nexus with development, as well as challenges and opportunities of these processes (Tejada et al, 2013, p. 161; Li and Low, p. 1; CODEV-EPFL, 2013, p. 7; Habti, 2012, pp. 1-3; Wiesbrock and Hercog, 2012, p. 1; Jackson, 2012, pp. 20-21).

The countries of origin of highly skilled migrants, such as the Republic of Moldova represents a country where the impact of skilled migration on development and the role of transnational networks of its nationals are new issues on the public

agenda. The mass emigration of skilled human capital due to severe economic crises and long periods of political turbulence is a tough challenge in Moldova that has hindered the advancement of science, research and innovation since independence. Therefore, it appears crucial to address the brain drain challenge in both research and policy discussions about the relationship between migration, transnationalism and development.

Our study showed that classical “push” (lack of possibilities for the realization of own ideas; high level of bureaucracy; distrust in public authorities; living standards (quality of life) in Moldova; uncertain future; high level of corruption; economic instability; political uncertainty and instability, etc.) and “pull” (better career opportunities; better education; a new professional and personal experience; positive impression of living / working / studying abroad from others; a good academic and professional reference; better living standards (quality of life) in general abroad (social welfare system, living environment and amenities, etc; high standards of research abroad; economic / political stability abroad, etc.) factors prevail in the case of Moldovan HSMs, that have a lot of similarities with the experience of other countries. As distinct of factors of merely economic nature, that represent the key trigger of economic migration, in case of HSMs the determinants of psychological, social and even political character play a much more pronounced role, comparing to material ones, namely distrust in current political elite of the country and state authorities, in corpora, deep frustration by high levels of corruption, political and economic instability and uncertainty, lack of clear perspectives for self-fulfillment in the country, low general level of living standards, absence of enabling environment for professional and personal growth, etc.

Findings related to the experience in the countries of residence prove the fact that Moldovans are not facing any significant integration problems during their migration experience (linguistic, social, economic integration and cultural integrations; legal and political rights). The process of their social adaptation and integration in host countries occurs rather efficient. In our opinion, successful integration of Moldovan HSMs in host societies will diminish automatically eventual rates of return of Moldovan HSMs back to the country. This fact, undoubtedly, should be taken into account during the process of migration policies design and implementation by the Moldovan public authorities concerning integration of returned Moldovan HSMs.

In case of our survey, only a minor number of respondents indicated that they were sending remittances to Moldova during their migration experience. We consider that this reality, that contradicts to average international experience, could be explained by one of the following three motives: either the respondents were reticent to disclosure “delicate” information of financial character, or most of the surveyed respondents were pursuing graduate studies abroad that was limiting their possibility of earning additional money, rather scholarship, or surveyed HSM were originating mostly from wealthy families and economic reason did not represent a push factor for migrating abroad. In one word, the main obstacles on the way to invest the remittances in Moldova are not of personal character, but are referring to enabling environment in Moldova that, in opinion of respondents, is not favoring remittances' investment.

The reasons of personal character, as own initiative and family stood behind the

decision of respondents to return to Moldova. Similar table appears when it comes to external factors that motivated respondents to come back to Moldova. Most of them are of personal/family related factors, followed by employment-related factors and immigration and integration-related factors. Thus, the objective factors of eventual attraction of HSMs to Moldova, comparing to the country of residence, are insignificant. The general neutral degree of satisfaction of the respondents with their life and work, after returning to Moldova, also confirms indirectly the low level of attractiveness of motives for return to Moldova under current circumstances in the country. Although the returnees could be potential messengers of newly acquired skills, innovative and entrepreneurial attitudes, bringing a new work culture, unfortunately, the absolute majority of respondents faced serious obstacles on the way of knowledge transfer. These obstacles are, in principle, correlated with the challenges faced by Moldovan returnees, particularly in the workplace. They are of discouraging nature for proper integration of acquired skills in Moldovan working culture and environment. Moldovan HSMs returnees do not perceive existing conditions in Moldova as “enabling environment” for the career advancement or professional growth. The main concern refers to the fact that the knowledge and skills obtained abroad are not capitalized and operationalized in current Moldovan context. The study shows a certain level of frustration of Moldovan returned HSMs when it comes to the interaction with the colleagues in working environment. The respondents believe that their visions and concepts on the way of working and business set-ups are not adequately perceived in Moldova.

Despite of the existing obstacles and challenges in the process of knowledge transfer, Moldovan returnees recognize international migration as important for the transfer of knowledge and skills. Respondents believe that their knowledge, skills and social capital acquired abroad could have a positive role in the societal development.

The HSMs could become the spillovers of development if a state succeeds to implement effective political and economic reform, creating a favorable domestic enabling environment for returnees. If development in origin country takes a positive turn, if the country stabilizes its political situation, if the country's structural situation improves tremendously, adequate policies are put in place and economic growth starts to take off, migrants are likely to be among the first to join in and recognize such new opportunities and, and reinforce these positive trends through investing, circulating and returning to their origin countries. However, we could hypothesize that if in Moldova continues to prevail and dominate disabling environment for personal and professional growth, unclear perspective, economic and political turmoil, social insecurity, high level of corruption and bureaucracy, underdeveloped physical and technological infrastructure, infringement of basic civil rights, etc., the chances of physical or virtual return of Moldovan HSMs through various channels are really minimal. The evidence shows that, although skilled Moldovans abroad do have the motivation and potential to benefit the home country through collaboration with the scientific and professional community in Moldova, this can only be accomplished if adequate conditions are put in place and maintained over time. The evidence gathered indicates that skilled Moldovans will continue to emigrate, but it also shows that return skilled migration could occur.

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Educating the Young Generation for Prospective Parenthood in the Context of Modern Worlds Challenges

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Abstract

The purpose of the study is to investigate the problem of prospective parenting education for teenagers. The research is motivated by the decreased value of parenting and its impact on young people's conscience and behaviour. It analyzes the strategic plan of prospective parenting education at pre-university level, the school potential in the field under research and the evaluation of teachers' competences to cope with the problem of parenting for teenagers. Two strategies of capitalizing the school curricula regarding prospective parenting education for young people are examined and suggested as potential solutions for improvement.

Key-words: parental love, parental obligations, parenting education, formative pedagogical model.

Social development in the modern world is a dynamic and contradictory process facing a number of serious problems which demand deep reflection. The achievements of the modern society present not just manifold opportunities, but also potential hazard with serious consequences.

People's dependence on modern technologies worldwide makes them vulnerable in their relationship with nature and reality. There is a looming risk of losing control over complex technical systems that man created and have extended globally. Fetishlike relationships, limiting the once multidimensional human existence to virtual and technological environment, poses the risk of losing their meaning in life for the young generation.

The threat consists in the fact that modern man may transform into a creature with a garbled value system, into a mutant who has lost his moral and spiritual guidance alongside with the deep semantic foundations of his existence both in his private and social life. Apart from that, global problems, like economic ones, which are a threat to mankind in general, also have an impact on it. All of these elements create doubts about the efficacy of modern civilization life strategies and of basic values orientation.

A critical analysis of current evolution strategies, the identification of their sources, would allow for an improvement of the safest ways of mankind development.

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In this regard, it is vital to understand the way the value matrix of the technological society has been built, how Western and Eastern cultures have evolved. Without such a philosophical analysis it would be impossible not just to understand the essence of the current developmental stage of mankind and the problems it faces, but also to proceed to creating and implementing new and efficient strategies for its subsequent development.

The value orientation in socio-psychological terms is the most important element of the inner structure of personality, which is developed through private life experience, through all the other experiences that delineate his personal significant and essence from the social non-significant and non-essence. The overall and well defined value orientations make core value of a person or the axis of consciousness that ensure the stability and continuity of a certain type of behavior and activity. An individual's behavior is the expression of their needs and interests. This legitimacy proves that society is a significant, decisive, regulating factor of a person's motivation to act.

The socio-psychological framework of an individual is the expression of value orientation encompassing specific personal attitudes towards particular values. Regarding the subject matter, we aim to highlight the importance of developing a positive and responsible attitude to parenting in the younger generation.

Almost every human being becomes a parent and the quality of training the young generation towards prospective parenthood relies on society, family and the value system the future parents are raised in. Parenthood determines the survival of mankind, but it can be achieved only through goodwill.

Increasing awareness of this reality implies the necessity of enhance the younger generation's need to become a parent. The metamorphosis in modern family requires that more attention be paid to related phenomena: increased vulnerability of family life, parental lack of responsibility, social hardships. The need to train the young generation towards prospective parenthood is determined by the crisis in modern family, parents' exodus in search of a better job abroad, all of these elements ending up in an increase in partial or total academic drop-out, accidental motherhood/fatherhood which lead to aggressive trends at psychological levels with an impact on the perennial need to become a parent, causing the so-called non parenting phenomenon as a life style.

The problem of educating towards parenthood is also determined by the belittled prestige of being a mother/father. Just like any other phenomenon, parenthood has an impact on private life. Parenthood is a complex social phenomenon which consists of two key elements: motherhood and fatherhood. It produces specific patterns and expectations and organizes daily routines. It does not affect the family alone, but also economies, ideologies and politics. Parenthood has a time and space dimension, it does not take place in a social void, it interrelates with and is completely shaped by demographic shifts, historic events, cultural patterns, norms and values, systems of social layers, family arrangements and developments and changes in the societal organization.

Historical and anthropological studies reveal that family represents an ideologic concept, a symbolic construct with its own history and policy,²² still true for parenthood, which appears to be the most ideologized and politized area of family experience,

²² Baciu A., Cazan C. Educația părinților. București: Ed. MarLink, 2006, p.4.

beside childhood.

Being multidimensional and complex, parenthood implies a variety of attitudes, aptitudes, objectives that are acquired through participation in community life. Specialized literature of the latest several decades shows that the significant changes in marital status of adults alongside with other socio-demographic changes, have contributed to dramatic changes in young people's life arrangements.²³ These changes have overlapped the proliferation of different family life arrangements, simply called lifestyles (Beck-Gernsheim, 2002) or non traditional or alternative family forms (as opposed to the classic triangular form). The in-depth and rapid changes at societal levels, caused by particular deconstruction events characteristic of post modern times have significantly altered parenthood.

Terry Arendell, developing his constructionist thesis of family, supported by Gubrium and Holstein in their work „What is family” (1990) and applying it to parenthood, argues that parental activity does not reflect a kind of behaviour derived from the reproduction function, but ways in which children are raised, brought up and integrated in society.

Parenthood is omnipresent and being a parent may seem a very simple, natural thing. A great number of adults, once parents, follow the parenting patterns they inherited from their own parents and the relationship child-parent is developed in a natural manner. They find it difficult to acknowledge the need for a special training to become parents much before they are a mother/father.

The anticipation of this educational aspect is viewed by some adults as pointless and it is a pity that parenthood is not treated as a source of achievement in life.

At the moment, parenting education is perceived as an important dimension of general education, focusing on discovering the values of parenthood, building the young generation's motivation to become a responsible and conscientious parent, developing the right personality traits required in fulfilling efficiently one's duty in this domain.

Parenting education aims at developing the capacity to culturally capitalize on topical information supplied by many social factors, including the mass-media, under the condition of diversification and individualization, which requires professionals in the field of education to adopt certain attitudes and to assess it judiciously in keeping with a scale of social values.

Parenting training is mandatory if a young person is expected to become an efficient parent in the future. This field of education must be related to the natural family environment, the young person's psychological framework, his level of cognition and societal demands. Openness to genuine human values requires a practical and theoretical solution to this problem. Family continues to represent the main social group to ensure a child's education. In a society where institutions and social relationships are changing constantly, the family can not remain unchanged, and no model of family organization should be idealized. All these changes are simple adaptations of individual behaviour with regard to demographic and economic changes which impact societies as a whole.

²³ Ciuperca C. Cuplul modern - între emancipare și disoluție. Alexandria: Ed. TIPOALEX, 2000, p.69.

Nowadays, there is a diversification of family models: the increasing number of single parent families, concubinage, divorce, the decision of some women to give birth outside marriage, rejecting parenthood; these new forms co-exist with the traditional model of conjugal family.²⁴

The ongoing changes at society level produce confusion about values related to parenthood not just among the young generation, but also among the older one. The situation can be improved through efficient education within the family aiming at conscious choices about parenting, with parents being counselled by professionals in the field.

Parenting education nowadays demands a solid foundation, not just episodic educational acts regarding the problem. It must be noted that currently there is no regulation to stipulate the need or the obligation for educational institutions to provide parenting training. Under the circumstances, the implementation of public policies in the field of parenting education becomes an imperative, alongside with the consolidation of an infrastructure to ensure the training and certification of teachers specialized in the field.

Training young people for prospective parenting is one of the most significant aspects of a respectable personality, capable to successfully integrate into society. This dimension of education takes place concurrently with value and knowledge acquisition, norm and ethic models observation, which must be internalized and become a need of the person in order to be later capitalized by schoolchildren and parents alike.

Educational institutions must project their activity regarding parenting education so that training future mothers and fathers becomes a major objective in itself. Institutions should join efforts in guiding the young towards conscious and planned parenthood. In this situation, a scientific strategic plan is a must for the training of the young generation for prospective parenthood.

The scientific problem consists in the pedagogical substantiation of the young generation towards parenthood through capitalizing the potential of general education institutions.

The aim and objectives of the research include:

- identify the presence of a strategic plan for prospective parenthood education in general education institutions.²⁵
- clarify the educational potential of schools towards training future parents.
- assess professional competences of teachers in the field of parenting education.

The scientific bases for the present research include: specialized literature review on the problem from different historic periods and geographic areas like: Banciu D., Ciupercă C., Grigorescu P., Iancu S., Narly N., Matei I., Mitrofan I., Stănculescu E., and others. In Moldova the problem is researched by L. Cuznețov, N. Ovcerenco, V.

²⁴ Ovcerenco N. Impactul devalorizării prestigiului parentalității asupra preferințelor axiologice ale tinerilor. În: Facultatea de pedagogie: tradiție și modernitate. Dialogul generațiilor. Chișinău: UPS "I. Creangă", 2014, p. 43.

²⁵ Ovcerenco N. Educația adolescentelor pentru maternitate-obiectiv major al învățământului preuniversitar. În: Univers pedagogic. Revista Ministerului Educației, nr. 1, Chișinău, 2004.

Bodrug, which serves as another argument in favour of our study.

Assessing the theoretical and applicative value of research in the field, we would like to note that the problem of training the young generation for prospective parenthood is underresearched. It is mainly conceived as a component of moral education or as a component of family education.

Such a training appears to be an emergency, as attitudes to parenthood determine greatly the way in which this role will be performed in the future¹.

The concept of educating the young generation for prospective parenthood defines, in a broad sense, the programs, services, and resources provided for the young with the objective to train them for a future parenting role (mother/father); they are aimed for the parents to train them and provide support in the field and to improve their parenting schemata if needed. In a narrower sense, the education for prospective parenthood refers to those programs that develop a value of parenthood in the young people, guide towards conscious and responsible parenting, help future parents to develop their own parenting skills.

Increasing awareness of the value of parenthood takes place within a triangular constellation: love, authority and family security. Education for prospective parenting in terms of attitudes and behaviour occurs through the identification with the parenting model from the family one comes from and its internalization. Any affective deficiency in fulfilling maternal/paternal roles, just like any other kind of deficiency, causes fallacies in the education for prospective parenting, particularly in the case of parents giving up their parenting duties. Harmful parenting practices are significant risk factors that correlate with an increasing number of young people choosing non parenting.

Young people learn about the parenting job before anything else, from personal experience, being raised by their own parents. This experience shapes their own perceptions and beliefs about what it means to be a good parent.

The „parenting scheme” (Ramey, 2000) is influenced by the personal experience of the once a child parent in his own family. The parenting scheme formed in childhood can change together with changing relations and lifestyles.

Deficient parenting schemes can be modified through gradual acquisition of topical information, meant to contribute to increasing awareness of parenthood values, developing a positive and responsible attitude based on knowledge about parents' rights and duties, the prevention of non parenting, of male feminization and female masculinization, misandry and misogyny; identifying parenting problems and strategies to solve them, informing parents with regard to raising children for the parenting role.

Educating young people for parenthood offers possible solutions to a number of social problems like accidental parenthood, teen motherhood, non parenting, promiscuity, delinquency, etc.²⁶

Thus, the proliferation of professional discourses directed towards students and families contribute to accelerating the professionalization of parenting, which is viewed as a job with its own rules, approached in a language belonging to the organizational field.

²⁶ Goddard H.W., Myers-Walls J.A., Lee T.R. Parenting: have we arrived? Or do we continue the journey? *Family and Consumer Sciences Research Journal*, 33, pp. 457-474, 2004.

Starting with the second half of the previous century, there has been an increase in the psycho-pedagogical studies which evaluate the experience related to interactions between parents and children in terms of parenting competence.

The assessment of parenting success or failure is equally designed both in the repertoire of the institutions dealing with the problems of the young and in the academic discourse in the field of psychology, pedagogy and social assistance, focusing on identifying the difficulties parents may face in educating their children for prospective parenthood, estimating the possibility to modify formal educational contents that aim at training the young from a psychopedagogic viewpoint for prospective parenthood.²⁷

The training for prospective parenthood is perceived as a key component of an ideal model of parenthood, focused on the analysis of parenting schemes and encouraging their modification when needed. The programs for the training for prospective parenting will qualify the young for prospective parenting and provide help in the field to families from high risk groups (single mother, alcohol/drug abuse, low socio-economic status). In such cases, efficiency levels rely on harmonizing the current model of parent-child interaction from the perspective of the ideal parenthood model. The need for such a training in a formal context is subsequent to a demand on behalf of parents. The parenting role is a socially developed one, thus it is greatly influenced by the society the parents live in. Child-raising practices and customs culturally determined become standards by which practices are judged as acceptable for a parenting scheme. Clarifying the sociocultural characteristics to base the training for prospective parenthood on, we should mention that in Moldova some specific socio-cultural patterns that have characterized our society for decades, are in use: broken or weak connections with the extended family, fragile/diminished social support(unknown neighbours, new friends), reduced social cohesion (in large cities), cultural rules/norms under „multicultural” change pressure, competitive, consumer society. Some other common features can be added to the ones above: both parents busy, making a career in high demanding jobs,(almost always absent from family), destroyed/superficial family structure, „disorganized” family caused by lack of structure and functions, artificial social insertion. All these elements show the need for immediate help provided to families with regard to training the young generation for prospective parenthood. Training programs for prospective parenting would, in fact, generate considerable labour force by boosting conscious and responsible parenthood.

To establish the existence and the peculiarities of an institutional strategic educational plan towards teenager prospective parenting, 8 descriptors have been applied, inventoried in international specialized literature as relevant for the efficiency of such programs.

- 1) The existence of a strategic parenting education program for young people (autonomous (mandatory/optional) or complementary to other family support programs).
- 2) Ways of approaching youth parenting education, main type of theoretical/practical approach.

²⁷ Ovcenco N. Parentalitatea – izvor al împlinirii vieții umane. În: Educația din perspectiva valorilor (editori Opreș D., Scheau I., Moșin O.). Vol.VIII. București: EICON, 2015, p.98-104.

- 3) The place where education programs for prospective parenting are organized.
- 4) Duration and frequency of parenting education programs.
- 5) The categories of teacher-trainers involved in prospective parenting programs and their professional background.
- 6) The intensity of parenting education programs
- 7) Funding parenting education programs.
- 8) Content features of parenting education programs; content diversity.

These descriptors have been used to create an 8 item questionnaire for general education teachers, 56 school teachers answered it. 78 teenagers (40 girls and 38 boys) answered the 8 item questionnaire for teenagers to identify if any activity for parenting education has been carried out. The study was conducted in 4 high schools from Chişinău from September, 2015 to April, 2016, involving 134 participants.

The data gathered after processing the answers to the questionnaires have been used to identify the education programs for prospective parenting, to describe some general aspects typical of school activities in terms of parenting education.

To increase the validity of our conclusions, we undertook triangulation of data sources, comparing at the analysis stage the data provided by the questionnaires with the ones from specialized literature, teaching resources and reference books for parents on parenting education at national level.

1) The existence of a program for parenting education autonomous (mandatory/optional) or complementary to some other programs that support families), kind of program-descriptor 1. There is a lack of such programs for teenagers. Although teachers from the institutions involved in the study acknowledge the importance and benefits of parenting education for both teenagers and parents, our study reveals the deficiency of programs aiming at training teenagers for the parenting career alongside with those for parents as independent and autonomous services to support and encourage family life and parenting. In fact, it appears that at institutional level parenting education programs are components of other subjects (like moral and spiritual education, civic education) and support programs for families and parents. Data processing from educational institutions reveals the weak position of parenting education programs as a component of a complementary program or service provided by schools as family counselling and support to train teenagers for prospective parenting.

2) Ways of approaching parenting education. To identify the ways parenting education programs approach skill building in future parents, we applied a descriptor dealing with ways to approach prospective parenting at school and in the family. Specialized literature lists four major ways inspired from Carter's model (1996):

- a) Systemic approach / family centered. The data reveal that the education strategy of the institutions involved in our study do not have any affiliation to systemic approaches in providing prospective parenting services.
- b) Empowerment and participation. Research of institutional educational policies reveals the presence of such an approach in prospective parenting education programs for parents and young people.
- c) Community based / culture and national value sensitive. This approach is not widely applied by the institutional strategy for prospective parenting education.
- d) Interdisciplinary /with a collaborative infrastructure involving professionals

from different fields. The parenting education program researched does not belong to this category. The data gathered show that the schools involved in the research do not encompass the 4 approaches mentioned above; high schools are not education providers for the parenting career.

3) The place where education programs for prospective parenting are organized. This kind of education is carried out within schools. Neutral meeting places for parenting education programs have not been identified. Online education in this direction has not been identified in schools. These institutions do not have the right logistics (internet connection, online interactive materials, specially designed tools for online use etc.) to ensure the development of online parenting education programs. This aspect is also conditioned by the fact that online education is still at an early stage of development in the country.

4) Duration and frequency of parenting education programs. Regarding the duration and frequency of training programs, it should be pointed that there is scarce research to show the optimal extent of an efficient parenting education program or the optimal number of meetings. High schools, as education providers, state that extensive programs are more efficient as they offer the possibility of developing attitudes and competences for an effective parenting role.

5) Categories of teacher-trainers involved in programs for prospective parenting and their professional background. The teacher coordinator has a key role in providing parenting education. It is worth mentioning that currently there are no specialized training programs for teachers to improve prospective parenting education.

6) The intensity of parenting education programs. This descriptor aims at establishing the intensity level of teacher intervention, starting from general information provided to future parents to specific competence development. In accordance with this descriptor, there are several programs:

- a) Informative programs. The parenting education program under study has an information component for prospective parents.
- b) Workshops, deemed to be the first real level of parenting education (Carter, 1996, p. 10) as the power asymmetry between professional and participants in terms of tight interactions within the group is reduced and the empowerment function can be achieved. This form of parenting education is not in use in high school.
- c) Discussions. This is a form that highlights the cultural peculiarities of the environment in which parenting education programs take place, emphasizing the experience of the young generation and boosting the empowerment aspect of the program. This approach towards organizing parenting education programs is found in high school.
- d) Systemic evaluation and planned intervention, which implies the presence of a cadre of experts, trained to deal with various problems within the field of parenting education. This form of organizing parenting education was not detected in the high schools involved in the study.

7) Funding parenting education programs. This aspect of parenting education programs is still unresolved under the conditions of institutional policies at national level that emphasize their importance in fighting non parenting and irresponsible parenting. Lack of proper funding for such programs leads to a significant decline in

efficient parenting education.

8) Content features of parenting education programs; content diversity. The contents of parenting education programs are incorporated in the parental education programs and could not be properly delineated; the topics covered have an episodic character regarding the way in which a professional informs parents instead of a clear-cut content with the objective of training the young generation for parenting.

Through this investigation we attempted to gather data related to professional high school teacher training and their acknowledging the significance of the problem. To reach this objective we used a structured questionnaire. 66,07% out of the total number of teachers involved in the study supplied valuable suggestions concerning the ways of parenting education starting from adolescence; 33,93% adopted an attitude meaning it is pointless to approach parenting education, 50% of the teachers state that training future parents should not be the responsibility of the school; the other 50% state the opposite: training prospective parents should become a major objective of high schools.

Teachers have been interviewed to assess the educational potential of schools in regard to training prospective parents. The results obtained are rather meaningful: Answers to the question „What do you think, is there a need for parenting education in primary school?” reflect the following:

Yes, within school curriculum frameworks – 50%;

Yes, as an objective of education within the family – 50%;

Yes, randomly – 0%.

Thus, 50% of the overall opinions refer to parenting education carried out within educational institutions. The other 50% of teachers conceive parenting education as a component of education within the family. These teachers' opinions harmonize with those opting for the responsibility of the school regarding prospective parenting education. Not a single teacher believes that parenting education should happen randomly.

The evaluation of teachers' professional competence regarding parenting education was performed via: direct observation of different activities, individual interviews, work experience analysis and examination of educational products. These tools allowed us to specify the following:

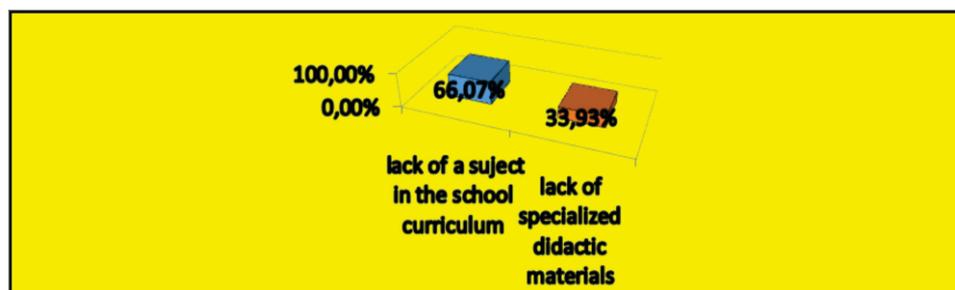
- The forms of planning teaching in terms of parenting education during adolescence.
- Educational technologies applied by teachers while training future parents.

Teachers have been asked to self-assess their professional expertise in parenting education applying a numerical scale: excellent (1), good (2), fair (3), inadequate (4). 56 high school teachers participated. As it is illustrated in the table below, 19 teachers stated they have excellent expertise, 9 are well trained, 19 indicate an insufficient level, and 9 are totally unprepared for the task.

Interviewed subjects	Numerical scale			
	1	2	3	4
	Very well trained	Well trained	Insufficiently trained	Not prepared
Number of teachers-56	19 (33,93%)	9 (16,07%)	19 (33,93%)	9 (16,07%)

An analysis of results emphasizes the main reasons for reduced potential competences in parenting education during adolescence, as described in Fig.1.

Figure 1. The main factors determining teachers' reduced professional competence in training teenagers for a parenting career.



The results obtained at the diagnosis stage regarding parenting education during adolescence allow us to identify the educational potential of the school; to clarify the impact of the educational institution on training future parents. It is assumed that a significant part of school education has fair potential in terms of parenting education which should be capitalized. All types of school activity have this potential. The contents of school activities can transmit age-relevant parenting information and have a share in developing moral features of great importance in fulfilling one's role as a parent.

The results of the study show that parenting education in schools is rather modest. School curriculum is not directly oriented towards meeting this objective.

An analysis of curricular documents, the results of interviews and discussions with teachers and school managers led to the conclusion that extra-curricular activities do not focus plenarily on training future parents. Syllabi examination and the observation of educational projects and activities reinforce the conclusion that schools do not involve enough in prospective parenting education and the contents in regard to the problem do not meet the challenges of the modern world. Training future parents in

educational institutions occurs mainly in a random manner instead of following a scientifically established system. The same remark is valid for the cooperation between schools and families.

Conclusion: prospective parenting education represents a systematic process the main components of which are actualization, understanding the essence of the parenting phenomenon, capitalizing specific information in daily life, developing skills the future parent will need in successfully fulfilling this role. The educational activity is a major element of the formative endeavour towards training future parents. If the school potential is to be exploited to achieve this objective, then specific topical activities that highlight the ethic-moral aspects of parenting should be implemented, the ability to assess the parenting phenomenon ought to be enhanced, alongside with developing skills of fulfilling one's duty as a family member. Educational activities focused on researching the parenting phenomenon ought to take place in keeping with specially developed content aiming at: discovering the value of parenting; forming ideas about parenting; developing competences needed to fulfill parental roles; familiarizing the prospective parent with his parental rights and duties; developing the right moral qualities young people will need in fulfilling efficiently their parental role; involving the future parent in social and familial activities with positive outcomes regarding his prospective parenting development.

The learning experience, conversations, disputes about problems related to prospective parenting, establishing partnerships, instructing parents, parenting courses for the young generation, parental counselling could be used as structural elements of the parenting formation system. Each of the components mentioned above has its own objectives, content and peculiarities. Applying them in a complex structure contributes significantly to the development of a positive attitude to parenting. If we keep acting within the confinements of curricular activities then it will be impossible to familiarize the young generation with the parenting phenomenon. Subsequently, the potential of nonformal and informal education should be taken advantage of.

Upgrading educational contents towards parenting from the perspective of problems characteristic of the modern family, genuine intervention focusing on the future parent formation ("prospective parenting training") should be accomplished on the basis of in-depth analysis of currently existing programs in this domain in order to rule out negative outcomes produced by formal, non-formal and informal educational contexts that can cause the parenting incapacity syndrome and hinder the development of a good parent-child relationship. It focuses on the prophylaxis of:

- Psychological immaturity which favours disorganized parental behaviour and leads to distortions in the parent-child relationship and subsequently, to loss of self.
- The profligate mindset of the prospective parent which transforms parenting capacities into a tool of affective recklessness used in bringing up children and which will lead to moral and spiritual degradation of the parent-child relationship.
- The behavioural incapacity to fulfill parental duties emphasizing the lack of rational-relational imagination and skills required to efficiently fulfill prospective parental roles.

Upgrading the contents of parenting education from the perspective of

challenges in the modern family should happen on the basis of cognitive-behavioral techniques with a positive impact on the value system of the young generation, a system where parenting will have a privileged place. Accordingly, school and family education of the young generation towards parenting will turn into the object of „a new morality”. Hence, the programs for prospective parenting education will include the components of „good parenting”, of conscious and responsible parenting.

In keeping with the results of our investigation we recommend:

1. The Development of a strategic plan of prospective parenting education that would meet the educational needs of the young and those of the modern family:
2. The implementation of an Integrated National Strategy to Develop Parenting Competences, with parent education as a component of permanent education, can provide a basis for the development of an integrated national education system for prospective parenting.
3. Adjusting contents and methodologies for prospective parenting education in keeping with the characteristics of different categories of young people and parents represents another dimension that should be taken into consideration. Parenting education programs should allow for transparency of parents' values, encouraging their participation as an involving and learning strategy. The existence of a formal framework for the development and distribution of informational and practical resources, available to future parents would represent a form of support in this area in Moldova.
4. Short-term interventions occurring in isolated social segments do not ensure sustainable effects and do not change collective mindset as intended. Increasing the addressability of parenting education programs to different categories of young people and parents through extended and consolidated social networks would allow for a program enhancement which would in turn develop a positive and responsible attitude to parenting and parental behaviour.

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Comparative Analysis of the Government of Moldova and Georgia's Management of the Education Sector. The Magic Wand or the Achilles heel?

Marcel OLARI*

Abstract

Human capital is one of the few resources that can offer to the Republic of Moldova a comparative advantage. However, if labor is not specialized in fields required by potential investors – job providers – human capital remains an untapped resource.

The development of human resources and the efficient use of existing potential are two of the most important factors contributing to comprehensive economic growth of Georgia.

Fast economic growth is an important precondition for increasing population's welfare and reducing poverty. At the same time, creation of equal opportunities for developing human capital through provision of quality services, social justice and strengthening the social systems is necessary as it provides access to quality education and healthcare systems.

This research paper consists in an analysis of the political views of Moldova and Georgia's Government on Education sector. Also, to understand better the issues related to this area, I will focus my attention more on the financial aspects of this sector. In order to obtain the correct comparative analysis of the Moldova and Georgia' situation, I will use the macroeconomic aggregates. The methods used in this research document are chronologically and progressive analysis.

Finally, it is supposed to be able to respond at the question: the Government of Moldova and Georgia's Management of the Education sector. The Magic wand or the Achilles heel?

Keywords: education, General Government Expenditures (GGE), General Government Expenditures on Education (GGEE), competitiveness, EU Association Agreement

1. Introduction

In recent years, an increasingly characteristic phenomenon for the education system in Republic of Moldova is preference for higher education showing that university education is a priority for Moldovan citizens.

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Consequences are felt directly on the economic front:

1. About 30% of graduates do not work according to professional qualifications obtained in vocational schools, colleges and universities, which show the necessity to diversify the educational routes by promoting the lifelong learning concept;
2. Lack of qualifications and low quality education of job candidates;
3. Non-competitive salaries - lack of business attractiveness;
4. Labor migration - an increasingly pressing problem.

The Government of Moldova' statement is that aligning the education system to the requirements of the labor market is imperative.

The strategic vision of the Government of Moldova consists in:

1. Modernization of the vocational education system;
2. Partnerships between education and labor market representatives;
3. Enacting new legislation on education, adjusted to the European experience, will allow structural and institutional reform in the field, taking into account the principle of efficiency and quality;
4. Reform of research and innovation system, by de-monopolization of its financing, by applying consistent and relevant rules supporting excellence in education and science, will boost the quality of career education;
5. Establishment of the National Agency for Higher Education and Research Quality Assurance is crucial for evaluation and accreditation of institutional and professional training/development programs for labor market specialists;
6. The National Framework for employment qualifications and standards will guide the educational process towards development of competencies required on the labor market;
7. A precondition for increasing the quality of education is to eliminate corruption factors in the education system.

At the same time, important investments in human resources development are necessary in Georgia. Georgian policies should be directed towards capacity building in human resources, it especially concerns youth, individuals with inadequate qualifications and persons that face the danger of discrimination in the labor market (handicapped people etc.).

The Government of Georgia statement is that in order to receive qualified academic and technical workforce in the long-term period, it's necessary to improve the quality of education and access to quality education systems.²

Formation of quality and accessible education system at all levels of education (general, vocational and tertiary) is a priority for the Government of Georgia.

Education is a fundamental factor of development and achieving sustainable economic development is impossible without investments in human capital. Only under strong and socially fair educational system can the existing social, cultural and economic challenges be overcome.

The problems of the education sector in Georgia are:

1. The quality of education especially in Georgia's general educational system. Only 38 percent of students are proficient in terms of reading literacy at or above the threshold set for functional illiteracy, and a mere 31 percent are proficient in mathematics at or above the threshold;

2. The quality of pre-school education also influences the development of human resources: on average, only 46 percent of children go to kindergartens in Georgia;
3. Georgia's vocational training system also faces challenges: vocational training programs struggle to meet labor market requirements, levels of public awareness of such programs are low and vocational training is still not regarded as being an equal or more attractive alternative to straightforward academic education.
4. Low level of spending on education is also a problem.

The strategic vision of the Government of Georgia consists in:

1. Improving accessibility to high-quality general education is one of the Government's main priorities. In order to improve the quality of general education, the education system must be based on modern, scientifically proven vision and concepts. The system's activities will be planned and implemented in accordance with that common vision:
 - a) education sectors will be harmonized and access to uninterrupted education will be ensured (preschool-general-vocational-tertiary education during the whole life);
 - b) training programs will be improved and developed;
 - c) the physical infrastructure of schools will be upgraded and developed;
 - d) strengthening preschool children's readiness for school;
 - e) increasing access to kindergartens and developing their quality.
2. Tertiary education system in Georgia must provide education of European standards, constantly work on improving its quality and obtain international trust, Social-economic Development Strategy of Georgia prepare competitive youth for local and international labor markets. A common informational-analytical system will be introduced with a view to evaluating the efficiency of tertiary education system.
3. With a view to improving learning and research quality internationalization component will be strengthened in education management model, legislative barriers will be removed in order to ensure students' and academic personnel's mobility.
4. Georgia will be more involved in relevant instruments and programs under EU-Georgia Association Agreement.

2. Comparative analysis of the Education public expenditures in Moldova and Georgia for the period of 2005-2014 years.

Table 1. Nominal value of the Education Public Expenditures and their share in the General Government Expenditures of Moldova, 2005-2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GGE*										
(mln. MDL)	13,94	17,97	22,41	26,14	27,35	29,32	32,10	35,37	38,65	44,39
	9.2	3.9	5.6	6.9	4.3	6.4	1.0	3.5	1.3	3.1
GGE										
E**										
(mln. MDL)	2,697.	3,605.	4,248.	5,178.	5,665.	6,574.	6,869.	7,397.	7,064.	7,823.
	0	8	6	3	9	5	0	0	1	6

Share of GGE E in GGE (%)	19.3 %	20.1 %	19.0 %	19.8 %	20.7 %	22.4 %	21.4 %	20.9 %	18.3 %	17.6 %
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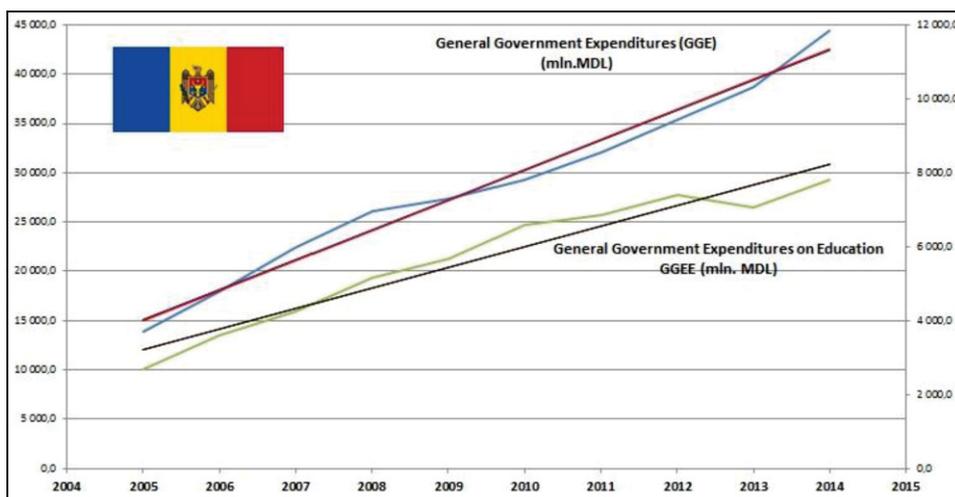
* General Government Expenditures (GGE) = Central Government Expenditures + Local Government Expenditures

** General Government Expenditures on Education (GGEE)

Source: elaborated by author based on data from www.mf.gov.md/en/reports [visited 15.05.2016]

As it is observed in the table above, the General Government Expenditures on Education (GGEE) in Moldova had increased from 2 697,0 mln. MDL to 7 823,6 mln. MDL in 2014. At the same time, it is noted that the share of GGEE in General Government Expenditures (GGE) had decreased from 21,4% in 2011 to 17,6% in 2014. So, what had happened in the period 2009-2010? It is sure that this change was caused by a political decision. It could be supposed that the European Government Coalition which overcame the Communist Party in 2009-2010 declined the share of this sector in General Government Expenditures.

Figure 1. The trend lines of the Education Public Expenditures and General Government Expenditures of Moldova, 2005-2014



Source: elaborated by author based on data from Table 1

In the Figure 1, it is noted that the trend of GGE's increasing in Moldova is higher than the trend of GGEE's and looking forward the difference becomes more evident.

Table 2. Nominal value of the Education Public Expenditures and their share in the General Government Expenditures of Georgia, 2005-2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GGE* (mln. GEL)	3,086.2	4,177.8	5,851.1	6,935.2	6,649.8	7,021.1	7,461.8	7,994.2	7,863.6	8,813.3
GGEE** (mln. GEL)	288.7	413.8	458.2	553.8	579.6	611.7	656.4	757.7	825.5	933.0
Share of GGEE in GGE (%)	9.4%	9.9%	7.8%	8.0%	8.7%	8.7%	8.8%	9.5%	10.5%	10.6%

* General Government Expenditures (GGE) = Central Government Expenditures + Local Government Expenditures

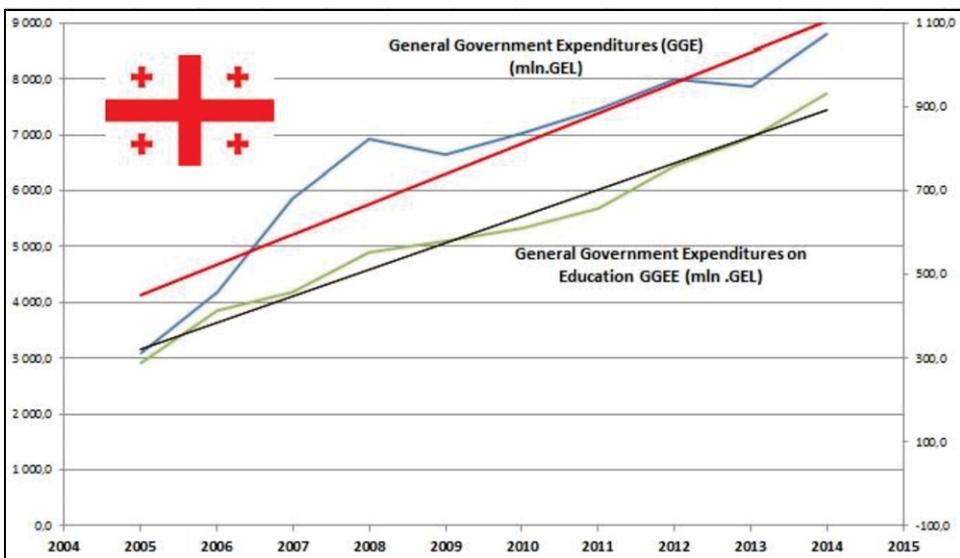
** General Government Expenditures on Education (GGEE)

Source: elaborated by the author based on data from www.mof.ge/en/4537 [visited 15.05.2016]

In the Table 2, it is observed that the General Government Expenditures on Education (GGEE) in Georgia had increased from 288,7 mln. GEL in 2005 to 933,0 mln. GEL in 2014. At the same time, what is different from the situation in Moldova, the share of GGEE in GGE had increased and reached a value of 10,6% in 2014, with small declines in 2007-2008.

It could be supposed that the political decision of Georgia is to invest and spend more on Education or at least to maintain the expenditure in this sector at the same level by reallocating funds from other sectors.

Figure 2. The trend lines of the Education Public Expenditures and General Government Expenditures of Georgia, 2005-2014



Source: elaborated by author based on data from table 2

In Figure 2, as it is observed, the trend lines of GGE and GGEE's increasing of Georgia are roughly parallel with a small discrepancy at the end of the period. So, the GGEE of Georgia had had the same rate of increasing as the GGE's.

Table 3. Nominal value of the Education Public Expenditures and their share in Gross Domestic Product of Moldova, 2005-2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GDP* (mln. MDL)	37,65 1.9	44,75 4.4	53,42 9.6	62,92 1.5	60,42 9.8	71,88 5.5	82,34 8.7	88,22 7.8	100,51 0.5	112,04 9.6
GGE E** (mln. MDL)	2,697 .0	3,605 .8	4,248 .6	5,178 .3	5,665 .9	6,574 .5	6,869 .0	7,397 .0	7,064. 1	7,823. 6
Share of GGE E in GDP (%)	7.2%	8.1%	8.0%	8.2%	9.4%	9.1%	8.3%	8.4%	7.0%	7.0%

* Gross Domestic Product (GDP)

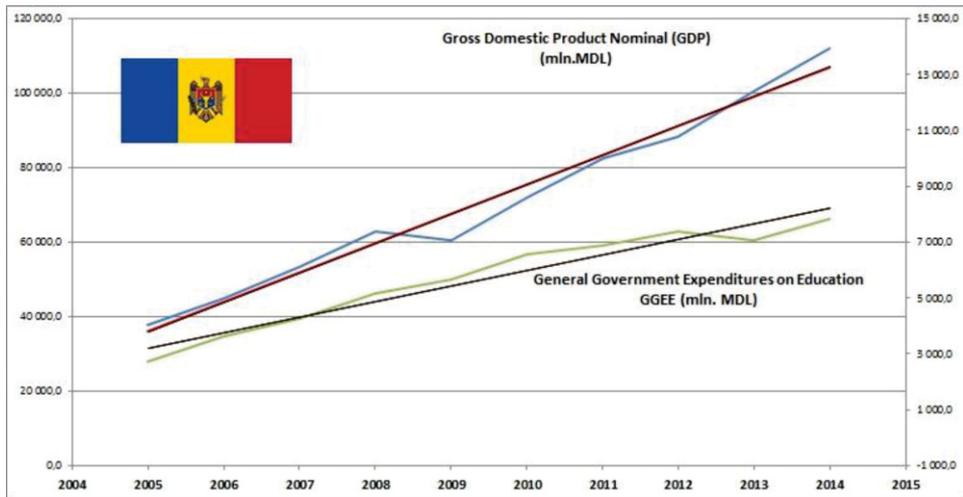
** General Government Expenditures on Education (GGEE)

Source: elaborated by author based on data from www.mf.gov.md/en/reports [visited 15.05.2016]

For the tables above and below, for making more analysis, it is taken into consideration a macroeconomic aggregate – Gross Domestic Product (GDP). According to the Table 3, it is remarked that the GGEE in Moldova reached in 2014 a value higher by 290,0% than in 2005. At the same time, the share of GGEE in Nominal Gross Domestic Product (GDP) had increased during the period 2005-2009 from 7,2% to 9,4%. After this period, it had declined to 7,0% in 2014.

Taking into account the 2014 year of analysis, when Moldova's population was almost 3,6 mln. citizens, it is distinguished that in 2014, on every 10 000 people, General Government spent 0,019% of GDP nominal value on Education.

Figure 3. The trend lines of the Education Public Expenditures and Gross Domestic Product of Moldova, 2005-2014



Source: elaborated by the author based on data from table 3

In the Figure presented above, it is noticed that in Moldova during the period 2005-2014 GEE had increased slower than the GDP nominal value, so, the rates of increasing are not the same and the differences become more evident at the end of the period.

In the data of the table below, it is attested that the GEE value in Georgia reached in 2014 a value by 323,2% higher than in 2005. At the same time, the share of GEE in nominal GDP of Georgia had increased from 2,5% in 2005 to 3,2% in 2014, with minor declines during the period 2007-2008.

Taking into account the analysis of 2014 year, when the population of Georgia was almost 4,6 mln. citizens, it is supposed that on every 10 000 Georgians, the General Government spent on Education 0,007% of GDP nominal value, which is smaller by 0.012% of GDP nominal value than in the case of Moldova.

Table 4. Nominal value of the Education Public Expenditures and their share in Gross Domestic Product of Georgia, 2005-2014.

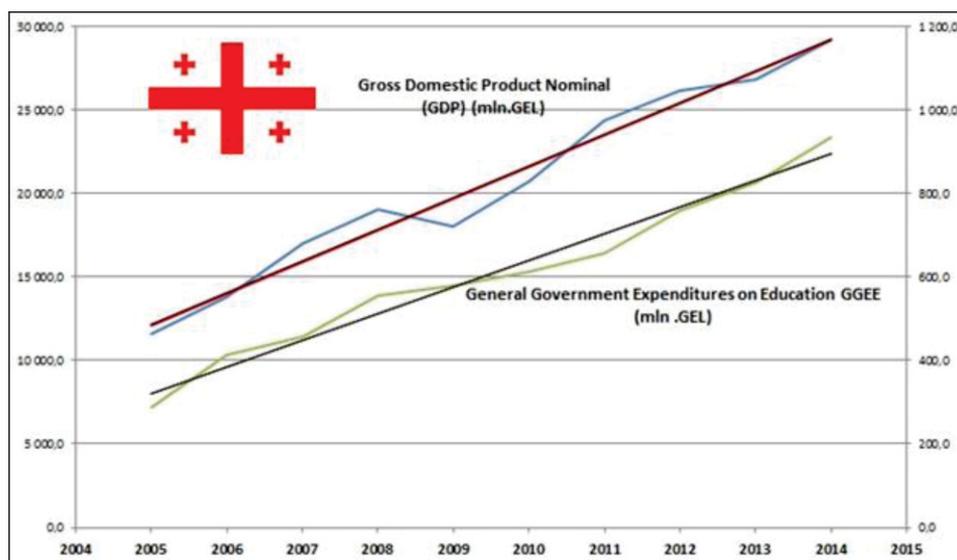
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GDP* (mln. GEL)	11,621.0	13,790.0	16,994.0	19,075.0	17,986.0	20,743.0	24,344.0	26,167.0	26,847.0	29,151.0
GGEE** (mln. GEL)	288.7	413.8	458.2	553.8	579.6	611.7	656.4	757.7	825.5	933.0
Share of GGEE in GDP (%)	2.5%	3.0%	2.7%	2.9%	3.2%	2.9%	2.7%	2.9%	3.1%	3.2%

* Gross Domestic Product (GDP)

** General Government Expenditures on Education (GGEE)

Source: elaborated by author based on data from www.mof.ge/en/4537 [visited 15.05.2016]

Figure 4. The trend lines of the Education Public Expenditures and Gross Domestic Product in Georgia, 2005-2014

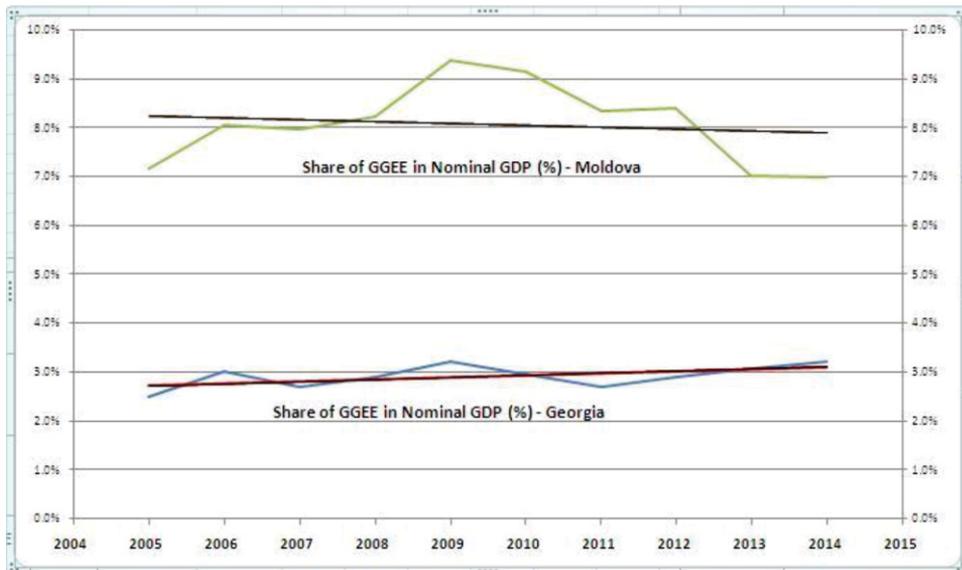


Source: elaborated by author based on data from table 4

According to the Figure 4, the trend lines of GDP and GGEE's increasing during the concerning period are roughly parallel with small discrepancies in the last years of the period. So, in Georgia, we attest more or less a stable increasing of GGEE that is in line with GDP growth.

At the same time, if we analyze both of the values concerning the GGEE in percentage of GDP, it is distinguished that the GGEE of Moldova in percentage of GDP is higher than the GGEE of Georgia. Nevertheless, during the period 2005-2014, in Moldova the rate of the share of GGEE in percentage of GDP declines, while the share of GGEE in percentage of GDP of Georgia increases (see the figure below).

Figure 5. The trend lines of the shares of GGEE in Nominal GDP of Moldova and Georgia, 2005-2014



Source: elaborated by author based on data from table 3 and 4

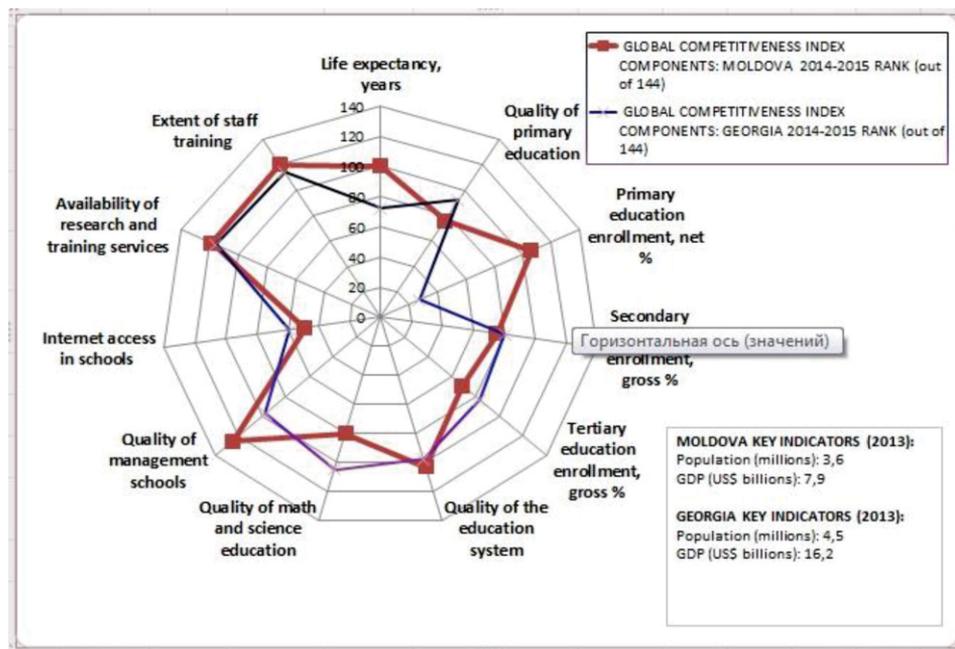
3. The international assessment of the Moldova and Georgia's education index

Table 5. The international assessment of Moldova and Georgia by the 2014-2015 Global Competitiveness Index Components

EDUCATION	MOLDOVA		GEORGIA	
	Value	RANK (out 144)	Value	RANK (out 144)
Life expectancy, years	68.7	100	73.9	72
Quality of primary education	3.8	76	3.5	92
Primary education enrollment, net %	87.9	106	98.3	27
Secondary education enrollment, gross %	88.2	75	86.8	80
Tertiary education enrollment, gross %	40.1	69	27.9	84
Quality of the education system	3.2	103	3.2	98
Quality of math and science education	4.0	80	3.4	105
Quality of management schools	3.2	125	3.8	98
Internet access in schools	4.9	49	4.6	59
Availability of research and training services	3.3	119	3.4	116
Extent of staff training	3.4	120	3.5	114

Source: elaborated by author based on data from World Economic Forum Competitiveness Report 2014-2015

Figure 6. The international assessment of Moldova and Georgia by the 2014-2015 Global Competitiveness Index Components



Source: elaborated by author based on data from table 5

In the table and figure above, it is remarked that Moldova has got a better rank on:

1. quality of primary education;
2. secondary education enrollment, gross %;
3. tertiary education enrollment, gross %;
4. quality of math and science education;
5. internet access in schools.

Therefore, Georgia overcomes Moldova in:

1. primary education enrollment, net %;
2. quality of education system, which is one of the most important education index components;
3. quality of management schools;
4. availability of research and training services; and
5. extent of staff training.

Conclusions:

According to the analysis above, it is attested that both of countries have good strategic political visions on Education sector, defined in the National Development Strategy: Moldova 2020, as well as, in the Social – economic Development Strategy: Georgia 2020.

The trend lines of increasing the General Government Expenditures on

Education in Moldova are different from those of General Government Expenditures and Gross Domestic Product. Not the same, in the case of Georgia, where the rates of increasing of the aggregates above are stable and roughly in the same line.

In 2014, on each Moldovan citizen, General Government spent roughly 3 times more expenditure on Education than in the case of Georgia. So, pursuant to the ranking report mentioned above, it is supposed to be the time to reform the management of this sector and with fewer funds to do more concrete things.

The efficiency of the public funds allocated by the Government has been attested in the international assessment of the Moldova and Georgia's education index provided by the World Economic Forum Competitiveness Report 2014-2015. At this moment, it is remarked that with less public expenditure, Georgia is more efficient and better than Moldova concerning important education index components. So, it's time to claim and to reform the education sector according to the European standards, to eliminate corruption from this sector and, even the General Government Expenditures on Education declines in recent years as share of the General Government Expenditures and GDP, to do concrete actions for improving the quality of the education system and therefore the welfare of the population.

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THE ROW MATERIAL POLICY IN POOR AND SMALL COUNTRIES

Lilia ŞARGU*, Alexander GRIBINCEA**, Vadim ALEXEENCO***

Abstract

The major tasks concerning economic diversification and modernization mean the importance of priorities for foreign policy regarding economic diplomacy. Thinking about the governmental tasks for prioritizing directions of foreign trade activities, by attracting international investors, by upgrading technology, importing advanced foreign technologies, exporting development, and promoting national economic interests abroad. The Governmental structures and authorized institutions always relay on importance for external economic policy, focusing on achieving concrete economic results. In a globalized industrialization, tasks of economic modernization, development of the resource and infrastructure establishing for the Ministry of Foreign Affairs and European Integration, tasks that require intensification of economic cooperation in a widespread area. The particular importance in this research has the close relationship between cooperation within international organizations with universal or regional interests. Achieving the objectives of economic diplomacy will help improve the competitiveness of the economy ultimately, create new industries and jobs and economic growth of the country as a whole.

Keywords: poor countries, raw materials, trade, export, import advanced technology.

1. Introduction

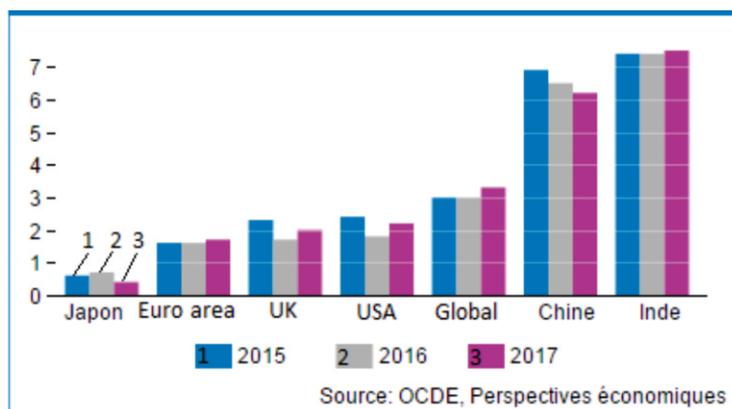
The volume increase of world trade is expected to remain low in 2016 at 2.8%, unchanged from the rate of 2.8% in 2015 (Figure 1). Imports from developed countries are expected to decline this year while demand for imported products expected to resume momentum in the economies of developing countries in Asia. World trade growth is expected to reach 3.6% in 2017, WTO economists as announced on April 7, 2016.

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Figura 1. The world economy is caught in a trap of real economic growth, real GDP growth, annual changes, %



Source: OECD Secretariat de l'. 2016

How should those countries with poor in natural resources, proceed? These countries are looking for other options of existence, focusing on financial markets, services, tourism, or importing stocks, process it and later sale products already with a degree of intelligence and high tech, adding high value. Moldova and other countries do not have rich natural resources. South Korea was taken as an example, to learn from its experience.

Research purposes. To research the strategic behavior of some countries, like South Korea shortage of raw materials, but having a high GDP and a decent standard of living of the population.

The methods used focused on the comparison, statistics, induction, deduction, etc. Once in dimensions territory states can be ranked:

States with several million km² area:

- Russia, Canada, China, USA, Brazil, Argentina, Australia, India, Kazakhstan

Member surface of hundreds of thousands of km²:

- France, Ukraine, Spain, Germany, Sudan, ...

States with an area of several thousand or tens of thousands of km²:

- Austria, Ireland, Moldova, Switzerland, Lithuania ...

Classification of states in the world after wheat Insurance natural resources

States with a complex natural resource of global significance

- Russia, USA, Canada, Australia, Brazil, R.A.S., Mexico, Kazakhstan ...

1-2 states that have natural resources of global significance

- Arabic peninsula, Libya, Chile, Peru, Zambia (copper), Malaysia, Thailand (tin), Sweden, Norway, Finland (res. forestiere)

Countries that have natural resources of national or regional significance

- Great Britain, France, Ukraine, Germany, Belarus, Tunisia, Argentina, Azerbaijan ...

Member poorly supplied with natural resources

- Moldova, Japan, Switzerland, Lithuania, Latvia, Nicaragua, Sudan, Ethiopia, ...

How poor and outdated economic Korea managed a leap without precedent in the world economy. If analyzed briefly, the strategy chosen by the Government of South Korea, will serve as the basis of its export strategy. In the last 35-40 years, Korea was transformed actually into a country-factory, importing raw materials and turning them into finished products and exporting them. There was no another way for South Korea that lacks in natural resources. It is clear now that after such strategy adopted by South Korea, the country, is in considerable export dependencies. The status of global markets, exchange rate fluctuations, changes in customs legislation in a short time affects directly every Korean, and information regarding import-export are studied carefully by all who in one way or another are related to the Korean economy.

The ascendant growth of the Korean economy was begun in the early 1960s, when the country adopted export strategy. Over a period of a quarter century (aa.1964-2000) South Korea become first among other places in the world, in the growth of exports, which grew by 22.4% on average annually (in some even successful years the export is doubled). In 2001 S. Korea relatively small country, by the general foreign trades and export volume, ranks 13th in 2015, reaching its export share amounted to 7 150.6 billion USD and all foreign trade (imports and exports) totaled 291.5 billion USD. For comparison: Russia's foreign trade in recent years ranked 17th in the world, exporting 103,1 billion, and overall foreign trade - 162.1 billion dollars, so almost two times less than South Korea. This indicates that Russia after foreign trade parameters is at the same level with Malaysia and Sweden, but remains far behind Taiwan and Singapore.

Table 1. FOB exports, Imports CIF and FOB / CIF trade balance by main groups of Countries, EUR million

	January 2016		
	FOB Exports	Imports CIF	FOB / CIF trade balance
TOTAL	4118.1	4500.4	-382.3
Of which:			
EUROPE	3592.1	3919.2	-327.1
EUROPEAN UNION	3200.4	3527.4	-327.0
EFTA	34.6	38.2	-3.6
OTHER EUROPEAN COUNTRIES	357.2	353.7	3.5
ASIA	283.5	455.6	-172.1
MIDDLE EAST	159.8	24.3	135.5
OTHER ASIAN COUNTRIES	123.8	431.3	-307.5
AFRICA	124.4	45.5	78.9
NORTH AFRICA	95.2	27.8	67.4

OTHER AFRICAN COUNTRIES	29.2	17.6	11.6
AMERICA	108.6	76.0	32.6
OCEANIA	4.4	2.5	1.9

Income per capita in South Korea rose from \$ 100 in 1963 to nearly 30.000 USD today. Unemployment is decreasing, and reached the lowest level since 2002, but the number of illegal workers is important, growing inequality and social ties are deteriorating. The largest foreign trade partner of South Korea remains the US, the trade volume in 2001 was USD 53.4 billion (18.3% of the total foreign trade turnover). In second place is Japan (USD 43.1 billion or 14.8% of turnover), followed by China (10.8%), Hong Kong (3.7%) and Taiwan (3.5%) . 5 main export partners among EU countries, in decreasing order of volume registered are Germany (4.7 billion USD), UK (USD 4.3 billion), the Netherlands (\$ 3.1 billion), Slovakia (2, 8 billion USD) and Italy (2.7 billion USD), while the imports are Germany (15.6 billion dollars), France (\$ 4.8 billion), Britain (\$ 4.4 billion), Italy (USD 4.3 billion) and the Netherlands (USD 3.2 billion).

Table 2. South Korea's economic indexes, 2012-2016

Annual growth	2012	2013	2014	2015	2016 (e)
GDP(USD bn)	1222.81	1305.61	1410.38	1392.95	1450.05
GDP(Annual growth in%, constant prices)	2.3	2.9	3.3	2,7e	3.2
GDP per capita(USD)	24.454	25.998	27.970	27.513e	28.525
Public financial balance(% Of GDP)	1.6	0.8	0.9	-0.3	0.4
State debt(% Of GDP)	32.3	34.5	36.0	38.2	39.3
Inflation rate (%)	2.2	1.3	1.3	0,7e	1.8
Unemployment rate(% Of active population)	3.2	3.1	3.5	3.7	3.5
Current Balance transactions (USD bn)	50.84	81.15	89.22	98,40e	96,87
The balance of current transactions on (% Of GDP)	4.2	6.2	6.3	7,1e	6.7

Sliver: IMF - World Economic Outlook Database, 2015

Note: (e) Estimated Data

Saudi Arabia trade, placed 6th, is not well stabilized: Korean exports in this country are \$ 8 billion, while imports - only \$ 1.3 billion. This gap is explained by the fact that Saudi Arabia is the largest oil supplier for South Korea. The 7th or 8th place out of 10 largest trading partners is Germany, Indonesia, Australia and Singapore. The

turnover with Russia in 2001 was only 2.9 billion USD, ranking 29th among other partners. Foreign trade between Russia and S. Korea is not well balanced, S. Korean imports from Russia amounted 1929 billion dollars, while exports to Russia - 938 million USD. This discrepancy is due to the fact that raw material trade is predominant with S. Korea. Main exports between S. Korean and Russia - are petrochemicals (20% of total exports), produced food, textile, automobile, electronic products. Russia sells in Korea mineral products (30% of all imports from Russia), metal products (mainly - material for metallurgical plants) and seafood. These figures do not reflect the whole picture because individuals are omitted (small entrepreneurs to trade in used cars), sometimes close to the official.

**Table 3. World trade in commercial services by region and economy, 2015
Billions USD and% Value**

	Export		Import	
	Value, 2015	Variation% 2010-15	Value 2015	Variation% 2010-15
World	4675	3.8	4570	4.1
US	690	4.9	469	4.4
Brazil	33	2.4	69	3.6
europ	2205	3.1	1880	2.6
EU-28	1958	3.1	1707	2.7
Chine	229	4.1	437	17.4
Japan	158	3.7	174	1.3
India	158	6.3	126	1.9
Singapour	140	6.7	144	7.2
South Korea	97	3.3	112	3.1
Russia	49	0.1	85	3.1

Source: WTO report 2016

Article principal occupies in export automobiles, steel, semiconductors, electronics and marine cargo ships. All these Guiding products are intended primary destinations for foreign market. About half of the cars produced se exportă (at 2001-1500000 from 2.95 million) and Heavy virtually all ships built in Korea. In 2001 the first place was semiconductors (9.5% related to total exports). Then comes automobiles (8.8%), computers (7.4%), digital means of communication (6.6%) and ships (6.4% of exports). Korea imports preponderance raw materials and technologies (spoken less. In Korea missing eesursele energy of which reason all the oil and gas are imported. Korea, although it is small, is fifth after the import volume of oil in the world . in 2001, oil

imports accounted for 15% of total imports of Korea (after cost). the gas is second only to oil - 3% of imports. the imports a considerable amount of cǎbune, including cox, without which it operates steel production. Coal for cox holds third place in import. the country imports about half of the iron ore required, wood and other raw material.

After the research authors, among the ten countries that import Iranian oil records: China: 550,000, India: 320,000 Japan 310,000, South Korea: 220,000, Turkey 190,000 Italy 180,000, Spain: 160,000, Greece: 110,000, South Africa, 60,000, France 50,000 (barrels per day): [possible]. The main consumers of oil remain stable in industrialized countries worldwide. But lately accelerated increase in consumption from developing countries as a share amounting to the industrialized countries. Fluctuations if and excel in the field in recent years - are insignificant. Consumption remains first in the US.

Figura 2. Top 10 most Innovative Economies [3]



Sources: Bloomberg, International Monetary Fund, World Bank, OECD, WIPO, UN, 2016

Regarding foreign trade, 2001 was not the best for Korea - unlike success in 2000. In 2000, the prices significantly reduced for some products in Korean exports - primarily for steel and semiconductors. An important role was played September 2011, which had a negative impact on the US economy - the main trading partner of Korea as well as difficulties in the second half of the same year affecting most developed economies. Therefore, Korean exports in 2001 compared to 2000 increased by only 0.7% - modest result compared to 1989. Multiple South Korea's problems have been created by high oil prices, which are kept for a long enough time (for Russian delight), however the trade balance remained positive. Meanwhile, trade balance, despite all difficulties, remains positive, ie exports exceeded imports: in 2001, S. Korea sold goods by 8.4 bln. USD more than bought.

These issues - remain tactical and temporary: the price however is always fluctuates but after this recession it will exchange vector for growth inevitably. Unfortunately, the tactical problems are not limited to a growing strategic threat to South Korean trade companies from China's foreign trade. This is due to the structure of S. Korean exports, the products that have traditionally predominated in intensive manpower industries with a medium difficulty as shipbuilding (four naval giants Hyundai Heavy Industries headed, then Daewoo Shipbuilding & Marine Engineering

(DSME) and Samsung Heavy Industries), Automotive and metallurgy [core].

In this area, the main advantage of Korea lies in the availability of cheap labor and very disciplined and high level of education. In recent years the situation has radically changed. Korean workers currently receive salaries similar to those Spanish or Greek, while in China, workers are receiving quit modest salaries as before. In early 2002, the average wage of workers on the assembly line in Korea amounted to \$ 7.75 per hour; while in China was eight times lower - just \$ 0.92 per hour.

Table 4. New world order: the Largest Economies in 2050 [2]

2010		2050	
Country	GDP (Billion USD)	Country	GDP (Billion USD)
US	14524	China	24600
China	5743	US	22300
Japan	5391	India	8200
Germany	3306	Japan	6400
France	2555	Germany	3700
UK	2259	UK	3576
Brazil	2204	Brazil	2960
Italy	2037	Mexico	2810
Canada	1564	France	2750
Russia	1477	Canada	2287

1000 KRW = 0.84USD / 1USD = 1190 KRW

This gap allows Chinese companies to substitute competitors in the areas of South Korean industries with high labor share. Already, there is a pressure of Chinese shipbuilding and metallurgy industries, and it expecting the same in Chinese car manufacturing. In any case rejection of the export strategy for Republic of South Korea in the near future is not an option. Exports remain the key of success of Korea's economy, the base of the entire economy.

The Korean companies at the moment have two options to overcome this potentially dangerous situation. The first way - is to build high-tech industries, primarily - in electronics, IT and telecommunications. In these areas, Chinese producers are not yet serious competition, but these Korean companies must tackle another challenge: to enter the market mature, trained, long time occupied by Western firms and Japanese as well.

The second way - is the gradual transfer of simple technology industries, but with a share of advanced manpower-intensive outside Korea, in countries with cheap labor. It is no coincidence that more and more Korean companies set up factories in Malaysia, Vietnam and of course China. In any case, it is clear that Korea does not give guidance exports from Korea in the near future. Exports - the main condition for

prosperity of the country based his entire savings.

The fifteenth largest economy - South Korea has seen a dramatic increase in the last thirty years. However, due to its strong involvement in international trade and finance, the country is vulnerable to external shocks. In 2015, Korean economic growth has stagnated (2.7%), the country faces an epidemic of the Middle East respiratory syndrome (MERS), which has affected consumption. It is expected a slight rebound in economic growth in 2016, with recovery in household consumption and entry into force of the FTA signed with Australia and China.

South Korea suffering since 2012 with the economic downturn in China and the US, the country's main trading partners. In response to the slowdown in 2015, the Korean government has set a stimulus package of 19 billion USD, which provides special tax exemptions, infrastructure construction and aid to SMEs. Budget 2016 also includes measures to strengthen social protection and development services. The government launched a second five-year plan for 'green growth', but at the COP 21 climate commitments disappointed. With inflation at high, the central bank carries out accommodative monetary policy. If, in 2015, the country registered a slight deficit due to exceptional expenditure, public balance should lay some surplus in 2016. The public debt sustainability, but corporate debt represents 30% of GDP and the high level of household debt poses a risk to the banking sector. The country will also address structural problems as financial market underdevelopment, aging and eroding the country's competitiveness as a result of the modernization of the Chinese economy. At the end of 2015 was marked by a strong wave of protest against the liberalization of the labor market. Despite the agreement "six points" between the two countries, tensions with North Korea persists.

Income per capita in South Korea rose from 100 USD in 1963 to over 30.000 USD today. Unemployment is declining; reaching its lowest level since 2002, but the number of illegal workers is increasing and affecting social ties as well.

Key industries. The primary sector is weak in Korea, representing only a negligible part in the country's GDP. Rice is the main crop, cultivating it and barley, wheat, corn, soybeans and sorghum widely. It is also widespread livestock. South Korea's mineral resources are limited to gold and silver. The country's major industries are textiles, metallurgy, automobile manufacturing, shipbuilding and electronics. South Korea is the largest semiconductor manufacturer in the world. The manufacturing sector represents 40% of GDP, whereas the tertiary sector represents almost 60%.

Trade. South Korea's largest exporter 7th and 9th importer of goods (13 services) and trade represents over 104% of GDP (average 2012-2014). The trade balance is largely a surplus starting in February 2012 and should remain so in the coming years. In 2015, the trade surplus reached a record exceptional 90 billion, decreasing imports (-16.9% compared to 2014), faster than exports (-7.9%). Main trading partners are China, Japan, European Union and United States.

After sustained growth in recent decades (with an average annual growth of gross domestic product [GDP] of 7.1% between 1980 and 2010), the South Korean economy now growing at a more moderate pace (average annual GDP growth of 3.0% between 2010 and 2014). Dependent largely on the good performance of exports (48.1% of GDP in 2014), South Korea's economy continues to suffer from the global economic and financial crisis of 2008 and its effect on international demand, especially

China and other Asian countries. Moreover, the rise in recent years by the Korean currency (won), especially against the Japanese yen, undermining the competitiveness of exporters. The high level of indebtedness of Korean households - whose average disposable income has not increased as fast as the rest of the economy - weighed on consumer spending and the housing market.

Concluding, it can be noted that as the level of living standards are high, it is not mandatory that the country features natural resources, deposits or is extremely labor-intensive. With more importance the country has a well-developed strategy, oriented to the export of finished smart products with a degree of advanced technicality. Every country in the international division of labor chooses the optimal path.

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New Forms of Scientific Communication for Research Intensification

Oxana SAVCIUC*, Elena RAILEAN**

Abstract

Development of an effective system of interaction between the scientist and scientific library will optimize the information services for scientists and will promote the development of national science on the basis of new forms of scientific communication.

Keywords: scientific communication, electronic information, information needs, scientific library, electronic journals, databases, blogs, forums, repositories, chat, file sharing, e-mail

1. Introduction

Scientific communication as a form of business communication is of interest to library professionals engaged in information service of scientists.

Modern trends in civilization evolution, the development of information technologies, the growth of information in the world and others modify the forms of communication in society as well as in scientific community. Monitoring and adaptation to these changes, development of an efficient system of interaction between scientists and research library will enable optimization of information service of scientists and will contribute to the development of national science.

The trends in developing scientific communication are the extension of Open Access to scientific information, the growth of informal communication value, the creation of the network of remote scientific teams, the optimization of interdisciplinary and international cooperation, the emergence of new forms of scientific communication on the basis of information technologies, the enhancement of the role of self-discipline of scientists and their potential in free dissemination of research results. New forms of scientific communication blur the institutional and interdisciplinary boundaries, thereby increasing the scientist's responsibility for disseminating the results of their own research, the choice of optimal communication channels.

2. Challenge

The trends of quick growth of new forms of scientific communication bring researchers both opportunities and some threats. Scientists need more time to adapt to

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new communication channels, sometimes for a reason they do not trust them. The quality and the status of new forms of scientific communication going online require expert assessment, which is complicated by the lack of specialists in this area and the lack of adequate qualification of scientific libraries for the new role.

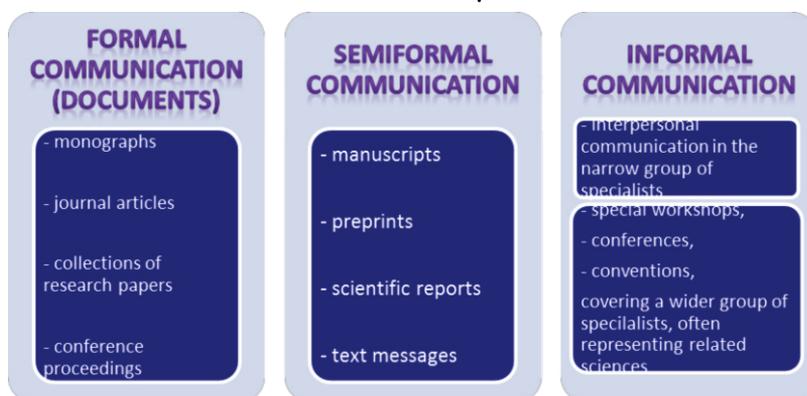
The evolution of scientific communication from letters, personal interviews, articles to innovative forms of communicating scientific knowledge on the basis of information technologies makes libraries look to new possibilities of communicating information to consumers, their relation to modern communication channels and users' preferences for receiving and communicating scientific information in order to completely meet professional information needs of scientists.

Over the last century the status of science has changed, it becomes a state business, scientific production acquires controlled character, there are introduced scientometric methods of measuring scientific research results. The research libraries become a significant segment in assessing scientific research results, they seek to optimize the scientific communication of researchers and to promote their research results through a variety of communication channels.

Collection and analysis of empirical data are a fairly expensive part of scientific research. The research libraries relying on the use of instruments offered by modern information technology are designed to reduce the scientific production complexity by offering timely informational resources and informing about new forms of scientific communication in a network environment.

The system of scientific communication includes subsystems: formal, semiformal and informal communication. (Tab.1). Which in its turn can be divided into traditional and innovative one. Traditional communication includes articles, scientific conferences, workshops, letters, scientific reports and others. Innovative communication may include communication based on information technologies, such as online conferences, scientific institutions websites, articles in electronic journals, databases, blogs, forums, repositories, chat, file sharing, e-mail and others.

Figure 1. System of scientific communication.



Source: Developed by the authors.

Research techniques.

The analysis of preferences of consumers of scientific information on the basis of the questionnaire survey and desk research of new forms of scientific communication on the Internet helped to identify the peculiarities of communicative interaction between the scientists of Moldova and other countries at the present stage.

Results.

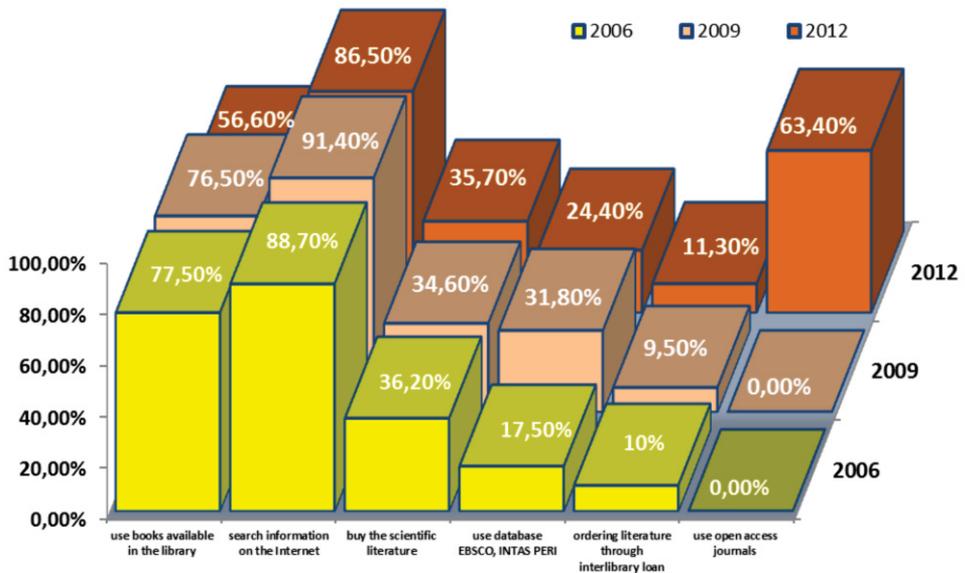
The Moldovan scientists actively use the opportunities provided by modern computer telecommunications, which is confirmed by the research on professional information needs of the scientists of Moldova conducted in the period of 2005-2012 [4, 217 p.].

The active use of various forms of electronic scientific communication enables active integration of the Moldovan scientists into the global scientific community.

Traditional scientific journals with electronic archives, scientific organizations websites, e-journals with open access enjoy the researchers' special confidence.

There is a tendency to reduce calls to the library in the process of scientific production, that is, library attendance, for the rest the proportion of using the scientific communication channels remains unchanged (Figure 2).

Figure 2. Scientists' preferences in selecting the sources of information acquisition.



Source: РАЙЛЯН, Е., САВЧУК, О. Инновационная маркетинговая стратегия в деятельности научной библиотеки. Кишинэу: ASEM, 2015. 117с.

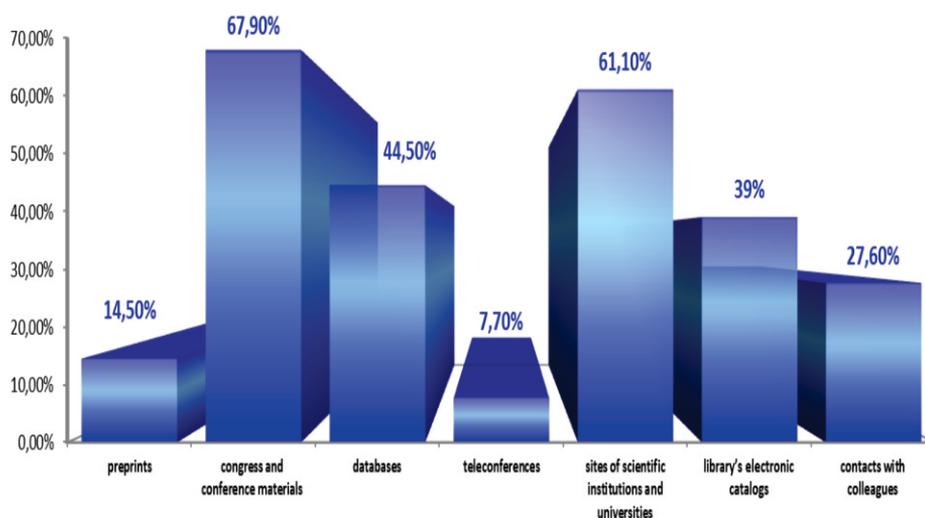
The research has found that the Moldovan scientists are increasingly using scientific information in electronic form in the process of scientific production. 30 - 80% of all scientific information consumed by most scientists in the process of scientific production is scientific information in electronic form [4, p. 217].

The forms of online scientific communication used by the Moldovan scientists are presented in Figure 3.

The transfer of scientists' activity in the electronic environment changes the structure of scientific communication. Dr. Blu points out to an interesting paradox: despite the fact that the Internet was created by scientists for scientists, they are in no haste to discover all its benefits. [3]

Informal communication provides the modern scientists with 70-80% of the information necessary for their work. [6]

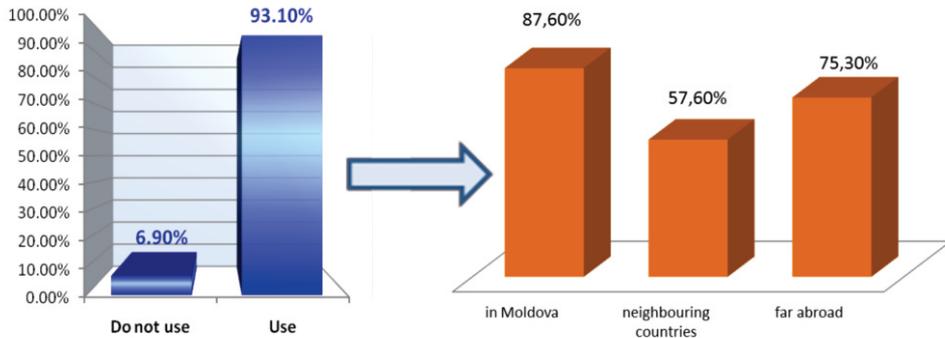
Figure 3. Scientific communication used by scientists in electronic environment.



Source: РАЙЛЯН, Е., САВЧУК, О. Инновационная маркетинговая стратегия в деятельности научной библиотеки. Кишинэу: АSEM, 2015. 107с.

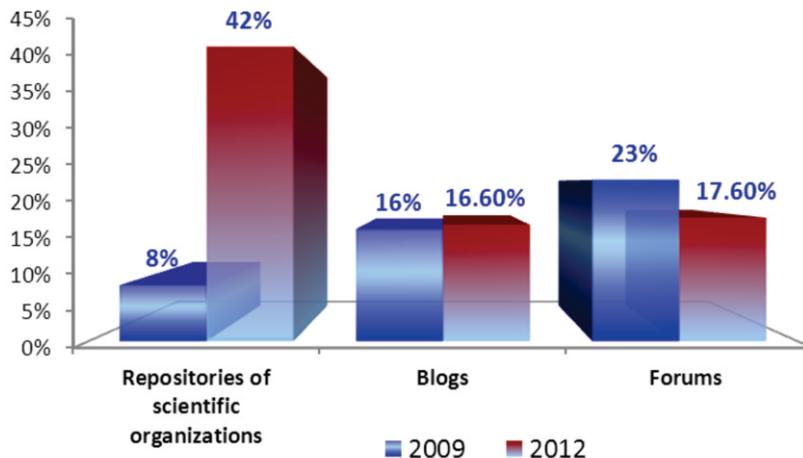
Among the informal channels of information exchange and dissemination the Moldovan scientists use e-mail most of all (Figure 4). This rapid means of scientific communication is extremely popular among scientists, but there is a problem with processing and storage of this type of information.

Communication with “close” colleagues dominates. These peculiarities of informal communication have already been identified by the sociologist of science G. Diumenton. He compared the number of personal contacts of professionals interviewed by him with close and distant colleagues. It turned out that internal contacts dominated. Similar results were obtained by American sociologists. [3]

Figure 4. Use of e-mail in scientific communication

Source: РАЙЛЯН, Е., САВЧУК, О. Инновационная маркетинговая стратегия в деятельности научной библиотеки. Кишинэу: ASEM, 2015. 107с.

Less popular forms of scientific communication are repositories, blogs and forums (Figure 5). And if in scientific organizations repositories the information is clearly organized and is subject to archiving, then in scientific forums and blogs there are risks of losing valuable data, since there is no system for the collection and storage of scientific information, there is a risk of loss of research priorities, the risk that a competitor will appropriate the results of your scientific research.

Figure 5. Innovative forms of scientific communication used by the Moldovan scientists in 2009 and 2012.

Source: РАЙЛЯН, Е., САВЧУК, О. Инновационная маркетинговая стратегия в деятельности научной библиотеки. Кишинэу: ASEM, 2015. 107с.

In the world there are about two thousand blogs related to scientific topics [1, p.142]. The most famous and popular among the scholars are:

- Research Blogging (<http://researchblogging.org/>) is a website where scientists

can discuss the articles on exact sciences, medicine, engineering, geosciences, social sciences, anthropology, psychology and others.

- Research Blogging allows users to mark messages as metadata - the information about the author of the article and revision history. This allows identifying the priority publications, which has been considered so far the exclusive advantage of peer-reviewed journals [1, p.144].
- The website is equipped with a well-designed service that allows saving, sending, marking the necessary information, easily finding the related information and getting in easy contact with the authors of scientific articles.
- Scientific Blogging (<http://www.science20.com/>) provides information on social and exact sciences, geosciences, medicine, cultural studies. This online product for scientists in the network promotes the idea of Science 2.0 and innovative opportunities to optimize the scientific production in the XXI century.
- The interesting format ResearchGate (www.researchgate.net) which is a social network and forum of scientists from all scientific fields brings together seven million researchers, including 45 Nobel Prize winners. Created in 2008 by physicists Dr. Ijad Madisch and Dr. Sören Hofmayer, and by the scientist in the field of computer technology Horst Fickenscher this website is designed to facilitate scientific communication between scholars from different parts of the world, to provide access to research results, knowledge and experience. On ResearchGate researchers can find what they need for promoting their research.
- The website offers a semantic search, forums, methodological discussions, publication database exchange and others. Free registration is required, which is done under one of three types of researchers: an academic researcher, a corporate researcher and another type of researcher (independent researcher, graduate).
- Epernicus (www.epernicus.com/) is a specialized social network designed to facilitate communication, exchange of experience and cooperation in research activities. This site offers the expert review of the results and scientific facts.
- Connexions (cnx.org) is online scientific community created with support from William and Flora Hallet Fund, Maxfield and Connexions Consortium. The scientists are able to freely exchange modules covering various fields of knowledge. The information in OpenStax CNX is presented in small modules according to various branches of knowledge and groups of modules structured in monographs and educational materials.
- Scientia.ro (<http://www.scientia.ro/>) is the largest Romanian forum popularizing science and technology and presenting daily high-quality articles and news information. There is a possibility for forum participants to communicate by asking and answering questions.
- On Russian scientific forum dxdy (<http://dxdy.ru>) there are discussions in the field of mathematics, chemistry, physics, engineering, medicine, biology, social sciences and humanities, computer science.

Scientists usually keep blogs for two reasons: communication with the scientific community and the ability to publish in Open access to test their own ideas and to receive feedback.

There is growth in popularity of sites that use the voting technology and file sharing.

Thus, for example, some online resources such as SciRate (<http://scirate.com>) and BioWizard (<http://biowizard.com>) enable researchers to filter content based on the daily votes of registered users for the most relevant online articles.

An important tool of scientific communication is file sharing, which is offered by different servers focused on serving the scientific community. The most popular server in this group is arXiv.org (<http://arxiv.org>), the biggest free archive of mathematics, mechanics, physics, biology, with preprint exchange included.

3. Conclusions and recommendations

Digital information presentation has expanded capabilities of search, processing, transmission and storage of information. The scientific process is supported by the variety of data visualization, format portability, interactive transmission. A wide range of tools enables easy access and storage of scientific information. A new level of communication between scholars increases the possibilities of scientific production, which is becoming increasingly individualized. The way of transmitting their own scientific information depends on the scientists' individual features, fondness and skills, area of expertise in which they specialize, and others.

The use of modern communication strategies and techniques, i.e. the entire set of tools of modern forms of scientific communication greatly affects the researchers' presentation of research outcome at different stages of research, establishes copyright, enables to trace the rating of scientific publications and contributes to scientists' socialization.

The emergence of new individual and collective forms of electronic communication enhances the importance of self-organization of scientists and international cooperation. The use of innovative forms of scientific communication: formal and informal fructifies scientific production, brings new opportunities for the new knowledge creation, that is why research libraries are designed to communicate useful information to scientists on emerging interactive forms of scientific communication in order to optimize the scientific production in the country.

The rapid growth of forms of scientific communication, increased data traffic in science face the researchers with the problem of choosing the optimal and qualitative communication channels, being best capable of meeting the professional information needs of scientists, their status, goals and objectives of research, the science-specific issues.

In this regard, the role of research libraries as the most professional intermediaries in the field of scientific communication increases significantly; they accumulate their own traditional and electronic resources and provide access to external databases.

Research libraries can contribute to both the development of individual strategies of the scientist's professional communication and collective strategies in the use of various forms of scientific communication at the level of the organization.

Research libraries should promote scientific communication in the Republic of Moldova identifying the role of innovative forms of scientific communication and their efficient usage.

Research organizations management with the support of research libraries is intended:

- to promote the organization of institutional support for new forms of scientific communication according to the areas of scientific institutions;
- to promote monitoring and increase the representation of research outcome in electronic journals and archives;
- to encourage development of collective forms of scientific communication, for example, publications in international archives, on the website of the organization, academic blogs, in social networks, which will help to increase the scientific communication efficiency.

Research libraries should promote new forms of scientific communication, which will contribute to the maximum satisfaction of the professional information needs of researchers, the integration of the Moldovan scientists into the global scientific community and the intensification of research activity in the country.

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Cybernetic Approach in Regional Infrastructure of Governance/E-Governance to Long-Life Development (Study in Social Cybernetics)

Dumitru BALANEL*

Abstract

The paper formulates and demonstrates a lot of theorems on regional social cybernetic systems, including electoral / administrative systems of country. It is the nucleus of a formal system. The paper introduces in scientific circuit concepts of national ring, core of national ring, constructive system, destructive system, optimal number of parties. By author first it formulated cybernetic criteria to driving the regional cybernetic social system in real time.

Keywords: cybernetic systems, concepts, politics, governance

1. Lexical.

Between evaluation and study of them, author selected the notions of domain of definition. Minimal list of notions following notions include.

Idea, notion, concept, opinion, judgment, conception basic principle, plan, project, sentence, statement, saying, definition, demonstration (proof), ring national core ring national, system stable, government program (GP), object manager, object driven, policy decisions, decision rule, feedback loop, system constructive, system destructive, optimal number of parties, tank, Sniper, Grenade, Scholar, careerist, Ever-of-agreement, I then man anymore, man-not, Weep.

2. Dictionary. Introduction.

This is to understand in the same sense theorems proposed specifying notions.

- 1) Idea - 1. A product of the activity of thought; idea, concept; opinion, judgment. 2. Conception basic principle. 3. Plan project. [1, p. 285]
- 2) Ideation - the process of forming ideas. [1, p. 285]
- 3) Meaning - fundamental logical way, reflecting the essential characteristics, general class of objects; is expressed by the word. 2. General knowledge about something. [1, p. 431]
- 4) Concept - concept, the general idea. 2. Draft, sketch. [1, p. 130]
- 5) View - 1. Opinion, point of view; idea, concept. 2. Feedback unfounded, illusion, delusion. 1, [p. 471]

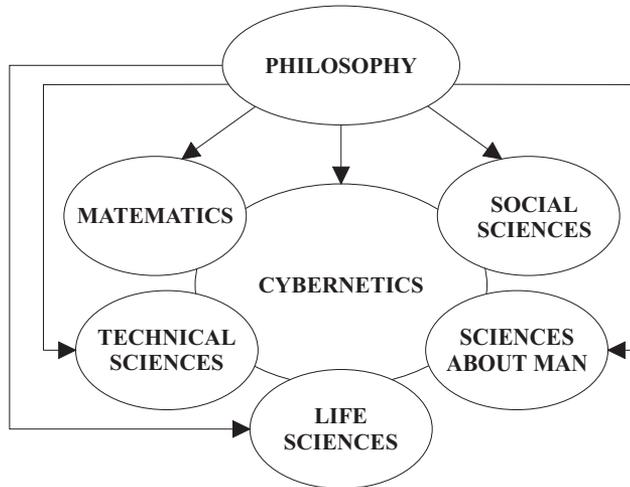
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- 6) Judgment - 1. Faculty to think logically. 2. feedback, idea. 3. Law: The act of judging, debate process. [1, p. 341]
- 1. Basic concepts - way of thinking or design something new; set of ideas on matters philosophical, scientific, literary, etc. overview of existence. [1, Pag.130]
- 2. Principle - 1. Thesis fundamental basic idea; fundamental law of a science or an art. 2. Source primordial, primary cause. 3. Conviction, legally. [1, p. 524]
- 3. Plan - methodical organization of parts of a work of science, literature etc. [1, p. 493]
- 4. Project - 1. plan future actions; 2. The first drafting a provisional plan, laws, etc., to be discussed and approved to be implemented. 3. Technical Paper containing the data necessary for the execution of construction of a plant etc. [1, p. 529]
- 5. Sentence - the smallest syntactic, expressing a judgment, an idea; Merge log words expressing a complete idea. [1, p. 530]
- 6. Assertion - affirmative or negative statement which is given as TRUTH. [1, p. 45]
- 7. Statement - expression of an opinion support. [1, p. 18]
- 8. Definition - determining the content of a concept; sentence expressing this operation. [1, p. 166]
- 9. [N. A.] Definition - which determines the sentence of a term.
- 10. Proof - reasoning that establishes the truth of an assertion; prove a truth by arguments, evidence, etc. [1, p. 169]
- 11. [N. A.] Core national ring - sacred information: personalities, triumphs, texts, songs, costumes, national dances, paintings, videos, films, dreams, master plans etc. the majority of the people of (strategic).

3. Stability of an electoral / administrative system (party, alliance, government, parliament)

We will examine the issue in terms of cyberspace. Cybernetics relations with other sciences are illustrated in Figure 1.

Figure 1. Links of cybernetics with other sciences.



Definition 1. Theorem - Stated, whose truth is the result of demonstrations. (1, p. 680)

Definition 2. Utterance - Exposure to a judgment of a completely understand. (1, p. 210)

Definition 3 [1 of auth.]. Sentences to completely understand, whose truth value (TRUE / FALSE) can prove theorems are called.

Definition 4 [2 of auth.]. A ring is called nonempty $R \cup T \cup S \cup G \cup C$, for items which are defined two operations binary very similar to assembly (\vee) and multiply (\wedge), satisfying the following axioms:

$$1) a \vee b = b \vee a$$

$$2) a \vee (b \vee c) = (a \vee b) \vee c$$

Information equation $a \vee x = b$ have solution: the author have developed methods for solving; (Omit - exceeds the current theme); For example, a - party program, x - tacit understanding between parties; b - government program (PG).

$$3) a \wedge (b \vee c) = (a \wedge b) \vee (a \wedge c) \text{ și } (b \vee c) \wedge a = (b \wedge a) \vee (c \wedge a), \text{ where } a, b, c - \text{sentences, } x - \text{propositional variable (Bertrand Russell); } R - \text{(real) numbers, } T - \text{set of letters, punctuation and special symbols, } S - \text{set of elements of sound, musical, } G - \text{set graphics, } C - \text{set of elements combined } R \times T \times S \times G.$$

Definition 5 [3 of auth.] It's called national ring, NR (national belt) sacred commitment and responsibility towards the country, provided by art. 56 of the Constitution of Moldova of Republic, all laws {a}, national interests {b}, skills {c}, customs {d}, characteristic features of national {e}, strategic goals national {f} integrated into history, territory and language, traditions and common references.

For example, when pronounce NR in Moldova "our language" shall apply scientifically grounded value - Romanian.

Regarding the parties: the Supreme Law provides art. 41 (1-7) of the Constitution "Freedom of parties and other socio-political organizations", which is essential for Ring national electoral issue / administrative addressed. However, it stipulates that parties do not satisfy the ring national (art. 41 p. 4): "The parties and other socio-political organizations which, by their aims or activity, militate against political pluralism, the rule of law, sovereignty and independence, territorial integrity of the Republic of Moldova are unconstitutional [3, art. 41, p. 4].

I suppose that trip early 2015 Socialist party abroad affect this article.

Remark. In the section "laws" can not contradict national laws ring "international ring" and that contradicts laws of country, is applied international ring [3, art. 4].

[N. A.] Core of national ring containing sacred information: personalities, triumphs, texts (scientific, literary, spiritual), songs, costumes, national dances, paintings, videos, films, dreams, master plans etc. the majority of the people of (strategic).

The core ring requires national attention - in accordance with art. 56 of the Moldovan Constitution. In this case the current administrative system problems would disappear [3, art. 56].

The main objects of study of cybernetics and connection management are laws in nature, technology and society. In particular, are studied cybernetic system,

connection and balance, management and self-management of cybernetic systems. Cyber methods can apply to study of electoral and administrative system.

Definition 6. Definition of a system steady - entry procedure for which sizes (input) and output (output) are invariant over time [1, p. 636].

Definition 7 [4 of auth.]. The Systems that can achieve a stable systems are called steady.

Theorem 1. A system is stable if and only if it is non-contradictory on the inside and on the outside not isolated (development of principle [2, p. 113] in the theorem).

For example, a political party in Moldova is stable when, and only when non-contradictory on the inside and on escher Not isolated country's political and stable political parties in the world. Examples party naked: LDP and LP. Ie non-contradictory inside the party - LDP (situation in October 2015).

To demonstrate the proof of the theorem we apply the theorem about the incompleteness theorem of Kurt Gödel, that "In any non-contradictory theory and quite rich first order there as a closed formula, that neither the formula nor its negation of this theory are not deductible." The demonstration will use sentences $\sim L$ and L , for example, the sentence L : The post of president is shared between parties; sentence $\sim L$: The post of president is not sharing between parties.

The necessity. $S1$ be - given a stable system (eg party, and for the program that is compatible with national ring) and $S2, S3, \dots, Sk$ - ambient systems (areas / parties subject to connection). If the system is stable, then the system / software there is a sentence L so that it can not be fixed truth value of any sentence L nor the sentence $\sim L$; but according to Gödel theorem in any system there so L and $\sim L$ sentences whose truth value can be established. Ie any system at a stage of development is contradictory on the inside. But because the system $S1$ - a stable given, it follows that there is an S_i ($i = 2, 3, \dots K$) such that the $S1 \cup S_i$, [where $S1 \cap S_i \neq 0, S1 \neq S_i, L \subset (S1 \cap S_i)$] the truth of the proposition L (and sentence $\sim L$) can be established. But this means that the system remains non-contradictory $S1$ on the inside is not isolated on the outside as $S1$ and S_i are linked by L . I assumed $S1$ system is stable and we have proved that the system $S1$ is non-contradictory on the inside and on the outside Not isolated ($S1 \cup S_i$, [where $S1 \cap S_i \neq 0, S1 \neq S_i, L(S1 \cap S_i), (i=2, 3, \dots k)$]), and $\{S1, S_i, L\} \in R \cup T \cup S \cup G \cup C$.

For example, sentences L : prosecution to be politicized; $\sim L$: prosecution not to be politicized.

Parties LDP, DP and LP have several pairs of sentences type $L L$. Party PCRM has sentence: We will help to choose the governing bodies and $\sim L$: We will assist in the selection of the Board. Other sentences L : It will celebrate May 9; $\sim L$: Do not celebrate 9 May.

It can be stated that in Moldova all pairs of sentences L and $\sim L$ worthless truth \sim alliance lead to early elections.

Sufficiency. Whether we have a system $S1$ Not isolated non-contradictory on the inside and non-isolated on the outside. We must prove that $S1$ is stable. Since $S1$ is non-contradictory on the inside in his program are not (and principles / conditions / actions, delegated $S1$ for forming new system - Parliament / PG) does not lead sentences shares / L , that it can not be fixed truth value of sentences / L and $\sim L$ shares, exits from the

system by parliament are invariant (smoothly). As a result of the business cycle in parliament on feedback inputs S1 system is developed inputs invariant over time. Such a situation can only be the case when the principles / conditions of entry and exit S1 S1 does not change over time. Ie S1 led the system with the system leader - parliament - working steady (without shocks). In these circumstances defined 6 S1 system is stable. I assumed that S1 is non-contradictory system on the inside and on the outside Not isolated and demonstrated that S1 is stable. The proof is evident in the case when systems are included in one another, ie the system S1 este subsystem of another system.

Definition 8 [5 of auth.]. The organization, which does not fall within the national ring (national belt) is called destructive organization [3, art. 41, p.4 - unconstitutional].

Theorem 2. An Alliance (metasistem [6]) government is stable then and only then, when component systems (party alliance) am contradictory programs / actions are consistent with national and alliance ring (metasystem [6]), is insulated on the outside the party / parties in opposition and stable political parties in the world.

Proof of the theorem. It is proved analogously to Theorem 1. The alliance consists of three matches.

We note with alliance parties' programs P1, P2 and P3. If we denote the ring NR national plan of government with PG, the EU association agreement with CAUE note it, then we have:

$$P1 \subset IN, P2 \subset IN, P3 \subset IN, P1 \neq P2 \neq P3, P1 \cap P2 \neq \emptyset, P1 \cap P3 \neq \emptyset, P2 \cap P3 \neq \emptyset, P1 \cup P2 \cup P3 \subseteq IN. P1 \& P2 \& P3 \subseteq PG.$$

Obviously, $GP \subseteq CAUE$. The big weight is to generalize and coordinate programs (ideation: $P1 \& P2 \& P3 \rightarrow GP \subseteq CAUE$).

Alliance will interact with the European Union. That implies the need for a cybernetic system, consisting of leading EU system, direct channel (feedforward) alliance, feedback connected to the EU. Feedback, in turn, will consist of two variables: Command and Status system, repeated one after another and determine one another. The overall structure of the feedback loop includes also the difference (error) between actual status and desired status of the system, policy decisions and rule makers. New desired state determined by the following rule policy decision makers; again determine the difference and so on. a. m. d. Cycle-state-control-political_decizional-rule_of_decizion difference is the motor feedback loop (cycle minimum: Fresh-order difference). Understanding the functioning of feedback loops require a description of the relationship and effect established between state variables and command them up. It becomes possible to develop models of feedback loops either as mathematics (differential equations and finite difference - equation (8) below) or as symbolic (models of the effects of transmission). Elementary loop consisting only of state and control is equal to delay 1. Indeed, when t ut order to influence the state xt at time t, which in turn influences the order at time t+1 ut+1 ş. a. m. d.

Next we deduce the fundamental equation of dynamic feedback loop system (parliament RM) with the goal - EU membership.

The proportion depends on the desired status in the current real state,

$$\mathbf{D}_t = \mathbf{a} + \mathbf{b} * \mathbf{x}_t, \quad (1)$$

D_t - desired state, x_t real state, both in period t .

Real state depends linearly on the expected state during t

$$R_t = a_1 + b_1 * x_t^e \quad (2)$$

Expected state at time t depends on the condition expected at time $t-1$

$$x_t^e = x_{t-1} + \alpha(x_N - x_{t-1}) \quad \mathbf{0} < \alpha < \mathbf{1} \quad (3)$$

x_N is state where the object led considers normal. Constant value α is the parameter adjustment of the current state to the desired state.

One of the opportunities is to treat equal x_N with \bar{x} - the state average. In this case, equation (3) has the form

$$x_t^e = x_{t-1} + \alpha(x - x_{t-1}) \quad \mathbf{0} < \alpha < \mathbf{1} \quad (4)$$

The initial problem is expressed by the system of equations

$$\left\{ \begin{array}{l} \mathbf{D}_t = \mathbf{a} + \mathbf{b} * \mathbf{x}_t \\ \mathbf{R}_t = a_1 - b_1 \left[x_{t-1} + \alpha(x - x_{t-1}) \right] \\ \mathbf{D}_t = \mathbf{R}_t \end{array} \right\} \quad (5)$$

D_t - the desired state; a, b - constants, x_t - state of system at the time t .

Adjusting the actual state to the desired state is achieved by the adjustment of coefficient α . Substituting first and second in the third equation we have:

$$a + b * x_t = a_1 + b_1 * x_{t-1} + b_1 \alpha x - b_1 \alpha x_{t-1}, \quad (6)$$

$$bx_t - (b_1 - b_1 \alpha)x_{t-1} = a_1 - a + b_1 \alpha x. \quad (7)$$

Where to get

$$bx_t - b_1(1 - \alpha)x_{t-1} = a_1 - a + b_1 \alpha \bar{x} \quad (8)$$

This is the basic equation of dynamic feedback loop (in finite differences).

The general solution of the inhomogeneous equation (8) consists in the sum of the solution of homogeneous equation (9)

$$bx_t - b_1(1 - \alpha)x_{t-1} = 0 \quad (9)$$

with a particular solution to the inhomogeneous equation.

The general solution of the inhomogeneous equation is of the form

$$x_t = A \left[\frac{b_1(1 - \alpha)}{b} \right]^t \quad (10)$$

a particular solution to the inhomogeneous equation (8) is

$$\bar{x} = \frac{a_1 - a + b_1 \alpha \bar{x}}{b - b_1 + b_1 \alpha}, \quad (11)$$

where \bar{x} decisional balance which means the strategy decision.

The general solution of the equation of dynamic feedback loop is shaped

$$x_t = A \left[\frac{b_1(1 - \alpha)}{b} \right]^t + \bar{x} \quad (12)$$

if known x_0 can be determined constant A :

$$A = (x_0 - \bar{x}) \quad (13)$$

and complete solution of equation (8)

$$x_t = (x_0 - \bar{x}) \left[\frac{b_1(1-\alpha)}{b} \right]^t + \bar{x} \quad (14)$$

The stability condition allows write relationship

$$|b_1(1-\alpha)| < |b_1| \quad (15)$$

It is clear that $b_1(1-\alpha)$ is smaller than b_1 and α is always below par.

In this model, the dynamic oscillatory path remains convergent, the convergence is provided by the relationship

$$\left| \frac{b_1(1-\alpha)}{b} \right| < \left| \frac{b_1}{b} \right| < 1. \quad (16)$$

Type oscillations of the model is convergent, since the condition of equation (16) is always true, because $\alpha > 0$.

Oscillator explosive character in this model is slower because α parameter is less than 1.

And the $1 - \alpha$ is lower, so the model requires condition

$$|b_1(1-\alpha)| \leq |b|, \text{ i. e. } |b_1| > |b|. \quad (17)$$

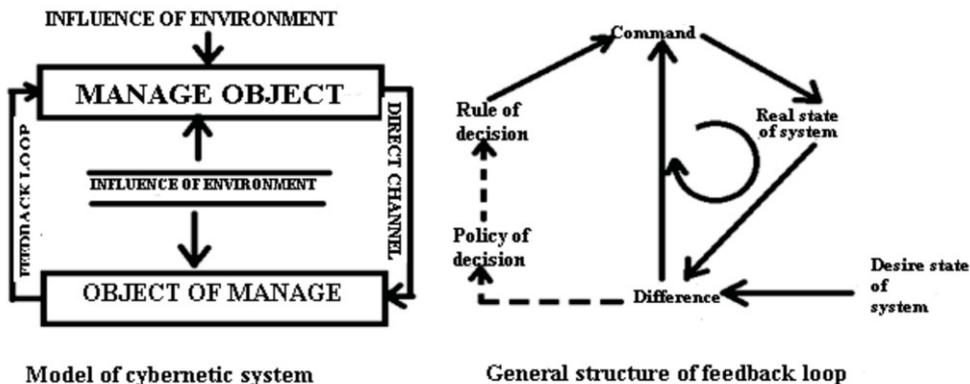
The necessity. Whether the alliance is stable. We must prove that component systems (party alliance) are contradictory programs / actions are consistent with national and alliance ring (metasystem [6]) is insulated on the outside. We use definitions of steady and stable system.

Defined 6 is a system steady rate for which input sizes (input) and output (output) are invariant over time.

According to the definition 7 [4 aut.] Systems that can achieve a stable systems are called steady.

Let us examine how the system will work alliance, made up of three parties P1 P2 P3. If the alliance is stable, then Programs / parties P1 P2 P3 actions are consistent with IN, are compatible with each other and there are no sentences M such that for all propositions $M \sim M$ can not be established truth value, confirmed by all parties of the alliance. If the alliance is stable, however, the operation appears a sentence N so that neither for nor for N and $\sim N$ in $P1 \cup P2 \cup P3$ not have truth values, then using Not isolated Pk party, in $P1 \cup P2 \cup P3 \cup Pk$ the propositions N and $\sim N$ have values of truth.

Figure 2. The model of cybernetic system and structure of feedback [4], [5]



If the alliance is stable when subject leader and the led interact like elements interconnected and interdependent, that form a party system. The statement about neizolarea on the outside in the fact that if the system generates sentences shares / L, that it can not be established the truth of propositions / actions L and ~ L then because the alliance is stable, there is a system (party) Pk so that the meeting can be established alianc \cup Pk that can establish true/false value of the propozitions/actions L and ~L. the truth of propositions / L and ~ L shares. For example ~ L: The office of President shall not share; L: The office of President is shared. Whether Pk - President of European People's Party. In alianc \cup Pk is the solution: the parties choose an expert council, which in three months determine the truth of propositions L and ~ L. Therefore, I assumed that the alliance is stable and we have proved that the alliance parties are contradictory and programs, consistent with national and alliance ring is insulated on the outside.

Sufficiency. It is given that component systems (party alliance) are contradictory within the alliance, programs / actions are consistent with national and alliance ring (metasystem) is insulated on the outside. We must demonstrate that the alliance is stable.

If the alliance parties are contradictory, they draw / performed sentences / action type L and ~ L, who really values accepted by all parties of the alliance. The fact that these propositions / actions are consistent with IN (national ring) confirm their legality and sustainability. If the parties in the alliance are insulated on the outside, the appearance of a shock (L and ~ L can not have truth values) alliance parties will identify at least one external linkages among Ek such that in alianc Ek - L common value proposition truth. But this also means that the alliance is stable.

Reverse connection Law, formulated by Norbert Wiener says that "any cybernetic system has at least one feedback loop (reverse connection)". In reality, any system can be part of another system more complex.

Theorem 3. A system / party is non-contradictory if the program's activity is consistent with national ring (national belt) of the country and is built on true, current and complete information.

Demonstration. It is given a system / party $S1 / P1$ non-contradictory. We must show that this party must be consistent with national ring and be built based on the information true, current and complete.

If the program / actions party P_i are not consistent with the ring nationally, that contain propositions L and $\sim L$ truth which can not be determined in relation but then the actions that arise from propositions L and $\sim L$ are illegal and make the alliance system destructive as defined 6. therefore, the program / P_i party's actions must be consistent with national ring.

1. If the program / actions party P_i is built on false information, then it contravenes the principle of logic and principle of sufficient reason can not be accepted.
2. If the program / actions party P_i is built on outdated information, it is contrary to the national ring - so incompetent, irresponsible and can not be accepted.
3. If the program / actions party P_i is built on incomplete information when it occurs missing information errors in policy decisions and the choice of system status and inadequate regulation decision contravenes the principle of sufficient reason if one turns - and untrue information can not be accepted.
4. If information is made based on untrue, not current or incomplete, then the consequences are that in cases 1, 2, 3 - can not be accepted.

Therefore program / P_i necessarily party's actions should be built based on the information true, current and complete. $P_i, I = \{1,2,3\}$

Theorem 4. A system / party is not insulated on the outside, if there is at least one other system / party system / party is connected via information given true, current and complete.

Demonstration.

Whether $P_i, i = \{1,2,3\}$ a party that is not insulated on the outside. Then there is another party P_k such that there is at least one sentence / L action, shared these parties.

If common sentences were not true, then they can be called gossip joint activities and joint work - not within the national ring and can not be accepted. So connecting to another party / external system can only be achieved based on real information.

If common sentences were not present, then so common activities include criteria of incompetence and joint work - criteria inefficient waste of resources and not within the national ring. So, the alliance built on inadequate information can not be accepted. So connecting to another party / external system can only be achieved based on current information.

If common sentences were not complete, then joint activities based on them can be called amateurism and joint work - imitation inefficient - not within the national ring and can not be accepted. They will be corrected at each filling, which is not consistent European policy for sustainable solutions - long life. So connecting to another party / external system can only be achieved on the basis of complete information.

Connecting to a system based on abuse of managers, leaders, departments, organizations, State (information untrue, not current, incomplete) and conflicts of interest are not within the national ring and can not be accepted.

4. Electoral/administrative systems unstable

Definition 9 [6 of auth.]. System with at least a destructive purpose is called destructive system.

Definition 10 [7 of auth.]. The system, which has all constructive purposes is called constructive system.

Theorem 5. The constructive system is based on civilization, culture, science - and supports innovative information true, current and complete, consistent with national ring. It proves the theorem 3.

Theorem 6. The organization comprising at least one destructive system is necessarily destructive.

If an organization O1 SD1 contains a destructive system, this system tends to achieve the purpose for any occasion. The purpose of a system is achieved by the choice of policy decisions Rule decision feedback loop.

If the system time renounce destructive destructive purpose, then it becomes neutral or constructive system and is not the subject of this theorem. So we examine SD2 destructive system that does not give up destructive purposes. The essence of this system lies in the fact that he will appeal the balance functioning of the organization. The techniques and tactics of attack can be varied, depending on the capabilities destructive leader. Thorough analyzes based on memorized environment may allow to detect cyber destabilize the balance of the system driving the organization / system.

The initial order will be substantiated constructive. If the system is encapsulated object destructive drive, then the realization of orders, possibly from the first result will be unexpected, shocking. If the system is encapsulated destructive decision-making system, the deviation can occur even in making the first decision. If the system is encapsulated in defining destructive expected result, then this object / situation, possibly the first result will be unexpected. There will be attempts to change the negative feedback loop of positive or vice versa or liquidation feedback loop.

Essential: if the system is not detected and neutralized destructive in real time, then it has increased and become a habit and neutralizing's is often more complicated - the whole organization becomes destructive.

Anatomy damage. Feedback loops positive and negative feedback loops show the behavior of a sense that the same variable from changing the contour of a flow loop after it has taken in its entirety. So if X is a variable which is in a feedback loop, it will be positive if an increase in X's entry into the loop will increase by X after checking the entire loop. But if an increase of X at the entrance to the loop causes further decrease of X, then the feedback loop is negative.

Destructive system of organization will influence other systems and feedback loops to destruction if the organization does not react urgently and do not correct the situation in the system and organization.

Theorem 7. Parties elected to parliament not allowed to put additional conditions on the program for which voters voted. Additional conditions may be added to GP with vote of all the parties elected to parliament.

Demonstration. Suppose the contrary, that the parties elected to parliament were allowed to set additional conditions to the party program (with PL). If states parties sentences that differ from those voters who voted for or neglect propositions formulated

in the party program, which correspond, then these parties 'voters are ', according to art. 39 hp and violate the rights of voters administration, democracy, and candidates likely to be suspected of usurping power - that will be punished criminally for "usurpation of state power", "usurpation of official qualities", "false declarations" "treason" etc. But then they can not be members of Parliament. I assumed that the parliament elected parties can put any additional conditions to the party program and come to the counter.

Therefore, the deputies have no right to remove any sentences of the program in negotiating with other parties, nor add new sentences, which were not rated by voters.

For example, the leadership of the democratic party has no right to ask who should be provided to the government (without PL) because the PDM software for voters who voted is not this sentence. So adding a sentence to parliament / coalition is abuse of trust of voters, breach of democratic principles, not within the IN and the PDM discredited as a political party.

Reverse connection Law, formulated by Norbert Wiener says that "any cybernetic system has at least one feedback loop (reverse connection)".

Theorem 8. The degeneration of parliament. If the organization does not contain any feedback loop, it is necessarily destructive.

The proof of the theory of cybernetics, developed by Norbert Wiener, in particular, the Law reverse connection, that any cybernetic system applied in cars, society, humans and animals "have at least one loop feedback (reverse connection)", which serves management. Cybernetic system is the cornerstone of feedback loop. Without feedback loop system degenerates into isolated components.

Theorem 9. Parliament as a system. Any constructive parliament can be amplified by constructive system. Any parliament that does not fulfill the functions of the system degenerated into destructive competitive components.

Demonstration.

Parliament consists of MPs elected by the citizens of the country on election day, representing the interests of voters. The interests of voters were divided by party, which achieved a certain ordering deputies, so long as the parties' interests do not contradict the interests of the country, the provisions of national ring (IN). If the parties' interests are subordinate IN, where parties receive a coefficient k ($6 \leq k \leq 100$), which takes into account every voting for solving one or another problem. If interests against the interests of one party or another country, the parliament has the right to bring the matter before the Constitutional Court on the constitutionality of that party (art. 135 PIH). Parliament obtained after landing parties forms a constructive system unconstitutional.

Theorem 10. Landing in parliament. A stable parliament may not include the most unbearable (cf. [7]). Ladder for landing of honor in parliament (top management) is autodemission (or insistence of resignation from voters).

The most unbearable (tank, sniper site, Grenade, Erudite, careerist, Ever-of-agreement, I then man anymore, man-no, Weep):

Tank - a confrontational person, directed-aggressive, brutal, quarrelsome, which are characterized by unrestrained behavior, arrogant. [7, p. 13]

sniper - a brutal response, a sarcastic remark or a tribute to gaze over his head, but sniper site will compel you look bad - this is "the horse" his favorite. [7, pp. 14]

Grenade - at first everything seems to be quiet. But spontaneously exploding

grenade insulting assistance without any visible cause it. This anger is in no way connected with what is happening. [7, pp. 15]

Scholar - rare person doubts and do not suffer to be told that I was right. But when he states that he admitted the mistake, he smugly defines what it demonstrates that all are guilty ... Your. [7, pp. 16]

Careerists - not being able to make a good impression lasting a while careerists can fool others, to be in sight. [7, pp. 17]

Ever-of-agreement - it promises and promises, forgetting that it is not able to fulfill everything that was seized. And the ever-agreement say yes until I have time even for his own work. And then he begins to rebel against the people around him. [7, pp. 18]

Do then - postponing a decision from day to day, hoping that the solution will come by itself. But the solution usually comes naturally when no longer needed. [7, pp. 19]

Man anymore - no soul to speak with him can not, nor shut up together ... [7, p. 20]

Man-no. Who will bring despair around, you will miss the last hope and consume a great idea with a word? Of course he is, man soft with soft manners, man-no. The man, who has wasted all the forces fighting for disappointment, despair and hopelessness ... [7, p. 21]

Weep - feels helpless and oppressed by unjust world around them. He dreams of perfection, but nobody and nothing responds's ideal. Complaints and requests to not love solitude - is tirajează to others. But even problem-solving proposals were not accepted by the complaint - considers you an interlocutor anything. [7, pp. 22].

Example. (L): The state language is Romanian; (~ L): The state language is Romanian.

Demonstration.

Because the system does not meet the condition of persons referred to as non-contradictory on the inside. Therefore, if the structure of any system allowed people so they destabilize it. Destabilization of a system / party needed to bring destabilization alliance. Last necessary bring serious consequences for the entire country. That is why people require contradictory landing in parliament. Landing in parliament is carried out under the right of every citizen to defense, combined with the freedom of association and the right to petition or the right to strike rallies. But under the right of parliament to exist, which can be liquidated because of these people.

5.Optimizations in the electoral/administrative system

Theorem 11. The optimal number of parties and programs in a country parties is 2-3 with programs compatible with IN and intersecting.

Demonstration.

Completing parties are sources of parliament representing the interests of voters. It is not practical to have a single party in the country - it becomes a monopoly, which contradicts the anti-monopoly law.

The number of games is determined by two conditions: to ensure a majority of 50% + 1 votes in parliament; ensuring 2/3 vote in parliament for strategic decisions, for example, changing the Constitution. At the same time party programs must be compatible with NR (National Ring).

These restrictions where more than 30 games are very complex: each party

would get about 3% of voters, and to ensure a 61% (3/5) requires constituted alliance of 21 parties! Practice shows that three alliance parties can not but 21 more so!

From the point of view of a majority stake (50% + 1) is optimal parliament from 2 matches. One of them will be the majority, the other - in opposition. But 61% is more difficult to format. However, competent personalities of the country are divided into two parties and personalities in the party concentration is about 20 times as high as in the case of 40 matches.

From the viewpoint of securing the 61% is more convenient parliament in 3 games (2 leadership and one in opposition). Alliance of two parties would provide 50% + 1, and 61%. However, competent personalities of the country are divided into three parties and personalities in the party concentration is about 13 times higher than in the case of 40 matches.

Disadvantage: It is necessary alliance of the two parties!

Alliance of several parties may be allowed only in case the parties have programs with small differences between them. But safety is small alliances.

Proceeding from the above, are optimal parliaments of 2 or 3 parties (including 1 one of them - in opposition).

Theorem 12. About legal justice. RM necessarily justice must be competent (not immovable as now), independently and impartially.

Demonstration. Moldovan laws necessarily must be in accordance with international law. Art. 14 of the International Covenant on Social and Political Rights provides that every citizen has the right to fair and public examination of civil and criminal cases "OF A COMPETENT COURT, independent and impartial". The contradiction of the Constitution art. 116 (1): Court judges are independent, impartial and irremovable (N.A. irremovable = that can not be moved or removed; Incompetent + irremovable = judicial torture). Because according to art. 4 (2) of the Constitution: "If there are discrepancies between pacts and treaties on fundamental human rights to which Moldova is a party and its domestic laws, international regulations have priority" examination of cases in the Republic of Moldova must be exercised "DE A competent judges, independent and impartial ". According to art. 7 of the Constitution "the Constitution is the supreme law" and falling under article 14 aforementioned. Therefore, because of the contradiction between art. 116 (1) of the Constitution and art. 14 of the International Covenant on Social and Political Rights, art. 116 of the Constitution should be amended; the phrase "independent, impartial and irremovable under the law" be replaced by the phrase "competent, independent and impartial, according to the International Covenant on social and political rights".

Theorem 13. About justice immovable. Justice that is impartial, independent and irremovable DESTRUCTIVE meets the requirements of an organization.

Demonstration. Let us examine the conditions of the theorem.

Competent (condition is necessary but sufficient ni-i) - which has the ability to do something that is competent. Competence is the first prerequisite of international law on justice.

Impartial (condition is necessary but sufficient ni-i) - making fair assessments; unbiased, objective law.

Independent (condition is necessary but sufficient ni-i) - which does not depend

on anyone, free, autonomous (but not necessarily legal).

Irremovable (condition is neither necessary nor sufficient) - that can not be moved or removed.

Incompetent (condition is neither necessary nor sufficient) - which does not have the ability to do justice, which is not competent.

We will examine possible cases of combinations of these judicial qualities:

Impartial, independent, irremovable and competent enforcement jurisdiction - where sufficient but not necessary.

Impartial, independent, irremovable and competent, but do not apply the power - contrary to art. 56 Constitution (Article is violated), art. 14 of the International Covenant on social and political rights - combination neither necessary nor sufficient.

Impartial, independent, irremovable and competent, but apply selectively power - contrary to art. 56 Constitution (Article is violated), article 14 of the International Covenant on social and political rights - combination neither necessary nor sufficient.

Impartial, independent, irremovable and incompetent - contradicts art. 56 Constitution (Article is violated), art. 14 of the International Covenant on social and political rights - combination neither necessary nor sufficient.

Therefore, the judiciary is impartial, independent and irremovable 75% - 85% cases violates the Constitution and art. 14 International Covenant on social and political rights, that meets the organization DESTRUCTIVE.

A special role in the information infrastructure of social processes plays set of legal rules, procedures of law, judicial practice, taken as a model for future decisions. These components of Moldovan legal process necessarily should be a system of systems (metasistem) that for each legal situation provides a single true solution. It is achieved by building a constructive formal system. Suder was general solution of Kurt Gödel.

The current set of legal norms of the Republic of Moldova is contradictory .
Examples.

- 1) For example, in art. 20 (2) CPC RM states: " Any interference in the work of law is inadmissible and entail liability prescribed by law". In art. 303 (1) CP RM mentions that "punishments in order to prevent multilateral examination , fully and objectively concrete case or to obtain a judgment of court is punishable by a fine illegal 200-500..." In art. 303 (2) CPRM mentions that: interference in the work of law is inadmissible if "...research in order to prevent rapid, complete and objective criminal case is punishable by a fine 350 ... ". In other cases, interference in the work of law is possible: to find the true, to add the prove in case, in others situations.
- 2) Contradiction of art. 426 (3) CPC RM with art. 23 (4) CC RM. "We inform you that according to art. 426 paragraph (3) CPC will review the appeal without summoning the parties. Civilian use capacity is according to art. 19 CC RM the ability to have civil rights and obligations, ie to be the subject of civil law, the beautiful as such civil relations. Nobody can not be restricted in its ability to use. Exercise capacity is according to art. 18 CC RM suitability of the person to enter one civil legal acts. According to art. 23 (4) CC RM decision of Court of Appeal of 05.10.2015 on case no. 2r- 562/15 is null.

- 3) Art. 116 (1) of the Constitution : "Judges are impartial, irremovable and independent in conformity to law " (Constitution, the supreme law is the law dependent on the bottom that can easily change) "competent, independent and impartial"; according to art. 4 (2) of the Constitution, art. 116 (1) of the Constitution is null !!! Proposal for art. 116 (1) of the Constitution: " Judges are professionally competent , independent and impartial".
- 4) The contradiction of art. 426 paragraph (3) RM CPC and art. 26 of Constitution. Art . 26 of the Constitution "right to defense" provides "1. The right to defense is guaranteed 2. Everyone has the right to act independently through legitimate means to an infringement of his rights and freedoms". The prohibition to participate in the trial have been deprived of the right of defense (" the right to respond independently by legitimate means, (the violation of rights and freedoms") and the right of self-defense (art. 13 CC RM) " without immediate action there is a danger that the realization of the right to be impossible or substantially for example, in case 2a- 2510/2005 have been deprived of the right to give his recusing mr Pruteanu V. and ms L. Popova , which he have appropriated illegally ap. 95 Street . I. Vieru 16 , mun. Chisinau. According to art. 7 "The Constitution as the Supreme Law " of the Constitution : "No law and no other legal act contrary to the Constitution has legal power".
- 5) A violation of Article 20 of the Constitution "access to justice ", that " Everyone has the right to obtain effective protection from competent courts against". The right to " obtain effective " includes : satisfaction - feeling of contentment; satisfaction - giving prevailed; actual - real, true; " Effective remedy " means "to give prevailed to obtain satisfaction really. According to art. 7 of the Constitution "The Constitution as the Supreme Law: No law or other legal act that contravenes the Constitution has no legal power.
- 6) Very dangerous the local, departmental and corporate groups with interests (local, departmental or corporate) prevail the national interest. But these criminal groups are "bypassed" the judges illegally by neglecting art. 53 (3), art. 17 European Convention on Human Rights, art. 55 and 56 of the Constitution.

Therefore, the current set of components justice Moldova (CPC RM, CPP RM, CC RM, CPM, practice, etc.), are inconsistent with the Constitution and international legal law. Searches the decision tree allows for double or multiple solutions (conjectured by taxpayers, ensuring judges' salaries increased significantly as "selective justice"); vide cycles; zenon apories; endless cycles; increase in geometric progression in the number of files needed to restore justice/ righteousness; sofizme legal, and even open murder.

Setting all contradictions, included as components of justice current of Republic of Moldova (RM CPC, CPC RM , RM CC , CP RM , practice etc.) requires special research by logicians, matematicians, cyberneticians, managers and others.

Theorem. Solution double / multiple in justice is a non justice.

Demonstration. Whether we have a specific legal situation relating to natural persons A in the process with individual B. Sie that at the same time and under the same R were obtained two different solutions (" Selective") S1 and S2. $AR B = S1$ and $AR B = S2$. $S1 \neq S2$. A third possibility is excluded. $S1 = S2$. I assumed that $S1 \neq S2$ and $S1 =$

S2 have reached. The contradiction proves the theorem.

There are numerous "ways of obtaining" solutions double / multiple or lack of solutions: endless cycles of lack of access to justice, aporias of Zenon, legal Chinese walls, the big number of mistakes of judgments and big number of files to restore justice in justice, breach of the principle of identity, infringement of noncontradiction, violation of third party principality ruled, infringement of sufficiently basis and others.

Central definition. Cybernetic system is called all objects connected to one another, capable of delivery / collection, storage, information processing and exchange of information. [Slovari po kibernetike red bridge. V. S. Mihalevicea, str. 265]

Central theorem. The office is led cyber then and only then, when the loop (loops) feedback (the) system operates in real time.

The need. Whether social system is driven. We must show that loop / feedback loops of works in real time.

Demonstration. If the social system is headed, then it necessarily has at least one feedback loop. Suppose that the feedback loop reacts only on some events in the system, then the management will take place only if their other events are free driving; then the system is not driven; result contradicts the assumption that the system is run. So if the feedback loop reacts to all events in the system, then the management will take place for all system events. But this means that the system works in real time.

Sufficiency. Whether loop / feedback loops of a social system operates in real time. We must show that social cybernetic system is driven. The system operates in real time, ie any change in the variable feedback loop exists government strategy and decision rule for decision. As defined cybernetic system, that the system is run.

Example. Cyber social system - the country's parliament, which is elected every four years, during which the system components interacting in real time with the country based on national ring, degrade components isolated destructive antagonistic.

In other countries, they were admitted intuitive institute honorary resignation, the resignation of the killings, crying on television as excuses to voters, out massive voter in the street etc. and so on in many countries these events practically ensures loop / feedback loops of a social system in real time.

In Moldova it is necessary to replace the measures "resignate" criminal responsibility with other events, for example, voting by electronic systems for landing in parliament, a government, one person, party or group of deputies.

6. Conclusions and recommendations

1. Theorem 1. A system is stable if and only if it is non-contradictory on the inside and on the outside not isolated.

2. Theorem 2. An Alliance (metasystem [6]) government is stable then and only then, when component systems (party alliance) am contradictory programs / actions are consistent with national and alliance ring (metasystem [6]), is insulated on the outside the party / parties in opposition and stable political parties in the world.

3. The basic equation of dynamic feedback loop (in finite differences) of system (parliament RM) with goal (addition to EU) can have the

$$bx_t - b_1(1 - \alpha)x_{t-1} = a_1 - a + b_1\alpha\bar{x} \quad (8)$$

4. Type of the oscillation of model is convergent, if

$$|b_1(1-\alpha)| \leq |b| \quad \text{i. e.} \quad |b_1| > |b|$$

5. Theorem 3. A system / party is non-contradictory if the program's activity is consistent with national ring (national belt) of the country and is built on true, current and complete information.

6. Theorem 4. A system / party is not insulated on the outside, if there is at least one other system / party system / party is connected via information given true, current and complete.

7. Theorem 5. The constructive system is based on civilization, culture, science - and supports innovative information true, current and complete, consistent with national ring. It proves the theorem 3.

5. Theorem 6. The organization comprising at least one destructive system is necessarily destructive.

6. Theorem 7. Parties elected to parliament not allowed to put additional conditions on the program for which voters voted. Additional conditions may be added to GP with vote of all the parties elected to parliament.

7. Theorem 8. The degeneration of parliament. If the organization does not contain any feedback loop, it is necessarily destructive.

8. Theorem 9. Parliament as a system. Any constructive parliament can be amplified by constructive system. Any parliament that does not fulfill the functions of the system degenerated into a destructive competitive components.

9. Theorem 10. Landing in parliament. A stable parliament may not include the most unbearable ([7]). Ladder for landing of honor in parliament (top management) is autodemission (or insistence of resignation from voters). The most unbearable include: tank, sniper, Grenade, Erudite, careerist, Ever-of-agreement, I then man anymore, man-no, Weep).

10. Theorem 11. The optimal number of parties and programs in a country parties is 2-3 with programs compatible with NR and intersecting.

11. Theorem 12. About legal justice. RM necessarily justice must be competent (not immovable as now), independently and impartially.

12. Theorem 13. About justice immovable. Justice that is impartial, independent and irremovable DESTRUCTIVE meets the requirements of an organization.

13. Theorem 14. Double/multiple solution in justice is non-justice. (is not compatible with NR).

14. Central theorem. The office is led cyber then and only then, when the loop (loops) feedback (the) system operates in real time.

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The Role of Scientific Research in Modern Society

Maia GRÎU*

Abstract

Research, development and innovation is for any country the engine of its economic and social development. Common concern of all countries for science and scientific research appears as a recognition of their role in ensuring the welfare of human civilization. The level of society development is determined mainly by performance of its education and research systems, educational level of its citizens, the quality of research activity products and equitable access of all potential users to the services and products of these systems.

Keywords: scientific research, fundamental research, applied research, development research, technological progress, innovation

1. Introduction

Building a knowledge-based economy has become a rational goal for any state in the world. This is the road to competitiveness, growth and economic prosperity.

Economic science demonstrates that sustainable growth cannot be achieved by investing and maintaining stable macroeconomic conditions, unless they are backed by technical progress, that amplifies the value of capital and labor. Therefore the shift from exploiting resources to exploiting knowledge represents the touchstone of the shift from the cost-based competitiveness to the competitiveness based on the final value.

Scientific research is a systematic and creative activity aimed at increasing the volume of knowledge, including knowledge about man, culture and implementation of this knowledge in new applications. The concept of scientific research is also known today under the name of Research and Development.

Scientific research produces science, which is incorporated to a great extent into the technological products. Moreover, scientific research multiplies itself (since as opposed to the material values, the scientific ones are not consumed or lost), it promotes education and educates, leading to social superiority.

Scientific knowledge has the property to accumulate and multiply itself over time. When being used, knowledge is consolidated, improved and complemented. When being accumulated, knowledge becomes a free source of human creative power and it is not alienated when transmitted from person to person, but usually remains in the possession of those who have created the scientific knowledge.

Scientific research needs researchers, i.e. professionals in various scientific fields, as well as equipment, financial resources and infrastructure. There are two distinctive ways by which scientific information can be created and applied, namely:

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- ensuring availability of an organizational framework, of the means of collection, storage, processing and transmission of scientific information;
- creation of the new scientific knowledge through research activity conducted in laboratories, research institutes and academies.

Research products can include inventions, innovations, new materials, computing programs (software), equipment, technologies, modern systems of management and staff training etc.

Like other issues, current scientific research should be approached in the context of globalization phenomenon. The research field also faces global real-world challenges:

- science and research should take into account: the globalization of economic life, the deepening of international division of labor, the emphasizing of international relations, the limited character of resources and their uneven distribution across the globe, environmental protection and ensuring of sustainable development of mankind;
- the need for scientific research is an acute problem and requires great effort that sometimes cannot be supported by a single state;
- the issues of sustainable development have to be solved from international perspective.

Not bringing profit by itself, scientific research must be funded primarily by the state. This is a worldwide practice. The social motivation to sustain scientific research has always been production of scientific knowledge that contributed and further contributes to economic and social development. The scientific innovation creates capabilities to manage social, economic, financial, military crises, etc. Today many developed countries motivate scientific research from the perspective of ensuring military superiority.

Qualitative scientific research is a vector of progress and development. The need for national medium and long term strategy in the field of scientific research, as well as rigorous assessment of the real state of scientific research and its human potential, are obvious.

Universities have an important role in contributing to knowledge production, its transmission and use. Within universities scientific research represents an inseparable part of an effective education system and is essential for the development of higher education itself.

The Bologna Process stressed the need to stimulate performance, competitiveness and excellence, to internationalize and globalize the research activity. It has acknowledged the need to build the European Area of Higher Education and Research, as the foundation of a competitive knowledge-based society.

2. Results and discussion

The scientific research activity is the highest mode of human resource development, both through continuous training / information that it requires, and through the results obtained. It is an indispensable activity for solving global problems of the society.

Econometric analysis confirms the importance of research and development

activity for economic growth and ensuring competitiveness, as well as the importance of macroeconomic environment, market opening and financial markets development.

Scientific research is based on the creative potential of people who are involved in innovative activities. Innovation implies specific skills (such as sensing market opportunities related to technological developments, identifying technical solutions, evaluating the cost-benefits ratio and the inherent risks, identifying necessary resources, etc.), skills that have to be acquired at the level of employees and managers, or incorporated in organizing the entity.

The innovation analyses evolved from linear vision of innovative process to systemic vision that currently dominates the economic thinking. Even though both visions consider research and development either as an initiator or as a decisive factor of innovative process, the latest approaches tend to give greater importance to innovation factors outside of the research framework itself and even to the external factors of technological process, as well as to some aspects related to organizational and managerial dynamics.

The innovation process involves several elements, namely:

1. research system (in the center of knowledge production);
2. innovative companies – the engines (leaders) of innovation (enterprises that transform knowledge into products for the market);
3. innovation infrastructure;
4. available capital and financing channels;
5. labor resources and educational services (human capital).

In reality these elements overlap and in result a research unit may function also as an innovation leader or, alternatively, companies may have their own research units etc.

The success of the knowledge-based economy depends on how interaction is made with the business environment and on the resources available for generating new products and processes. The mechanisms by which this is achieved represent the innovation process itself.

The research areas are mostly oriented to technologies, then follow the natural sciences, exact and humanitarian sciences.

Increasing the competence and efficiency of the research - development activity can be achieved through attaining of some objectives such as:

- achieving results that are of interest to beneficiaries in economy / society;
- correlating research topics funded from the budget with the sector medium and long-term strategy;
- promoting partnership between researchers and beneficiaries / users of the research results;
- supporting the implementation of the results obtained by the beneficiaries / users;
- developing human resources through creating and training for the purpose of and by means of research and development, as to enable them to use the results of the research and development activity;
- developing research infrastructure - developing and creating centers of excellence in priority areas;
- developing innovation infrastructure (innovation and business offices, technology transfer centers, technological information offices);

- establishing risk funds for implementation of research results;
- instituting a flexible management system for budget funds on research and development programs.

Generating scientific knowledge occurs within research centers and networks, which should be furnished with last generation equipment, devices and software. The research units may develop their resources through grant programs for research. In addition to professional satisfaction and activity in modern conditions, researchers should be also attracted and motivated by an adequate salary.

Research and development units will have to increase their ability to disseminate knowledge, results, experiences, by developing marketing services, industry connection offices etc., and to intensify public promotion (through catalogs of products, newsletters / informative and promotional publications, conferences, demonstrations of products / technologies, audio-video presentations, launching programs / projects etc.).

Research and development units will have to increase their ability to use scientific and technological knowledge through:

- increasing the absorption capacity of innovation in the economic environment as a result of training and refresher training courses for beneficiaries / users of the results of research and development;
- supporting the mobility of researchers, specialists and students from the research institutes and universities to the companies;
- improved access of companies to information facilities and scientific support services.

Increasing the potential of research, development and innovation can be achieved at the company level through elaborating of research, development and innovation projects between industrial partners and research and development units. Another way could be co-financing of collaborative projects between businesses and research and development units. Introduction of quality management system requires companies to improve their work, i.e. to perform research, development and innovation.

But research is not exclusively economy-oriented, it should also be carried out and encouraged in the field of culture and national heritage.

The process of scientific knowledge points out that the act of creation and scientific research represents a homogeneous, specific activity of certain people endowed with native skills of scientific creativity and scientifically trained.

Research can be classified into fundamental and applied research, or in terms of expenses of the research and development projects in: fundamental, applied and development research.

1. Fundamental scientific research

Fundamental scientific research is a theoretical or experimental activity aimed to gain new knowledge on fundamental aspects of observable phenomena and facts, without seeking special or specific application.

This type of research is deciphering the mysteries of nature, thought and society, creating new openings for scientific knowledge, technological, economic and social progress.

A special place is held by experimental research carried out in research

laboratories with devices, specific equipment, different materials, energy in several forms (most often electrical, as well as mechanical and magnetic). New materials are discovered (eg composites, synthetic organic substances, pharmaceuticals, electronic equipment), as well as new applications for materials and, new technologies (in the field of nanotechnologies, biotechnologies, unconventional and alternative energy, medical science, environmental protection etc.).

In economic sphere the fundamental research is focused on major theoretical issues, such as economic growth and modeling, business process analysis and forecasting, financial, fiscal and monetary issues, politics – economics - society relationship, globalization etc.

2. Applied scientific research

Applied scientific research is an original activity of new knowledge accumulation, primarily aimed at a specific practical objective.

It uses results of other forms of research (fundamental and development research), empirical knowledge gained from practical experience in establishing new techniques and technologies (new products, new technological options), new forms of management, marketing etc.

Applied research is usually done in three stages: in laboratory, in pilot plant and then in semi-industrial installations. In laboratory the work is performed on small-size installations, with small quantities of material. In pilot plant the equipment sizes and consequently, the amount of materials and energy, increase as to be closer to industrial conditions in large production capacities. The three stages are not mandatory to go through. Sometimes it works only on semi-industrial installations. The results of such research are used for designing industrial plant.

3. Research and development

Research and development is a systematic activity to launch the manufacture of new products, new processes, systems and services or to substantially improve the existing ones.

It uses the knowledge already gained in the earlier stages of research and/or experience. This knowledge is used to achieve principle solutions for designing, implementation and prototype testing of new equipment, equipment for new technological processes etc.

Two main stages can be here distinguished:

- designing of economic activity, of material, energy, artistic or social production etc.;
- implementation of the projects.

During the designing stage is applied specific knowledge, with mathematical support, computer programs, including computer graphics.

In the implementation phase of the projects there may be accomplished a device, a product, an equipment etc. as prototype and sometimes as individual series.

The three types of research may be interdependent. For example, from the applied research one can derive new general principles, therefore the fundamental research can be approached. From the fundamental research new possibilities for application may arise.

Fundamental and applied research mutually support themselves and supply products for technological development and, consequently, for the development of research.

3. Conclusion

Research determines needs, indicates solutions and provides the means for implementing the solutions. The distinction between its three types (forms) remains useful for managing scientific research, so that the results of research reach the stage of progress and the funding policy is properly subordinated.

Research and development activity is concentrated in public sector (about 80%), the remaining 20% of the total representing private research. One of the possible explanations for this very low participation of the private sector in research lies in the reduced availability of capital and lack of entrepreneurship specific to research field.

The situation is aggravated by the ambiguity of legislation related to the possibility of paying researchers from the framework of state institutes from the attracted extra-budgetary funds.

Scientific performance may be covered by:

- Research grants won in national competitions;
- International research contracts;
- National contracts;
- PhD theses;
- Articles published in scientific journals;
- Books, manuals and monographs published by national and international publishers;
- Patents or other intellectual property products;
- Conference proceedings (summaries and papers published in volumes) etc.

A research evaluation study must take account of economic and technological trends, of education and legislation aspects, of opportunities and risks (threats).

Research, development and innovation activity can be controlled by the following criteria:

- the use of funds allocated from the state budget for research and development;
- private sector contribution to research and development effort;
- qualitative development of research and development infrastructure;
- optimal stabilization of the research structures and their orientation towards competitiveness and efficiency;
- youth participation in research-development projects.

Research policy in the Republic of Moldova pursues creation of an organizational and legislative framework like the one of the advanced countries.

Currently there is a tendency to carry out an increasingly broader specter of economic activities, even those traditionally performed as current activities, in the form of projects, considering that this type of organization provides results at a greater speed and efficiency and facilitates a better control of the resources used.

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The Role of Location Advantages of the Republic of Moldova for Transnational Corporations and FDI towards European Integration

Maria CHISCA*

Abstract

The article provides an overview of the key insights resulting from international business research on the interactions between location advantages and the competitiveness of transnational corporations and FDI. It describes the relative contribution of home country specific advantages and host country specific advantages to transnational corporations' competitiveness; it concludes that host country specific advantages, and in this case particularly Republic of Moldova's country specific advantages, may become increasingly important to integrate into European Union, to achieve global competitiveness and to attract FDI.

Keywords: business, competitiveness, transnational corporations, European Union

Nowadays world economy is passing through deep and controversial changes: market globalization, multidimensional development of competition, transformation of economic processes, traditional principles are obsolete, there is a need to reorient and restructure the national economies in order to succeed. Transnational corporations through foreign direct investments can help and support developing economies to pass this period faster and successfully.

Stephen Hymer (in 1960) was the first author to focus on foreign direct investment as a tool used by transnational corporations (TNCs) to transfer and exploit abroad proprietary resources. His view was that they would face location disadvantages vis-à-vis indigenous firms in host countries such as language and cultural barriers, lack of knowledge on the local socio-economic and business system, expropriation risks, which have been synthesized under the heading of “liability of foreignness”. This implies that TNCs producing in host countries would not benefit to the same extent as indigenous firms from localized network spillover effects or synergies from the combination of firm level and host country location advantages. [1]

At the beginning of XXI-st century, John H. Dunning's eclectic paradigm, also known as OLI Model, has become the leading conceptual framework for the analysis of international expansion patterns of business firms. The idea behind the Eclectic Paradigm is to merge several isolated theories of international economics in one approach.

Three basic forms of international activities of companies can be distinguished as: Export, FDI and Licensing. The so-called OLI-factors are three categories of

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advantages that Dunning added to the Internationalization Theory (the theory says that transactions are made within an institution if the transaction costs on the free market are higher than the internal costs. This process is called internalization.), namely the ownership advantages, location advantages and internalization advantages.

- Ownership advantages (trademark, production technique, entrepreneurial skills, and returns to scale) refer to the competitive advantages of the enterprises seeking to engage in Foreign Direct Investments (FDI). The greater the competitive advantages of the investing firms, the more they are likely to engage in their foreign production.
- Location advantages (existence of raw materials, low wages, and special taxes or tariffs) refer to the alternative countries or regions, for undertaking the value adding activities of TNCs. The more the immobile, natural or created resources, which firms need to use jointly with their own competitive advantages, favor a presence in a foreign location, the more firms will choose to exploit their Ownership specific advantages by engaging in FDI.
- Internalization advantages (advantages by own production rather than producing through a partnership arrangement such as licensing or a joint venture) refer when Firms may organize the creation and exploitation of their core competencies. The greater the net benefits of internalizing cross-border intermediate product markets, the more likely a firm will prefer to engage in foreign production itself rather than license the right to do so.[1, p.157]

One of the problems with Dunning's eclectic paradigm is that it is too eclectic. Indeed, in many ways, each of the three motives for FDI is overdetermined. This is especially true for Ownership advantages. According to Dunning, these include not only the firm's intangible assets, such as knowledge, brands, organizational structure, and management skills, but also natural factor endowments; manpower; capital; the cultural, legal and institutional environment; and industry market structure. Obviously the latter set of Ownership advantages is easier to analyze as country factors. However, Dunning argues that such country factors can somehow be turned into Ownership advantages. Going one step further, Dunning (in 1993) argued that Ownership advantages could explain the ability of TNCs to form alliances. TNCs do this by taking advantage of common governance structures across borders, such that relational assets are created which allow firms to access resources controlled by partners. This is a form of business networks or alliance capitalism, driven by a very broad interpretation of Ownership advantages.

In a similar manner, Dunning has a very broad definition of location advantages. Here it is host country Location advantages that matter, including market size, natural resources, aspects of the infrastructure, the education system, governance structures, and other aspects of political and government activity. Given that firms can lobby governments to obtain shelter type Ownership advantages, the distinction between Location and Ownership advantages is difficult to make. For example, when a TNC is given access to natural resources (ownership of an oil well, a forest, or a mine), a host country Location advantage is transformed into an Ownership advantage.

Finally, Internationalization advantages are clearly strongly linked to Ownership advantages. Indeed, without the institutional form of the TNC it is difficult to see how Ownership advantages could exist on their own without being owned

(internalized) by the firm. In their essence, intangible knowledge assets are an example of the firm replacing the market [4]. Dunning seems to argue that the Internationalization advantage only relates to transaction costs, such that an Ownership advantage is needed to explain organizational, financial, and institutional advantages. This distinction between transactional ownership advantages and asset ownership advantages was introduced by Dunning and Rugman (in 1985).

An important contribution of this theory is that the specific location characteristics which contribute to competitive advantage vary for different countries, sectors and firms (Dunning, 1992). It is interesting to observe that, at the firm level, the location advantages appear to include several elements such as the firm's experience with foreign involvement, psychic distance variables and attitudes to risk diversification. Another contribution of Dunning's paradigm (1998) is that it allows identification of the key location advantages of four different types of international production, such as:

1. natural resources seeking,
2. market seeking,
3. efficiency seeking, and
4. strategic asset seeking.

One of the great strengths of the model is that it highlights the complexity of determining the practical implications for managers and public policy makers of specific location advantages.[1]

Analyzing these four types of international production, we can see that natural resource seeking FDI occurs when firms identify specific host country locations as an attractive source of natural resources at the lowest real cost. However, even in this case, additional location advantages such as good transport infrastructure, an effective institutional and legal framework has been identified as needed too. In this case, FDI is usually associated with the exports of resource based products from the host country. However, in return, this may improve the location advantages of the home country both for the production and exports of goods which use the imported resources as a low cost or high quality input. As intra-firm trade replaces inter-firm trade, an unfavorable taxation regime in a specific country- whether the home or host nation – can be overcome as a location disadvantage by shifting profit, but not the production itself from the nation with the unfavorable regime. FDI should therefore not be viewed only as an outcome of existing location advantages but it may be helpful to the creation of new location advantages.

So, we can see that the identification of location advantages becomes much more complex during the involvement of international production, however, the home country will export capital intensive goods with high technology content and the host country will mainly export resource or labour intensive products with a low knowledge content.

The second type of international production, market seeking FDI, has an effect of immediate import substitution and often leads to trade creation [Rugman 1990]. This can occur when the newly established subsidiary uses intermediate outputs from the home country in its own production process and it becomes a mechanism for additional exports in other product areas for the home country, and the final product can also serve for the export to third country markets.

Efficiency seeking FDI, as the third type of FDI, leads to even higher complexity as regards the location advantages of the countries involved. This type of FDI is usually trade creating at the firm level, because it reflects a rationalization of the TNC's operations and a specialization of the subsidiaries in its internal network. This increases the intra-firm knowledge and goods flows, and the international exposure of the subsidiaries. It is important to understand the importance of location advantages to the firm, because the Firm specific advantages (FSA) and location advantages meet at the subsidiary level, and it influences the specific role given or earned by the subsidiary in the firm [Rugman 1990]. The subsidiaries may act as "globally rationalized", performing a particular set of activities in the vertical chain or they can have a regional product empowerment. In the case of a vertically integrated chain, intra-firm trade is likely to increase, building upon the location advantages benefiting each subsidiary, thereby leading to an increase of both intermediate goods trade and international production [Cantwell 1994].

Regarding the fourth main type, strategic asset seeking FDI [Weson 1993], we observe that the assets of foreign firms are secured by new plants and acquisitions or joint-ventures, to create synergies with the existing pool of assets through common ownership. A good example is the R&D performed in host countries rather than the home country which constitutes the key location advantage which leads to FDI. Due to the fact that the acquired assets sourced from the host country are linked to a localized innovation system and the TNC as a whole may get access to at least some spillovers from that innovation system, so backwards, the localized innovation system may benefit from being associated with the foreign TNC.

In addition to the four main motives for FDI, there are some motives that appear related to location factors, such as escape investments (made to avoid home country restrictions), which obviously reflect the absence of government restrictions in the host country; and trade supporting investments with the goal to facilitate home country imports or exports through building on host country location advantages (for example, to help in purchasing of inputs, logistics activities, after sales service, etc). So, as a conclusion, we may observe that it is precisely the nature of a company's specific advantages and the type of country specific advantages it faces, that will determine whether a particular production activity will be located in a foreign country through FDI and internationalization will occur.

The reasons why individual firms engage in international activities are the centre concern. And the key seems to be market imperfections, which prompt companies to internalize cross border activities. In many respects, this is not very different from what firms do inside national borders. [Dunning and Narula (1996b: pp.7-9)] As such, internationalization can be seen as just another dimension of the growth of the firm (Buckley, 1993b). Nonetheless, this is a dimension unlike the others. On the one hand, countries differ in their legal, political and cultural characteristics, which generates a whole set of managerial problems. On the other hand, transnationality changes the very nature of the firm, and can be in itself a source of competitive (ownership) advantages. As any disadvantage faced by any firm, those associated with doing business in a foreign country are neither permanent nor universal. Internationalization is a learning process. It can be managed through a process of progressive commitment of resources,

starting in more familiar countries and moving to ever more distant ones. If the internalization of ownership advantages explains why TNCs exist at all (Dunning, 1991), only this dynamic approach to internationalization can describe the process of the development of a transnational corporation.

However, in order to understand the way international production is organized worldwide a last critical element is needed. And that is the importance of locational factors. Only the interaction between the internalization of ownership advantages with location advantages can explain the configuration of TNCs' activity worldwide. This seems to be a description of the eclectic paradigm (Dunning, 1979), except that it cannot be dissociated from the dynamic elements of the investment development trend. A TNC engages in foreign direct investment (FDI) as it realizes some types of advantages from investing in foreign countries. Ownership of specific advantages drives national firms' involvement in international expansion. Firms with specific advantages also find it in their interest to locate their production overseas where the host country has certain location-specific advantages, and to internalize the value-adding activities of international production where (structural and/or transactional) market imperfection exists (Kindleberger, 1969; McManus, 1972; Buckley and Casson, 1976; Hymer, 1976; Dunning, 1981; Rugman, 1981).[1]

The Republic of Moldova has an untapped FDI potential, which ranges from agriculture and agri-business, through ITC and other services, to a number of manufacturing industries. Most of these industries are strongly export-oriented, with exports growing in most cases rapidly during the past decade and testifying to Moldova's international competitiveness in a range of products. Export-orientation does not put limits on the market size as long as competitiveness continues. The Republic of Moldova has for many years to come a unique advantage, not shared by many countries: a secured access to two large regional markets, those of the EU and CIS countries. Its key asset for export-oriented production includes competitive semi-skilled and skilled human resources. FDI potential extends to infrastructure services such as energy generation and distribution and, notably, to renewable energy. It also includes future infrastructure projects, where foreign investors can be attracted to public-private partnerships. Yet the existing FDI potential does not necessarily equal investment opportunities for foreign investors. In some cases these opportunities are pretty straightforward, such as in manufacturing industries, while in others, such as in agriculture and agribusiness, they are not. If the Republic of Moldova wants to attract more FDI, it has to transform the potential into opportunity and to exploit opportunities where they already exist. This will require concerted actions on many fronts. At the same time, the Republic of Moldova should start building potential for better, higher value added FDI, and, for that matter, for better domestic production in the future. So far, with few exceptions such as IT services, the country has relied in export-oriented production on attracting FDI into rather simple operations, benefitting from semi-skilled or unskilled human resources. Such production is characterized by low value added and products competing on price rather than on quality. The Republic of Moldova has a comparative advantage in such operations, which will hold for some time, and therefore should exploit its potential to the full, as it at present has hardly any other potential. But such operations are footloose; they stay in a country as long as its

human resources are cheap and move to other countries when they become too expensive. Therefore, they are not sustainable in the long term and they have to be gradually replaced with higher grade operations, for which the country should prepare ground. In other words, the Republic of Moldova has to move up the value chain of industries and activities, existing and new ones.[3]

So, to see how the Republic of Moldova can integrate into the internationalization process we should remark what are the main country's location advantages [5]:

- Favorable geographical position at the crossroads of commercial routes;
- Proximity to large world markets (European Union and Commonwealth of Independent States);
- Platform for manufacturing and exporting both to CIS and to the EU;
- Competitive general corporate income tax (CIT) rate in the region – 12%;
- Tax and customs framework close to the EU one;
- Considerable network of operational Double Tax Treaties and Investment Protection Agreements;
- Market access through 42 Free Trade Agreements including:
 - WTO members (worldwide)
 - DCFTA
 - CEFTA members (most Balkan countries)
 - CIS members
- Entrepreneurial activities under preferential terms and conditions developed in free economic zones (FEZ)
- Well skilled / multilingual workforce
- Relatively low employment costs
- Improved legal framework regulating entrepreneurial activity
- Starting a business – fast and easy to handle
- Investment opportunities through privatization of public property and public-private partnership.

As a general rule, countries that offer TNCs what they seek stand a greater chance to attract FDI, or more FDI. While investing abroad, TNCs seek access to natural resources and national and international large and dynamic markets. They also seek cost reductions from production abroad, enabled by access to competitive inputs in host countries, notably, but not only, to unskilled and skilled labour. And finally they seek national enterprises, they can acquire, fitting into their strategies. As a result, natural resources, markets, competitive production inputs and strategic assets are key four economic attractions of host countries seeking to attract FDI. What are key Moldova's attributes in light of these attractions? The Republic of Moldova hardly has any natural resources, apart from fertile land and good climate, suitable for competitive agriculture. Its domestic market is small, but Moldova is centrally located, between two large regional markets, to which it has relatively free access. Access to two large markets determines FDI potential in export-oriented manufacturing, tradable services and agriculture. This potential is enhanced by the availability of cheap, semi-skilled and in some activities skilled, trainable work force and investment opportunities in Free Economic Zones, where incentives and utilities are offered to exporting manufacturing

investors and in Industrial Parks, which offer infrastructure. Small domestic market does not rule out the possibility of attracting investors into small scale manufacturing and services catering to domestic market. The lack of natural resources can be seen as an opportunity: Moldova can import raw materials from where they are cheapest and process them for exports or domestic market (where scale would be sufficient), or both.[3]

The German Economic Team Moldova (GET Moldova), during its analysis of FDI attraction to Moldova, advises the Moldovan government and other Moldovan state authorities such as the National Bank on a wide range of economic policy issues in order to improve country's location advantages. Competition for foreign direct investment (FDI) is tough as many potential investment locations try to attract scarce and increasingly footloose foreign capital. The data on Moldova's FDI inflows and stock suggest that the country has only been partly successful in attracting foreign investors. The level of foreign capital invested per capita lags behind other peer economies and the structure of FDI is biased towards services. Manufacturing industries – which are usually more capital intensive and require thus a higher commitment from investors – are yet underrepresented and agriculture almost completely failed to attract FDI. In the opinion of the investors, business associations and other stakeholders, there are a number of issues that inflate the cost and/or increase the risk of investing in Moldova. Thus, removing such problems is the key for increasing FDI to Moldova. The German Economic Team Moldova emphasized several recommendations in order to help Moldova to improve its country location advantages.

Firstly, there is a need to improve legislation. One of such issues is the ban of land purchasing for foreign investors. While there are many workarounds for insiders and established investors, this ban is deterring new potential investors and increases the cost, and the risk, of doing business for existing ones. Indeed, given the many ways of circumventing the ban, aligning legislation with reality would be quick win and low cost recommendation for improving the FDI climate. More complex, nevertheless important, is the issue of labour laws. Despite high headline spending on education investors have difficulties to find and retain skilled workers. A major problem is a lack of options to tie workers to the company and, thus, provide the incentives for employers to invest in training and education. Consequently, know-how transfer, a crucial aspect of FDI, is severely inhibited. Furthermore, curricula and methods of further education are partly outdated. Secondly, the problematic relationship between government and business is a major barrier for FDI. The risk of investing in Moldova is particularly high due to the frequent arbitrary implementation of legislation by state bodies. Furthermore, often and sudden changes in legislation, which are not consulted with stakeholders, increase the cost and risk of running a business. Thirdly, the current “personalized approach” of attracting investments, where high level policy makers would champion investors, is not without problems. While policy makers have a role to play in facilitating FDI, an “institutional approach” centred on a well-resourced MIEPO would reduce the risk for potential investors. [2]

Most of the German Economic Team Moldova recommendations could be implemented in the short term and at a very low cost. This means that Moldova could in

fact significantly improve its investment climate soon and inexpensively, thus inducing higher FDI inflows.

At the current moment, the Republic of Moldova has a chance to take all the advantages from signing the DCFTA and benefit of its location advantages. Neighboring with the European Union, the main source of foreign direct investments in Moldova offers advantages that should be used correctly and for that, the following should be taken as recommendations:

- To enhance European course;
- Continue to promote the regulation reform;
- To create a clear concept referring to the role of TNCs and FDI for the Republic of Moldova's economy;
- To elaborate strategies and policies for attracting TNCs according to country's location advantages;
- To define and approve the economic spheres which require investments, meanwhile not to reject investments in other sectors;
- To invest in infrastructure and find a permanent source for investments in this field;
- To evaluate occasionally the policies for attracting FDI and TNCs in our country for optimizing the benefits;
- To assure that Moldova's performances in improving the investment climate are observed by investors from the entire world.

There are diverging views about the attractiveness of Moldova as an investment destination. On the one hand, existing foreign investors seem to consider Moldova as a satisfactory investment destination. While there is ample room for improvement of the business climate, those businesses largely maintain their presence and, in some cases, even expand their ventures. Moldova continues to take steps toward developing a stronger economy, reforming a cumbersome regulatory framework, combating corruption and adopting reforms aimed at improving the business climate. Poor physical infrastructure, cumbersome licensing procedures, excessive permit requirements, and proliferation of fee-for-services to public authorities and commercial organizations all contribute to a business environment that remains among the most challenging in the region.

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Bank deposits, notions and features of accounting

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Abstract

Bank deposits are the main method of raising capital and short-term available savings. The opening and using of the bank deposits is the main function of banks. In 2004 the Deposit Guarantee Fund was set up in the Republic of Moldova of Deposit Guarantee Fund and for the first time there was established a guaranteed bank minimum in case of bank insolvency which is currently 6,000 lei for the deposit of each natural person.

Key words: banking deposits, interest, deposits payable on demand, fixed-term deposits, deposit account, and deposit guarantee fund.

Bank deposits represents the main method of raising capital and short-term available savings. The opening and using of the bank deposits is the main function of the banks.

A deposit represent “a sum of money entrusted to the bank” under the following conditions:

- to be fully reimbursed, interest-bearing or interest-free providing any other facilities, on demand or in terms agreed upon between the depositor and the depositary,
- not to refer to the transfer of properties, provision of services or the guarantee.

Therefore, the bank deposit represents a sum of money deposited at the bank for a set period of time during which the bank pays the depositor an interest.

Depending on the period for which they are established the deposits are classified into two main categories:

1. Demand deposits - are low or no interest-bearing accounts designed to accept amounts of money from the depositor for a short-term use. It shows a credit balance and can be withdrawn at any time, without a prior notice. Due to the fact there is no definite maturity term, the opening of the demand deposit is entirely a matter of the depositor's needs and choice.
2. Term deposits - represents a sum deposited by the holder and made available only to the bank, until a certain maturity, preset in the contract upon opening the deposit. Unlike the demand deposit, the term deposit is a higher interest-bearing deposit intended to make up for the unavailability of the deposited funds. The interest rate is established between the depositor and the banker depending on negotiating skills of the respective parties and the size of the amount deposited and the maturity. As a rule, the interest rate is adjusted to the money market interest rate for a similar period. An emergency withdrawal before maturity leads to loss of interest.

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Demand deposits have the highest liquidity, are characterized by elasticity, given that the depositors can at all times use them to make payments into the account and withdrawals from the account, depending on their interests. On the other hand, term deposits enable banks to capitalize on these funds during crediting terms, adjusted to the nature of the resources. At the national and international level there are utilized the following categories of deposits:

- current account in lei;
- current account in foreign currency;
- term deposit account in lei.

Depending on specific criteria, there are several types of deposits. In terms of the currency used the deposits can be opened in lei or in foreign currency. The currency used determines the types of deposit, either in lei or in a different currency. The volatile character of the interest rate can yield:

- Fixed interest rates deposits: the bank ensures a fixed interest rate with the deposit validity.
- Fixed interest deposits with an interest fixed for a certain period: the bank will adjust the interest rate according to the policy of deposits that are still valid after the expiry date set in the deposit contract.
- Floating interest rate deposits: the bank is allowed to change the interest rate during the deposit period, depending on the market evolution.

In order to open a deposit account the natural person must submit the following documents:

When the respective documents are submitted by the depositor:

- the original and the copy of the depositor's identity card;
- the amount of money to be deposited.

When the respective documents are submitted by the person empowered to deposit:

- the identity card of the authorized person in original and the copy thereof;
- a notarial certified copy of the depositor's identity card;
- the power of attorney in original or its copy;
- the amount of money to be deposited.

The following persons are eligible to open a deposit:

- a) the account holder;
- b) a trustee of the account holder;
- c) parents or tutors - on behalf of the children aged under 14.

The deposit accounts shall be opened based on the following documents submitted by the client:

- a. the original and the copy of the document confirming the identity of the client: - the identity card issued by the Moldovan authorities; - Residence permit, issued by the Moldovan authorities; - Temporary residence permit for the refugees status or humanitarian aid beneficiaries, issued by the Moldovan authorities; - Foreign passport, issued by the by the Moldovan authorities having the note of withdrawal of identity card, - for individuals who leave the Republic of Moldova for other country residence;

b. request for account opening with the specimen signature of the client.

The photocopy of the document, which confirms the customer's identity, must be checked by the person in charge of the bank to ensure that it complies with the original.

In case when the data are authentic the person in charge for make on the copy the entry "the copy corresponds to the original", applies the stamp (which includes his personal number and date) and his signature. In addition, the person in charge of the bank establishes the identity of the person who submitted the documents, with the from the picture of the document confirming his identity. The photocopy of the document remains in the bank, and the original is returned to the client presenting the document.

For the opening of a deposit, account or several simultaneous deposit accounts shall be fulfilled an application for account(s) opening (an offer's accept) by means of appropriate programming according to the form established the bank.

The client checks the accuracy of the personal data indicated in the printed application and in the presence of the person in charge, applies his signature specimen in the space provided for this demand. If the account is opened by the authorized person, the specimen signature of the account holder is placed at the first presentation of the bank account holder.

The supplementing of accounts can be performed by: account holder, reliable person and third person (as defined in art.1222 and art. of the Civil Code of the RM) by cash or by transfer from other people's accounts in order and in accordance with the conditions of the referred deposit.

The withdrawal of money from the account can be carried out by: - the account holder; - the trustee of the account holder; - legitimate successors (heirs) in the event of the death of the account holder. The bank can release funds to the account holder at his presentation of the identity document.

For the purposes of changing the data or bank account closing the client presents to the bank the identity card.

The accounting of deposit operations is managed by the class II "Liabilities" of the chart of accounts. Demand deposits are held in registered accounts in 2220 groups "Demand deposits without interest" and 2250 "Demand deposits with interest". These are liability accounts, in credit account is recorded the opening and completion of deposits, in debit account is reflected the partial payment or the closing of deposits. The final balance is creditor and reflects the deposit amount at the end of the reporting period.

The most used accounts are accounts of demand deposits of the clients. For the recording of legal persons the principal accounts used are:

- Account 2224 "Current accounts of legal entities" - this account is intended to track the movement of funds deposited or transferred without interest by legal persons engaged in entrepreneurial activities or other work, including those for operations with bank cards. In this account is recorded the current operations of receipts and payments that can be withdrawn by the account holder at any time without notice.
- Account 2251 "Current accounts of legal entities" is intended to track the movement of funds deposited / transferred with interest by those who practice entrepreneurial or other work, including those for operations with bank cards. The amounts in this account are intended for current operations of receipts and

payments may be withdrawn without notice by the account holder at any time.
For recording of natural persons, the following accounts are essential:

- Account 2225 “Current accounts of natural persons” is intended to track the movement of funds deposited / transferred without interest by individuals, including those for carrying out of operations with bank cards. This account records the current operations of receipts and payments that can be withdrawn by the account holder at any time without notice.
- Account 2252 “Current accounts of natural persons” is intended to track the movement of funds deposited / transferred with interest by natural persons, including those for operations with bank cards. The amounts from this account are intended for current operations of receipts and payments may be withdrawn without notice by the account holder at any time.

Savings Deposits are kept on record in the accounts from the Group 2310 “Savings deposits”. The group is designated for the bookkeeping of savings deposits of natural persons, individuals who practice business, legal persons, non-banking financial environment and non-profit organizations.

Term deposits of the clients are kept on record in the accounts from 2370 groups “Term deposits of clients”. The group is intended to record deposits received from customers (natural and legal persons) for a certain period and with a determined interest rate.

Example:

Suppose that on April 22nd, 2015 between a commercial bank and a natural person was concluded a deposit contract stipulating that the bank has received a deposit amounting to 15 000 lei for a period of 3 months. The annual interest rate is 15.5%. The deposit is received in cash and the interest is calculated and paid monthly.

1. Based on the application for opening an account and the application for the initial payment in the deposit account is reflected the cash deposit:
Debit account 1001 “Cash on hand” 15 000 lei;
Credit account 2374 “Short-term deposits of natural persons” 15 000 lei.
2. The calculation of monthly interest is reflected:
Interest = Deposit account balance x Time for what the interest is calculated x rate of interest in percentage: 360×100
Interest for April = 15 000 lei x 8 days x 15.5% : 360 = 51.67 lei
Interest for May = 15 000 x 31 days x 15.5% : 360 = 200.20 lei
Interest for June = 15 000 lei x 30 days x 15.5% : 360 = 193.75 lei
Interest for July = 15 000 lei x 21 days x 15.5% : 360 = 135.62 lei.
Debit account 5374 “Expenses with interests on short-term deposits of natural persons” 51.67 lei;
Credit account 2728 “Calculated interest rate on term deposits of customers” 51.67 lei.
3. Recording of monthly interest cash payments:
Debit account 2728 “Calculated interest rate on term deposits of customers” 51.67 lei;
Credit account 1001 “Cash on hand” 51.67 lei.
4. The deposit refund will be reflected:
Debit account 2374 “Short-term deposits of natural persons” 15 000 lei;

Credit account 1001 “Cash on hand” 15 000 lei.

In banking practice, there are cases when the deposit is raised before maturity. In this case, depending on the bank's policy and provisions of the contract with the customer the calculated and paid interest will be deducted from the deposit amount to be paid to the customer.

Example.

Suppose that on April 25th, 2015 between a commercial bank and a natural person was concluded a contract of deposit stipulating that the bank has received a deposit in the amount of 105 633 lei for a period of 6 months. The annual interest rate is 16.5%. In the event of the contract cancellation, the interest is calculated at a rate of 0%. The deposit is received in cash and the interest is calculated and capitalized monthly and transferred to the customer's account. After 3 months, the contract was cancelled.

1. Recording the cash deposit:
 - Debit account 1001 “Cash on hand” 105 633 lei;
 - Credit account 2374 “Short-term deposits of natural persons” 105 633 lei.
2. Recording the calculation of capitalized interest:
 - Interest = Deposit account balance x Period for what the interest is calculated x percentage rate of interest: 360×100
 - Interest for April = $105\,633 \text{ lei} \times 5 \text{ days} \times 16.5\% : 360 = 242.07 \text{ lei}$;
 - Interest for May = $105\,875.07 \text{ lei} \times 31 \text{ days} \times 16.5\% : 360 = 1504.31 \text{ lei}$;
 - Interest for June = $107\,379.38 \times 30 \text{ days} \times 16.5\% : 360 = 1476.46 \text{ lei}$;
 - Interest on July = $108\,855.84 \times 31 \text{ days} \times 16.5\% : 360 = 1546.66 \text{ lei}$;
 - Debit account 5374 “Interest expenses on short-term deposits of natural persons” 242.07 lei;
 - Credit account 2728 “Accrued interest on term deposits of customers” 242.07 lei.
3. Reflecting the interest capitalization:
 - Debit account 2728 “Accrued interest on term deposits of customers” 242.07 lei;
 - Credit account 2374 “Short-term deposits of natural persons” 242.07 lei.
4. Based on the request for cancellation of the deposit contract, the cancellation of the contract is reflected after 3 months:
 - Debit account 2374 “Short-term deposits of natural persons” lei 4769.50;
 - Credit account 4951 “Fines, penalties and other sanctions” lei 4769.50.
5. Recording of reimbursement of funds:
 - Debit account 2374 “Short-term deposits of natural persons” 105 633 lei;
 - Credit account 1001 “Cash on hand” 105 633 lei.

The interest can be seen as a price paid by the debtor to the creditor for his permission to use his capital. The utilization is temporary and is accompanied by a promise of repayment.

The interest accounting of deposit accounts are kept in class II “Liabilities” in the group of accounts 2700 “Accrued interest to be paid”. These are liability accounts, in credit is recorded the accrued interest on deposits opened at the Bank and in debit is reflected the interest payment.

When calculating the interest for deposits the principle of synchronization is respected which consists in concordance between classes II “Bonds” and V “Expenses” from the chart of accounts.

Accounts of the group 2700 “Accrued interest to be paid” synchronize with the

groups of accounts from the Vth class “Expenses” 5250 “Expenses with interests on sight deposits of customers” - 5370 “Interest expenses on term deposits of customers”.

Group 2700 “Accrued interest to be paid” is intended to record accrued interest to be paid by the bank regarding loans, deposits, etc. In this group can be calculated fees and expenses that are non-interest bearing.

The calculation of fees and expenses that are non-interest bearing shall be made only if the bank has a well-founded insurance in supporting the expenses and there is a real possibility to exactly determine amount of expenditure.

The accounts 2717 “The calculated interest on term deposits of the National Social Security Authority/ National Health Insurance Authority” - 2738 “The calculated interest on term deposits of natural persons who practice activity” are intended to track the calculation, payment and correction of interest on deposits.

Depending on the group of accounts for deposits, expenses related to interests are reflected in the class V “Expenses” by changing the first two digits from the analytical account, for instance for the account 2311 “Savings deposits of natural persons” the interest related expenditures will be reflected in the account 5311 “Interest expenses on savings deposits of natural persons”.

The group 5250 “Interest expenses on demand deposits of customers” is intended for recording the interest expenses on demand deposits received from the customers. The accounts 5251 “Interest expenses on current accounts of legal entities” - 5262 “Interest expenses on other demand deposits of natural persons” are intended for the expenditure of interest on demand deposits received from legal entities and natural persons.

With the constitution in 2004 in the Republic of Moldova of the Deposit Guarantee Fund there was established for the first time the minimum bank guaranteed in case of the bank's insolvency.

Deposit Guarantee Fund in the Banking System (hereinafter - the Fund) guarantees, under the conditions and within the limits provided by Law No 575-XV of 26.12.2003 regarding the guarantee of the deposits of the natural persons deposits in the banking system (hereinafter - the Law), deposits in national currency and foreign currency held by residents and non-resident individuals in authorized banks.

The fund guarantees deposits that have the form of a credit balance resulting from existing funds in the accounts of natural persons or from transient conditions created through banking operations, to be returned by the bank under the legal and applicable contractual conditions, as well as those that have the form of a debt by a natural person represented by a debt instrument issued by the bank. Information on types of deposits (banking) are guaranteed in articles intended to inform the public about the services offered by the bank.

The following deposits are not guaranteed:

- a. deposits of bank administrators;
- b. deposits of natural persons that are shareholders of the bank holding at least 5% of its capital;
- c. deposits of spouses and first and second-degree relatives of the persons referred to in point a) and b);
- d. deposits of tertiary individuals acting on behalf of the persons referred to in point a) and b);

- e. deposits of individuals that hold in affiliated entities and dependent companies, functions similar to those listed in point a) and b);
- f. deposits of individuals who have obtained from the bank interests or other financial benefits on preferential terms;
- g. deposits of natural persons at “Banca de Economii S.A.” as of January 2, 1992, both those that entered into force and those and re-registered on 29 July 1994, taking as a basis their balance as of the accounts of January 2, 1992, which are already guaranteed by the State by Law on indexation of money deposits at “Banca de Economii S.A.”;
- h. deposits of natural persons in the deposit accounts opened under the Parliament Decision no.201-XIII of 29 July 1994 on indexation of people's deposition in the institutions of “Banca de Economii S.A.” from Moldova;
- i. bearer debt securities;
- j. deposits declared illegal by the judicial decision. The fund suspends the payment of deposits to natural persons against whom a legal proceedings is instituted regarding the legality of deposits and the judgment did not become final;
- k. all the instruments that is included in the definition of regulatory capital of the bank.
- l. Deposit guarantee ceiling (the maximum amount payable to a depositor) is 6000 MDL, regardless of the number and size of deposits or currency in which they were set up at the bank.

The size of the bank obligation towards the depositor is calculated by summing all its deposits, including due and unpaid interest on the date of the finding of unavailability of deposits.

If the bank has a claim on the depositor, the obligation proportion of the bank is reduced by the size of his obligation, expired and unpaid to the bank.

In the case of a common deposit, the share of each holder stipulated in the contract, is taken into account when calculating the size of the bank's obligation according to the coverage provided. In the absence of such a provision in the deposit contract, the common deposit is shared equally among depositors.

The equivalent in lei of the deposits in foreign currency is determined based on the official exchange rate of MDL against respective foreign currency at the date of the finding of unavailability of deposits. The Fund may mandate (empower) one or more banks to pay guaranteed deposits

The payment of guaranteed deposits begin within 7 days from the receipt from the liquidator of the List of claims relating to guaranteed deposits, according to art. 20 (1) of the Law. In exceptional circumstances and in special cases with the consent of the Government, the Fund may extend no more than 30 days the above-mentioned period.

The Fund cannot invoke the referred time limits not to guarantee the deposit of a holder who has been unable to require the guarantee in due time.

Holders of deposits make the receipt of the compensation. The payment compensation on deposits in favor of minors is drawn by their parents, adopters, tutors or curators.

The payment of the guaranteed deposits can be disburse to other persons in conformity with the legislation of the Republic of Moldova (based on power of attorney, certificate of inheritance, etc.).

In the case where the size of the bank obligation is higher than the level of the guaranteed ceiling, the Fund will pay the depositor a compensation equal to the level of guaranteed ceiling.

In the long term, along with the advanced process of European integration, will appear as well the single obligation for the EU Member States to adopt minimum guarantees of 100,000 euros for their citizens.

Given the potential of the migration of the capital, it is important to examine the practices in the region in the future (ex. Ukraine - at least 200,000 UAH, Russia - at least 700,000 rubles, Romania - 100,000 Euro (as in most EU countries, except Ireland offering unlimited guarantees)).

In most countries, within that limit, the deposits of the natural persons are guaranteed. However, in some countries such guarantees were also offered to legal entities, to support small and medium enterprises. (eg. in Romania).

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Economic, social and gender aspects of the international migration in Moldova

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Abstract

International labor migration is one of the most marked phenomenon that characterize the current situation on the Moldovan labor market.

Geographical and gender distribution in labor migration is largely determined by the type of work that provide migrant workers. Women migrate to provide domestic and care services abroad, delegating in the same time their responsibilities in this area to other people, leads to the constitution of so-called global care chains.

Migration with the purpose of study in Moldova is accompanied by a negative phenomenon, of the departure of highly qualified specialists. International migration of highly skilled labor, known as 'brain drain' clearly evokes a loss of intellectual capital.

Moldova continues to be characterized as an origin country of human beings trafficking, being at lesser extent a country of transit of human trafficking victims from NIS countries to Europe.

The lack of some measures from the Government on "human capital loss" problem will essentially reduce the chances of exit from the crisis.

Keywords: migration, labor, migrant workers, intellectual capital, gender, social responsibility, brain drain, global care chains

At the present international migration has become a defining feature of modern global economy. The main factors underlying this expansion are the process of globalization, the technical and scientific progress and the new economic order.

International Migration in Moldova, especially the labor migration registers a continued growth. International labor migration is one of the most marked phenomenon that characterize the current situation on the Moldovan labor market. In 2014 the number of people migrated abroad for searching a job was about 341 900 people (332 500 in 2013), or 18% of the inactive population aged 15 and over. Men accounted 64.1%, while women, respectively - 35.9% of all migrants. The share of people left from rural areas was 71.7%²⁸

Although the phenomenon of international labor migration is considered new for Moldova, this statement is only partially correct. During the socialist economy period, Moldova, as one of the republics within the Soviet Union, was characterized by pretty intense internal work migration. The high level of migration was explained by the fact that from the 15 Soviet republics Moldova had the highest population density (130

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²⁸ Labour force in the Republic of Moldova. Employment and unemployment, 2014, www.statistica.md

persons per square km) determined by the demographic specific of this region, whilst economic structure was mainly agrarian. As a result, Moldova was characterized by an excess of labor supply, which often was absorbed by "the great sites of socialist construction" through labor placement services of the Union. Many migrant persons were employed outside the country, especially in the northern regions of the former Soviet Union, in order to get a higher wage or to ensure a more successful career. Labor Migration in the Soviet Union was conditioned by the emigration of young people for study or for military service in the Soviet Army outside the republic, some of whom stayed to live and work there where they have studied or made military service.

When the USSR fall internal migration has become external, also changing the intensity and motivations. The apparition of borders between republics did not restrict migratory workers flows to east. On the contrary, they have become more intense, being mainly driven by higher income and better employment opportunities abroad, that missing home. The difficulties in the early years of transition, the challenges imposed by administrative reforms, economic and social policies have boosted the migration processes, particularly the economic migration.

During this period migration also has changed their character. From permanent, it has become mainly temporary (long-term) or seasonal.

Although in the early years of transition Moldova faced with a pronounced wave of permanent migration (usually Moldovans emigrate to Israel, Russian Federation, Ukraine, Canada etc.), the most observed form of migration was the temporary voluntary migration, based on economic reasons. Driven by socio-economic situation, the phenomenon of migration has also evolved depending of migration policies adopted in different time periods. Thus, according to experts the developments of migration phenomenon in Moldova can be divided into four phases, each with its own specific characteristics.²⁹

The first phase (1990-1994). The specific of this stage is determined by some aspects of migration policy characteristic for the previous period (when Moldova was part of the USSR). It be mentioned that at the beginning of that period over 560 000 Moldovans living in former Soviet Union republics. After independence proclaiming a series of migration related issues came to light, including protection of rights of Moldovans working in former Soviet republics, which led to bilateral agreements on labor migration signed with the Russian Federation (May 1993), Ukraine (December 1993), Belarus (1994), as well as other CIS countries.³⁰

Drastic worsening of economic and social situation, mass layoffs of workers as a result of privatization processes, increasing poverty etc. - led to migration intensification that occurred during this period, mainly as a commercial economic migration. Migrants go abroad (usually in Turkey, Romania, Russian Federation and Poland) where they sell autochthonous goods and with earned money buy goods from the land, which sell at home for a higher price. Along the way, this form of economic migration decreased their intensity and disappeared, becoming unprofitable due to the introduction of visa regime, strengthen customs control, balancing prices in post-communist countries, the active involvement of large and medium business in import-export operations with European countries.

²⁹ Tendințele și politicile migraționale în regiunea Mării Negre: cazurile Moldovei, României și Ucrainei, Institutul pentru Politici Publice (Kiev, 2008)

The second phase (1995-2000). This stage is characterized by intensification of migration processes, especially labor migration. By 1997 social and economic reforms promoted by the government, have led to an economic recovery began. However, despite these positive results, the economic situation worsened in 1998 following the regional financial crisis and the default in Russia, main trading partner of the Republic of Moldova, followed by block of the imports of Moldovan agricultural and industrial production in the Russian Federation and the collapse of the national currency and inflation increase. The years 1998-1999 were marked by acute economic crisis, which led to the closure of businesses, job losses, rising of unemployment, increased poverty. All these taken together led to compromising of labor market functionality in the country. As a result, grew spontaneous labor migration, mostly illegal. Grow the business connected with illegal migration of people to other countries, human trafficking increase. At the same time, began to take shape and the positive effects of labor migration. Foreign currency inflows into the country increased. The interest in this phenomenon increased too, both for general public and for decision-makers.

The third stage (2001-2006). This stage is characterized by the maturation of measures taken by the Government regarding regulation of flows of labor migration, protection of migrant rights, fighting with illegal migration, including human trafficking etc. Thus, in 2001 was created the State Migration Service, which has the function of development and promotion of more efficient and fair migration policies. During this period the illegal migration and employment was at its peak and was determined, first, by the difficulty of obtaining visa to European countries, the lack of possibility to be employed abroad legally, and high taxes, which were to be paid for obtain the legalization of stay in destination countries. Multiple attempts were undertaken to regulate the labor migration flows both in Moldova and in European countries. During this period more dialogues were initiated with 19 countries, signed bilateral agreements on labor migration, and were opened consulates of the main destination countries of illegal labor migrants (Portugal, Greece and Italy) in Moldova. Around this time grows seasonal work migration towards the Russian Federation and Ukraine (mainly feature for men working in construction field) and to Italy (mainly feature for women who are engaged in household work).

Stage Four (May 2006-present). This stage is characterized by increased activism in promotion of policies relating to international labor migration. After the reorganization of the State Migration Service appeared several institutions, including the Service of Migration and Asylum, Agency for Combating Human Trafficking, Migration Policy Department near the Ministry of Labor and Social Protection and the National Employment Agency and so on, that took over its competences. With the launch of the European integration vector occurs the closer cooperation with the European Union. Moldova made essential efforts for regulate the migration processes, and illegal migration of labor is gradually attenuated. The main destination countries remain Russia and Italy. Remittances from abroad have reached significant proportions amounting to about one third of GDP in 2006, remaining until now at high level.

The evolution of migration in this period was strongly determined the nature, the extent and types of international labor migration in Moldova, including the female one.

Although reasons for migration may be multiples (better employment and earning opportunities, poor quality of public services, environmental matters, family reunification, education, conflicts, etc.), however, the main cause of it, is economic or employment one. People migrate to improve their quality of life, to cultivate certain

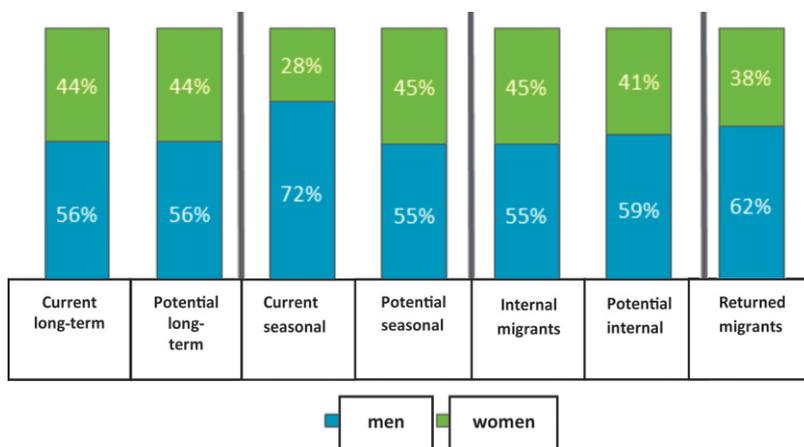
skills, attitudes, values, for general growth, while remittances sent home serve for assurance of their family members decent living.

On the background of intensifying labor migration there is also an increasing percentage of female migrants which leads to a "feminization of migration". If previously it was considered that migration of men pursued mainly economic goals and enhance family welfare, while the women migration has, respectively, a social character (family reunification, education, escape from domestic violence, etc.) now this approach changes. Today the female migration takes more pronounced economic character that contribute to increasing of the household welfare and to the development of the communities they belong to.

The feminization of international labor migration is determined by several factors, including: the change of labor content (reorientation from manufacturing to service economies), crisis of care systems driven by the mass ingress of women in the labor market of destination countries, the formation of such called global care chains etc. All this has led to an increasing demand for female migrant labor and to sexual division of labor.

Analyzing the distribution of Moldovan migration by sex, field studies indicate a prevalence of male versus the female migration. The study "Nexus" shows the prevalence of men over women migrant for all types of migration. However, it is noted that if for the long-term migration, both current and potential, this prevalence is not significant - 56% men compared with 44% women from total migrant persons, for current seasonal migration this discrepancy is more pronounced - 28% women versus 72% men. At the same time, the study shows an increase in the percentage of women for seasonal potential migration compared to the current one - 45% versus 28%. (figure 1)

Figure 1. Trends in the Moldovan migration by sex, 2013, %



Source: Nicolaas de Zwager, Ruslan Sintov, "Market Research: Innovation in circular migration - Migration and Development in Moldova", Chisinau, 2014 IASCI.

The prevalence of migrant men on migrant women is determined primarily by prevailing stereotypes in the Moldovan society, men are involved in the main function of ensuring the welfare of households in which they live, while women respectively

insure the function of domestic work, education and childcare etc., or those activities that are not yet considered value added work. Although mostly of women are present on the labor market, this does not exempt them of their responsibility for housework.

On the other hand, because the specific of employment and cultural traditions, the republic's population has sedentary nature and labor migration is seen only as a last way of solving the economic problems that could arise. For this reason, a high level of migration is not characteristic for Moldova, and the intensification of this phenomenon in the years of transition to the market economy is determined primarily by economic difficulties the population facing. In the same context, although female labor migration is not pleasant, sometimes even condemned, the number of migrant women workers is steadily growing.

The increasing number of female migrant workers is determined primarily by increased demand for female labor, particularly in European countries. Is envisaged the increase of the demand for domestic work and care that are usually provided by female migrant workers.³¹

The growing number of migrant women workers from Moldova is determined by costs and risks reduction related to migration, large disparities between incomes at home compared to those in destination countries, lack of opportunities to find attractive well-paid job in the country of origin, overcoming language and cultural barriers etc. All this led to labor migration abroad of a significant number of women from Moldova, especially from rural areas, with intention to provide the types of work mentioned above. Usually migrant female workers from Moldova go to work in such countries as Italy, Turkey and Israel. According to the Labor Force Survey in 2013 in these countries went respectively 38 600 or 33.4%, 5700 or 4.9% of all female migrant workers (Table 1). Migrant male workers go mainly in the Russian Federation - 170 700 persons or 76.3% of male migrant workers.

This geographical and gender distribution in labor migration is largely determined by the type of work that provide migrant workers

Studies in the field have shown that most of male migrant workers activate in construction 51%, transport or telecommunications -16% or industry -10% of male migrant workers, areas where labor demand is high, mainly in the Russian Federation. However, most of the female migrant workers work in domestic services- 43%, hotel services - 12%, commercial services - 13% and health care - 4% of the total of migrant female workers, areas characterized with high demand in European countries.

Increasing demand for care services in European countries stems from the fact that these countries are facing with their own crisis that presented serious challenges for the welfare and traditional care model based on family. Walkout of women to the labor market and the aging of population have led to a "crisis of care for children, elderly, sick and/or disabled people". Many states do not adequately manage this crisis, leaving households them-itself to take further the care responsibility. The most accessible solution for middle-class households was to employ a domestic worker to provide care, which often is a migrant woman.

As such, care work is the name given to all everyday activities aimed to maintaining our health and life, such as housework (meal preparation, housekeeping, laundry) and personal care (children, the elderly, the sick or the disabled). In the private

³¹ Labour force in the Republic of Moldova. Employment and unemployment, 2014, www.statistica.md

household, these activities are carried out mostly by women that do not get any remuneration. Therefore, at the moment, care work is considered the activity that don't generates added value. This situation derives from the traditional division of labor by sex, where the woman has role of unpaid caregiver and the men - paid worker.

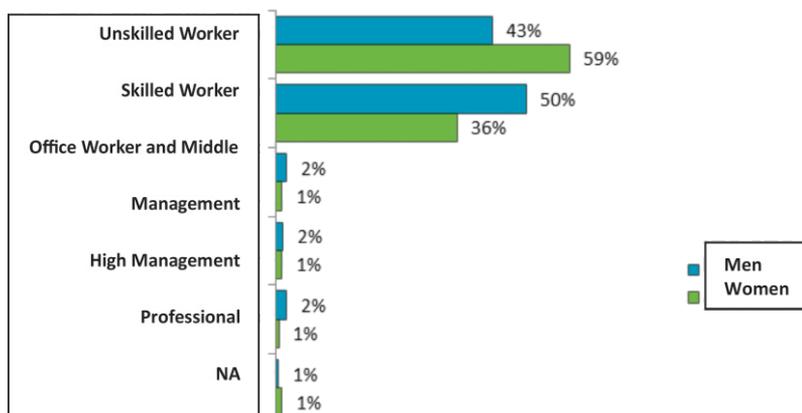
There are, of course, paid care services too.

In turn, in the countries of origin like Moldova, when men are not able to assure family welfare (because of unemployment, low wages, economic crisis, etc.), this function is delegated to women, which led to a "feminization of poverty". In this situation the family can take a joint decision that a female member too will leave to work abroad for the purpose of ensuring the welfare of the family. There are cases when women migrate so, to escape the violence or unhappy marriages, to find new relationships or knowledge.

The structural changes in the countries of destination and origin led to the feminization of migration. The transition to the market economy, economic restructuring, reorientation from manufacturing to service economies, led on the one hand to increasing the demand for flexible and cheap labor, on the other hand to the intensification of female migration. In this context, gender is a key principle in organization of labor markets, leading to an international sexual division of labor. This was manifested by the increase of demand for migrant female work, which is usually poorly paid, is provided in unfavorable working conditions, unprotected, and sometimes even economically unrecognized.

These trends are confirmed by the same study "Nexus" showing that the employment situation of migrant female workers in Moldova is mostly as unskilled workers - 59% versus skilled worker 36% of all migrant female workers and only one extremely small part of them are employed with the status of official, high-level manager or professional worker. Although men migrant workers have mostly the same employment status, the share of men in total unskilled male migrant workers is lower than that of female - 43% versus 59% (figure 2).

Figure 2 Distribution of migrant workers according to occupational categories and gender, 2013, %



Source: Nicolaas de Zwager, Ruslan Sintov, "Market Research: Innovation in circular migration - Migration and Development in Moldova", Chisinau, 2014 IASCI.

Various statistical data analysis (study of "Nexus" NBS) reveal a rather negative aspect of female labor migration specific for Moldova, and namely the qualification of labor force. Usually, most of the women who go to work abroad, have quite high professional level, but engages unskilled work. These persons, activating more time at this work, lose their qualification. Such cases are found among teachers, doctors, engineers, researchers and other professionals who require large investments for their education. Labor Force Survey data show that in 2013 approximately 14.2% from total of migrant women had high education.³² However, only 1-2% of them worked in areas that require a higher qualification. The ignorance of this phenomenon by decision makers can lead to an intellectual crisis, which will require much longer period than economic recovery of the country.

Intensification of female labor migration generates a number of social problems at the level of the households they belong so as at Moldovan society level, among which children without parental care, or old people helpless by their children. If the social protection system in the country is not able to give to these people adequate social assistance and the provision of private care services don't have an appropriate legislative and institutional support, this problem remains unresolved.

In general, care should be seen as a key dimension of human development, which involves the ability to live a dignified life for all. However, the most important necessity for people, daily throughout all life is the care. Besides the fact that care provide material needs (cleaning, food, physical assistance) and emotional needs (achievement, accompanying), care contribute essentially to the reproduction of labor force. On this basis ignoring this social problems or their inefficient management can generate unforeseen social consequences, such as accelerated population aging, social security systems compromising, diminishing social cohesion, degradation of human capital in the country.

Despite its importance, the care continues to be invisible in society. Mostly, this type of work activity is conditioned by the fact that the care activities was traditionally supplied free by women within the family and thus was never considered a work.

In order to solve the problem in some extent, migrant women workers delegate its care responsibilities to female relatives: mothers, sisters, etc. In the situation when women migrates to provide domestic and care services abroad, delegating in the same time their responsibilities in this area to other people, leads to the constitution of so-called global care chains. Delegation of care work from one house to another is based on the hierarchy of power, depending on gender, ethnicity, social class and place of origin.

Global care chains are a fairly common phenomenon in the world, being a product of the globalization processes, of the feminization of migration and of the reorganization of collective welfare systems. Global chains of care exist at transnational level.

Although men can provide care services too, however, in the care chains men and women fulfill different roles. Typically, men are the beneficiaries of care, while women are the care providers or managers. Women undertake this kind of activities either for salary either because of affection or responsibility towards people who require care but, most often, because households in destination countries for this type of

³² Labour force in the Republic of Moldova. Employment and unemployment, 2014, www.statistica.md

services require especially female migrant workers. Large demand for female migrant workers to provide these types of services are determined primarily by low costs bear by households employed migrant female workers. However, those workers are usually employed without labor contracts, informal, thus avoiding payment of taxes or other mandatory social payments.

Thus, care chains tend to generate an inequality between women too. Formation of care chains either not help society to progress towards a more equitable distribution of care responsibilities, nor raise the social value attributed to this work. However, care chains can be a temporary solution, but, unfortunately, unsustainable for solving the crisis in care sector. Although they contribute to expanding of labor markets, they perpetuate the same conditions of invisibility of the domestic work, lack of social responsibility and burden sharing under the same hierarchy as in the previous traditional model (unpaid work / paid women in the households).

Or, care work is not necessarily visible when some tasks are transformed into paid domestic work. Invisibility simply acquires another form. Currently, the invisible working woman is not the wife who has no longer access to its own income or is not entitled to retire or to have a holiday, but a migrant domestic worker without a contract and illegal migrant worker status.

Thus, we find that through global chains of care female migrant workers often face double discrimination - on the one hand, because they are women, and on the other hand they are migrant, working at poorly paid jobs.

Often, migrant female workers suffer from isolation, exploitation and sexual harassment. May take years before they will be able to see their children and beloved ones, they left at home country while confronting stigmatization and guilt to those "abandoned".

However, labor migration can offer women the opportunity to become free and independent, inclusive economically and socially, strengthening their social position and self-esteem, respect from the family and from the community and society. Through labor migration women can provide themselves the necessary conditions to return and set up their own business, to develop new experiences of living and working, to discover new opportunities, to learn new habits, to cultivate new values and skills.

Generalizing can be affirmed that female labor migration in Moldova is an objective phenomenon that can have both a positive and negative impact. For this reason, any policy for female labor migration should focus both to attenuate its negative aspects and to extend its positive aspects.

Thus, taking into account the specific of female labor migration from Moldova, for mitigate its negative aspects must be find, first, a way of enhancing care activities (remove the care work from invisibility). For this purpose it is necessary:

- To develop a system of indicators able to monitor these types of activities;
- To create a legal and institutional framework regulating the working conditions and qualifications necessary for care work (its institutionalization in countries of both origin and destination countries);
- Acceptance by the public institutions of care work as social responsibility;
- Ensuring the rights of people who provide care work

Although most long-term migrants from Moldova go in order to find more attractive job - about 89.5% of total long-term migrants, cannot be overlooked and other types of long term migration, i.e., those for studies or family reunification.

According to the study "Nexus" other relevant female long-term migration can be considered for purposes of family reunification and studies migration. Migration for family reunification purpose is an interesting category of long-term migrants, which constitute approximately 18,700 persons or 4.5% of long-term migrants. The dynamics of family reunification migrants largely correlates with the dynamics of migration in general. For purpose of family reunification usually migrates children aged up to 18 years - 54.3%. Also, a quite important category in this type of long-term migration are youth aged 18-29 years - 20%, and those aged 30-44 years - about 10.3%,³³ where are included migrant women. Although there are cases when young women migrant go abroad in order to marry citizens of destination countries, forming thus international families, this phenomenon is not widespread in Moldova.

Speaking about the distribution of migrant persons with purposes of family reunification by gender, it can be asserted that this distribution is quite balanced. Migrant women in this category easily prevail men - 53% women versus 47% men from all migrants with purpose of family reunification. Not only young people leave for family reunification purposes but older people leave too. The study "Nexus" make the finding that approximately 1 from 10 Moldovan migrants who went abroad for the purpose of family reunification is aged 45 years or more, that could indicate an intergenerational reunification of families, i.e. parents who join their children working abroad. This phenomenon fully corresponds to all traditions of Moldova, which implies that grandparents take care of their grandchildren who are abroad with their parents, when the parents are at work.

Depending on the country of destination, the trend of family reunification reflects the migration geography characterized for Moldova, except the USA. It finds that 11% of all cases of family reunification till 2012 occurred in this country, compared with only 1.1% of total long-term migrants who went to the USA. This could be due to the lower level of returning intention of Moldovan migrants residing in the USA.

Besides migrants purpose of family reunification, another 18 400 Moldovans migrate to make their education abroad. A big part of students come from rural areas - 66% of total migrants for studies purposes. Most migrant students are young. Thus, 2/3 of migrants in this category are aged between 18-29 years and the other 31% are under 18. These data confirm that most Moldovans who leave to study abroad are enrolled in higher education system. Usually, Moldovan migrants for studies choose, traditional, three destination countries: Russia (31%), Romania (22%) and Italy (21%).

Migration with the purpose of study in Moldova is accompanied by another negative phenomenon, namely, the departure of highly qualified specialists, including a significant number of women.

International migration of highly skilled labor, known as "brain drain" clearly evokes a loss of intellectual capital. Most young migrant persons from Moldova are at the beginning of their professional careers. These people unfulfilling itself into the country, because of the lack of attractive workplace, leave permanently or temporarily abroad. Labor Force Survey data indicates a level of youth unemployment (people aged 18-24) twice higher than the general - 9.8% compared with 3.9% in 2014.³⁴ Usually leave the best. Much of the young people from republic who study abroad, remain to

³³ Nicolaas de Zwager, Ruslan Sintov, „Market Analysis. Driving innovation in circular migration. Migration and Development in Moldova”, Chişinău, IASCI 2014.

live in these countries. Thus, Moldova is gradually turning into a supplier of skilled labor force for other countries in her own detriment.

Since the skilled workforce cannot fully be realized at home and Moldova's economy can't find it an appropriate use and respective remuneration, this "human capital loss" may be justified. If labor is not used, it loses its qualification anyway. Therefore, emigration of skilled labor force can be while considered as its potential storage.

The phenomenon of "brain drain" is becoming widespread in the country, driven also with mood of young people who no longer link their future with Moldova. This "lack of patriotism" of youth is conditioned not only by the economic crisis in the country, but also by frequent political crises, the indifferent attitude of politicians towards the problem, of those who come to power to solve their personal problems first and not thus of the society.

Other types of migration, that may be characteristic for Moldova are related to international youth programs "Au pair" or "Work & Travel", but the level of these types of migrations is insignificant.

One of the most negative phenomena that accompany international migration from Moldova is human trafficking. In the late 90s, when illegal labor migration in the republic was at its peak, was intensified and human trafficking too. Women were trafficked into sexual slavery, male - for forced work, children - for begging. Although there are no exact data on the extent of this phenomenon, but women constituted the majority among trafficked persons. At that time human trafficking started to spread high enough so prevention and combating of this phenomenon was declared as a national priority. In these conditions it is ratified a number of international acts and adopted a set of normative and legislative acts and strategies aimed to improve the situation in this area.

Although that in the present the scale of human trafficking is decreasing, specialist officers continue to identify new people trafficked, including traffickers. Statistics show that in 2010, through multidisciplinary teams of the National Referral System, was identified 132 victims of human trafficking, as compared to 2006 their number has increased 5 times, that can be explained by improving their identification. The structure of identified victims is represented in proportion of 75.8 % of adults (73% women and 27% men), children make up 26.5 % (65.7% girls and 34.3% boys) in the total numbers of victims.³⁵

The analyzes in the field tells about the fact that, despite the measures applied, Moldova continues to be characterized as an origin country of human beings trafficking, being at lesser extent a country of transit of human trafficking victims from NIS countries to Europe. According to the International Organization for Migration, the main destination countries for human trafficking victims over the past years remain the same: UAE (27%), Russian Federation (17%), Turkey (14%). But others were included first time in the list of destination countries: 11 cases in Egypt (except one case in 2003), Malaysia - 2 cases and Indonesia - 1 case.³⁶

Although the number of women not prevail men in the total number of migrant workers, the process of "feminization of international labor migration" in Moldova is increasing. In this context, the differences between the experiences and problems of

³⁴ <http://www.statistica.md/newsview.php?l=ro&idc=168&id=3722>

³⁵ Extended Migration Profile of the Republic of Moldova 2007-2012, IOM, Chisinau, 2013;

³⁶ Extended Migration Profile of the Republic of Moldova 2007-2012, IOM, Chisinau, 2013;

women and men must be integrated into migration and development policies.

Without gender equality can be no development. In other words, gender equality must be a central objective in any migration model that aspires to development. Here is envisaged the overcoming of the stereotype that only male migration has an economic character and can be integrated into development.

The degradation of human potential conditions particularly serious imbalances and damages for the current transition, economic recovery and the future of the country, so the problem of migration should not be ignored by the authorities. The lack of some measures from the Government on “human capital loss” problem will essentially reduce the chances of exit from the crisis.

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Employing human resources in banks

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Abstract

The main objective of human resource management is to provide abilities and experience in this field, so as to achieve optimum performance and reliable, using the most appropriate methods. Human resource management involves continuous improvement activities of all employee's patrimonial entity in order to achieve organizational goals and objectives.

The banking system of the Republic of Moldova divided into two levels involves hiring specialists in banking with deep knowledge in two directions: one is at the micro level that involves activity and development bank as a separate and independent in its work and macro level implies knowledge the Central Bank activity. People who are recruited are analyzed from many points of view and experience necessary to similar posts. The cashier is necessary to have an educational background in finance or banking or higher education institutions - cycle license. In order to be promoted to the next stage it is necessary to have master's or doctoral bank in administration in finance. To promote the final phase such as branch manager already requires specializations training bank or banking sites. 11 banks active on the market today. Of 22 banks that were active in 1991 are now in liquidation banks: BCA Banconsind; BIID MB S.A.; BCIA VIAS; BC Basarabia S.A.; Banca Guinea S.A.; BCA Întreprinzbancă; BCI Oguzbank S.A. și BC Investprivatbank S.A., and of 19/10/2015 „Banca de Economii” S.A., BC „Unibank” S.A., BC „Banca Socială” S.A. Offer staff is great, the staff demand is quite low.

To streamline the successful management of staff that steps should be taken:

- optimization stations senior managers of the bank;
- stop the expansion and liquidation of units that have major losses in total losses;
- renegotiating contracts with suppliers, centralizing various back-office structure, involving job cuts, increase synergies between different activities and structures to become more efficient and more;
- implementing a new operating model, which will allow increasing the efficiency of processes transactional (back-office).

Contemporary banking systems are influenced by the decisions and requirements for submission to the faithful clientele. International banking was influenced by a financial crisis of great proportions that has left large footprints on the credit activity of most banks, many banks some of which are very large bankrupted the unfairness of granting and management of credit resources. We can say that bank lending is a force strong enough that could prejudice rather large so the entire banking

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system and the national economy. Success depends on the volume of lending activity book you get bank profits. Many factors influence lending, most depend on the professionalism bank worker performs its work every day, the most important step remains to have credibility analysis of loan applicants both individuals and legal entities. Boosting lending at present remains evident, each bank granted a number of innovative lending products and most are quite affordable for individuals and businesses. Finding methods to reduce the risks in lending remains a priority for each bank of the banking system in Moldova, where competition for customers is quite tough and attracting them is a good strategy identified and determined.

One of the sectors that can have a decisive role in the economic growth of a country is the banking sector. A bank is defined as an institution that mobilizes funds temporarily available finances and credit individuals and businesses, organizes and carries out settlements and payments in the national economy and relations with other countries, in order to make profits. If the latter is obtained it is an indicator reflecting a problematic activity and requiring major changes or implementation of a structures of the bank's loan portfolio. Consider analysis and research personnel training important because it is a reason that is being sold by benefits not only banks but also those who make its resources in the form of bank deposits.

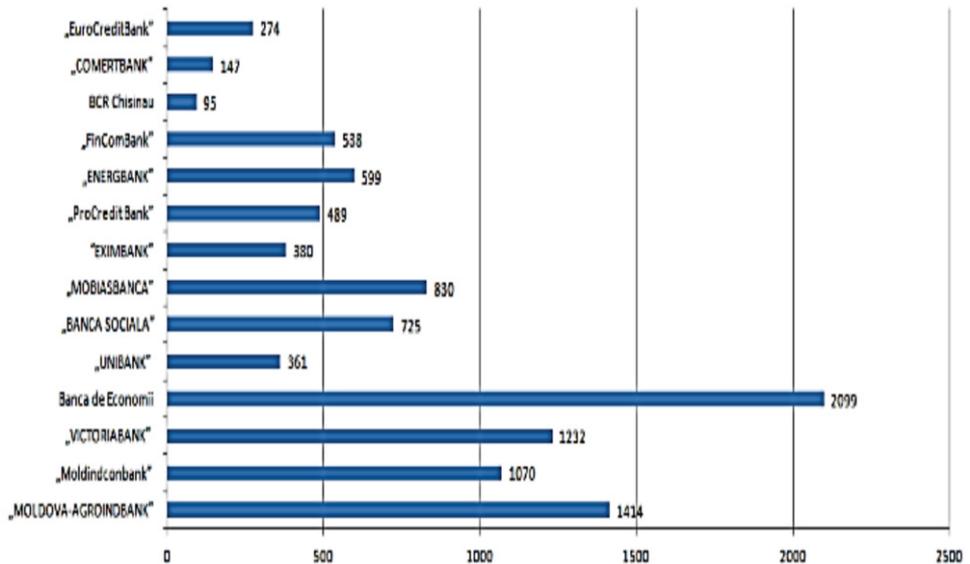
To overcome the shortcomings of such systems and procedures leading to losses from lending, banks must design and implement efficient credit policies and employ / personnel prepare professionally irreproachable discipline that respects these rules. For this it is necessary to have feedback that the bank's management to be informed about the effectiveness of credit quality control process so that the problem be collected and corrected (if possible) over time. For a banking policy lending prove to be useful formulation must meet proper and complete content. Factors determining the organizational structure of the department of credit are: products and services offered by the bank, the bank size and geographical spread, the way of reporting in the department of credit profile of the loan portfolio, related credit control culture, information management system.

At the end of 2015 the total number of subdivisions of banks amounted to 814, of which 289 branches and 525 agencies. During 2015 it was opened 10 branches and 207 agencies and as a result of withdrawing the licenses of the three banks were closed 70 branches and 672 agencies.³⁷

31 December 2015 in the banking sector have enabled 7621 people. In the banking sector in Moldova, according to the situation 30 April 2014, 10 250 employees were working. Most of the employees he had Savings Bank S.A., about 20.47 percent of the total, or 2099 people. In second place by number of employees, was Moldova-Agroindbank S.A. with 1414 employees, followed by Victoriabank S.A., with 1,232 employees.

Thus, the banks are the 3 employees about 46.28 percent of the total employed in the banking sector. Top banks with most employees, developed based on data published by the National Bank of Moldova:

³⁷ Annual Report of NB of Moldova, 2015. Available: // [ttp www.bnm.md / files / RA_2015_ro_1.pdf](http://www.bnm.md/files/RA_2015_ro_1.pdf).

Figure 1. Diagram of staff in the banking sector at the end of 2014.

Source: prepared by the author based on the article "3 banks hold nearly half of the Moldovan banking sector staff." [http:// www.bani.md/](http://www.bani.md/)

The ability of any institution fulfilling the strategies and achieve the results projected depend on the efficiency of the organization, improvement and coordination system frames.

Human resources policy banks must achieve four basic objectives:

- efficient organization of personnel;
- optimizing staffing levels and future;
- developing the ability to achieve tasks;
- correlating individual and unit performance objectives bank.

Tasks efficient organization of staff in the current banking system are:

- responsibility positions;
- matching business needs with the skills of staff;
- establish organizational structure;
- establishing personnel structure.

The starting point in human resources policy is to establish the organizational structure bank. The bank's strategy and its operational plans define the means, policies and tactics to achieve those objectives, products and services of the bank and also achieved market position. The Bank organizes its structure functional and operational towards achieving the objectives which it has set so that the organizational structure of a bank will acquire a particular aspect (dependent guidance strategies, the specific products and services and other key factors) that includes bank size, branch network etc. Moreover, there are constant changes in the organizational structure based on the development of the bank and the economic environment in which it operates, which affects the number, structure and staff training.

If predetermined objectives and standards are obviously human resources it is simple, it remains only to conform and study, but if they are applied or implemented new standards must remain as such standards become known each bank employee. Changes cannot be fast, everyone needs time to accommodate the implementation of new standards, but always pursued quality improvement MRU orientation change, for something innovative that would result from implementation.

Remain viable for any improvement in the quality of HRM some rules that you expose:

- the quality of education that we have a job candidate in the bank;
- skills and ability to change quickly to new market requirements;
- full involvement of staff at all levels;
- implying continuous improvement trainings, conferences, round tables, internships abroad, etc.

For banking systems developed strong point is directed toward staff training bank staff internships and resistance to stress of bank activity.

Each bank is ready to select staff on several criteria but the most important remains:

- 1) professional qualities;
- 2) moral qualities;
- 3) resistance to stress.

Since 2011 the company HR Portal is part of the Center for Independent Certification of specialists in Human Resource Management (European Centre of Independent Certification of Human Resource Management Specialists) called EU Centre "HRM-Europe". It specializes in promoting performance standards and the preparation and qualification of specialists in the field of HRM. Representation in Ukraine and the company is called "HR Practice".

But 2011 is the official certification system in Moldova company "HR Portal" by this center is possible to get qualification in accordance with the standards of European countries. If we refer to EU-Centre "HRM - Europe" for 10 years it promotes European standards, the most advanced techniques in the field of HR promoted - independent review, innovations, government programs, publications, etc. EU-Centre "HRM-Europe" has its representative offices in 16 countries authorized in the European areas: Sweden, Germany, Italy, Bulgaria, Romania, France, Spain, Ukraine, Russia, Belarus, Moldova, in total there are 40 countries. It notes that if we refer to the banking system performance in alignment with European standards specialists from banks must pass the certification to European standards.

If we refer to the most important analyzes of the human resources, we highlight:

- development / training of bank staff;
- planning and management of staff;
- ensuring the quality of HRM (human resource management);
- human resource planning;
- leadership;
- human resources management;
- implementation of innovations in human resource management of the bank.

BCR is the leading financial services market in Romania with assets of over 17 billion Euro and most valuable financial brand. BCR is the most important financial

group in Romania that includes in addition to banking services, international operations, leasing, mortgages, private pension fund. BCR offers a full range of services including internet banking system. Erste Group is one of the leading financial market in Central and Eastern Europe, present in 8 countries with over 50,000 employees serving 17 million customers a portfolio.

Chisinau Romanian Commercial Bank S.A. (BCR Chisinau S.A.) is a subsidiary of BCR S.A. (Romania), member of Erste Group (Austria). BCR Chisinau is a universal bank offering all types of clients. BCR Chisinau in Moldova has a network of 3 units and 40 ATMs, which serve about 16,000 customers, both individuals and legal entities. BCR Chisinau is currently in the process of developing new solutions for customers: business loans, loans for the population, cards, internet banking solutions. The purpose of Chisinau Romanian Commercial Bank S.A. It is to provide customers with the best solutions to business prosperity and aspirations.

The number of staff working in BCR can mention that they are no more than 140 people. The Bank recorded losses in 2012 and the bank's new executive Tomas Spurny is tough. About 60 units of BCR bank will be closed until 2014, and 1,600 people will be released throughout the bank. The bank is in a difficult situation especially because of financial problems facing small and medium enterprises which are the most important clients of the bank. Relocation of people, their availability and network efficiency is the most important at present when the bank faces deficiencies in performance.

BCR internship project is aimed at students from faculties and technical and economic aims, on the one hand, to attract young talent to recruit, on the other hand, to develop mentoring skills of bank employees. The program runs during the summer holidays is paid and aimed at both retail and corporate areas and support functions. Throughout the period of practice, participants benefit from the support of a mentor and are actually engaged in the activity functional unit in which they are assigned, the first project they are responsible, in contact with customers and interact with other departments of the bank. Over 15% of participants in 2009 were kept as BCR employees or other forms of collaboration.

Banca Comerciala Romana (BCR) is the largest bank in the banking market in Romania, with foreign subsidiary opened in Moldova with assets exceeding 68 billion (EUR 16 billion) on 31 March 2010 and more than 4.6 million customers. Since 2005 part of Austrian group Erste, a leading provider of financial services in Central and Eastern Europe. Erste Group has over 50,000 employees in 8 countries - Austria, Czech Republic, Slovakia, Romania, Hungary, Croatia, Serbia and Ukraine. BCR's network covers the entire territory of Romania, with 665 retail branches and agencies and 48 corporate commercial centers. At the end of 2009, BCR had about 9,000 employees.

Staff should be restructured or must leave, those who remain must regain in other specific activities of commercial banks. Improve efficiency of banks must include: network resizing and relocating some units more efficient allocation to areas that have growth potential, existing human resources, streamline flows to reduce operational expenses.

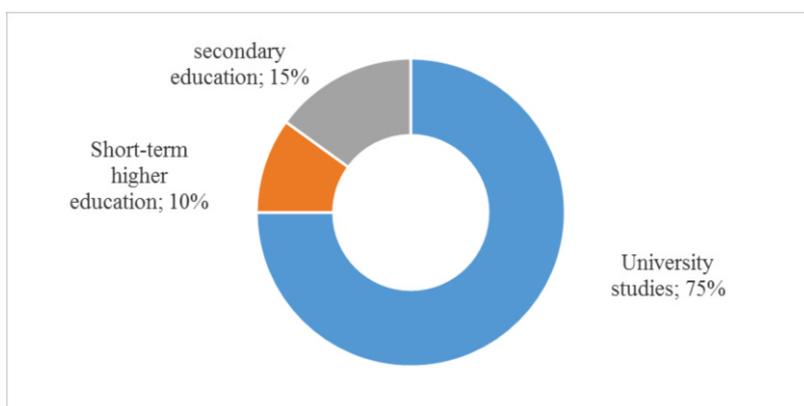
Measures may take the banks on the efficient management personnel are:

- cancellation or reduction of bonuses because they are linked to achieve profitability;
- bringing consultants is complicated because it requires time, but this time the

- losses are enormous;
- streamlining stations senior managers of the bank, cutting benefits;
 - stop the expansion and closure of inefficient units that have major losses in total losses;
 - renegotiating contracts with suppliers, centralizing various back-office structures, involving job cuts, increase synergies between different activities and structures to become more efficient and more.
 - implementation of a new operational model, allowing us increase the efficiency of transactional processes (back-office type).

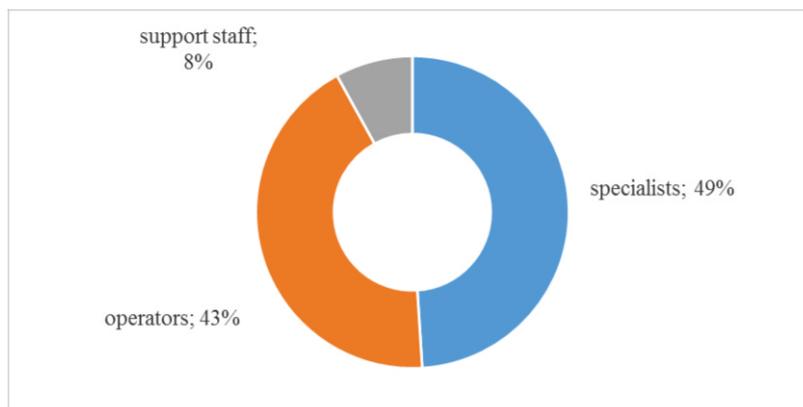
If we refer to BC "Victoriabank" S.A. 31 December 2015 the total number of employees was 1248 persons. After studying the structure of banking staff it is as follows:

Figure 2. Structure of staff in 2015 after studies.



Source: prepared by the author based bank's annual report "Victoriabank" S.A. 2015. Available: <http://www.victoriabank.md>

Obviously it remains that the bank is important as the skills of their being permanently growing, and to increase the level of professional competence of every employee at work, while all these ratings should be considered together with customer satisfaction bank to and service to product quality and services offered by the bank.

Figure 3. Structure of specialized personnel by category, 2015.

Source: prepared by the author based bank's annual report "Victoriabank" S.A. 2015. Available: <http://www.victoriabank.md>

To become a bank Chapter HR performance are enhanced discipline in work, increase employee accountability, quality and efficiency at work, according to ensuring effective advancement, compensation and appropriate employee motivation, orientation toward overcoming the expected performance.

The move to a profound restructuring of the national economy based on efficiency and profitability, returns a very important role human factor. Component of economic growth, employment has a dual affiliation: on the one hand the sphere of demography, on the other hand the economic sphere, adapting and shaping it according to the laws of both areas. Development of the theory and practice of human resources management requires understanding the role as full and peculiarities of human resources within the bank.

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Suitability for use of open market operations as a main tool of monetary control by the National bank of Moldova

Larisa MISTREAN*

Abstract

The open-market have become the main instrument of monetary control in the developed countries, increased flexibility offered, from the point of view of volume of the monetary policy operations initiated by the central bank. They permit the establishment of impersonal relations between market participants, as well as inefficiency and to avoid market and of the economy, as a result of the direct control.

Keywords: monetary policy, REPO operations, reverse repo operations , open market operations, direct and indirect instruments, withdrawal of liquidity (sterilization), injection of liquidity, main refinancing operations, longer-term refinancing operations, fine-tuning operations.

JEL Classification: E5

1. Introduction

Open market operations are central bank intervention on the currency market to increase or reduce the liquidity of agents, that are operating on this market and hence their ability to grant credits, and for the creation of the currency. They are sales/purchases of government bonds (securities) in the short term, from the central bank officials to/from financial deposit institutions or to/from public. Called otherwise and operations on the free market, they are a tool indirectly of monetary policy by which the central bank initiates the market supply with liquidity, in particular through its own offerings.

In the countries with developed financial market, the open market operations are main instrument of monetary policy because they are the most important determinants of changes in monetary base, and as a result are main source of fluctuations in the supply of currency. Purchases on an open market expanding monetary basis, thus increasing the offer of money. The reverse situation, the sales in this market reduce monetary base, and by default dropping demand of the currency. Thus the open market operations allow central bank not only to grant credit, but also to take out a loan in this market, thereby reducing their liquidity and those of the national economy.

2. The essence of open market operations

For achieving the objectives laid down in monetary policy, the central banks

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have a string of tools. The literature distinguishes two categories of instruments: direct and indirect. Direct instruments contain targeted measures to limit the direct loan interest rate, the volume of the credits or loans. Alternatively, indirect central bank monopoly operator in the creation of base currency (the base currency), to regulate general conditions of liquidity in the economy by influencing the basic conditions of supply and demand of the currency from the central bank officials. In turn, indirect instruments may be classified in the other two groups: (a) instruments based on rules ("rules"based) and (b) market-based instruments (market based):⁴¹

(a) Rules-based Instruments (monetary instruments based on the regulatory power of the central banks), include:

- Rate of liquidity of the assets (Liquid asset ratio (LAR));
- Requirements for reserves (Reserve requirements (RR));
- Standing facilities (Standing facilities);

(b) Money-market instruments, which include:

- Open market-type operations (open market-type operations) are operations which will be carried out on the basis of tenders covered by the central bank. They involve: (i) trust/ borrow on the basis of the underlying assets as collateral; (ii) the issue on primary market value of securities of the central bank or government's goals of monetary policy on primary market; and (iii) Acceptance of deposits for specified periods of time.
- Open market operations (open market operations (OMO) are operations which will be carried out by the central bank as a participant on the money market, these include: (i) procurement/ sale of assets directly on the secondary market, and (ii) procurement/ sale of assets under the contracts to repurchase on the market of repo operations, or foreign exchange swap.
- Auctions (Auction techniques). central bank may use different techniques of auctions: banks quote volume; interest rate (banks bid on a volume and rate); reads as uniform or multiple rates.
- Fine-tuning operations: irregular operations on the money market, coming to cope with unexpected fluctuations in the level of cash in the market.

From the foregoing it can be seen that the open market operations are a toolbar, along with other categories of instruments, used by central banks for the purpose of achieving the objectives of monetary policy. Open market operations, "shall mean the activity of central bank selling and buying titles of monetary market".⁴²

General Trend is to use more and more indirect instruments and in particular of the operations on the money market, and covered by application of the money market instruments is greater than in the developed countries.⁴³

Since the use of the monetary policy instruments is part of deliberate actions of

⁴¹ Monetary policy Implementation at different stages of market development. Prepared by staff of the monetary and financial Systems Department led by Bernard J. Laurens, IMF, 2004, <https://www.imf.org/external/np/mfd/2004/eng/102604.htm>.

⁴² Ionela Costica, Sorin Adrian Lazarescu, policies and banking techniques, <http://www.biblioteca-digitala.ase.ro/biblioteca/carte2.asp?id=359&idb>.

⁴³ Inese Buzeneca, Rodolfo Maino. Monetary Policy Implementation: Results from a Survey. IMF, 2007

the authorities, they are very strictly regulated in each country. In this way, each monetary authority, is taking account of the specific features of countries, and shall issue such concerned regulations. In this sense it is important to note the role of developed countries which in fact are leaders in the development and implementation of monetary instruments. With the emergence of the EU and in particular with the appearance of euro-area, was created an important pole in the development of instruments of monetary policy.

It is to be mentioned that the syntagm "open market", means to perform the operations in an institutionalized market, with many players, impersonalized, unlike the bilateral transactions where transactions shall be determined in direct negotiations between the parties. In accordance with those regulations in the Euro system and the Republic of Moldova in addition to competitive operations, the operations on the money market shall also be carried out through bilateral procedures.^{44,45} The orientation (EU) 2015/510 defines that a bilateral procedure is whereby the NCB or the ECB, for fine-tuning operations or simple transactions negotiated directly with one or more an offsetting benefit or through stock exchanges and market agents, without using auctions. Very similar this is defined and in the Regulation of Moldova, only not to mention that a bilateral procedure can be carried out by scholarships and does not specify for what kind of operations may be employed.

The advantages implied operations to open-market consist of the following:⁴⁶

- offers a great flexibility, from the point of view of volume of the monetary policy operations initiated by the central bank;
- to permit the establishment of impersonal relations between market participants;
- to avoid market and inefficiency of the economy, as a result of the check directly.

Under the conditions of globalization, financial operations flexibility open-market has had a favorable effect and in the countries with economies in transition, where there has been market trends and an increase in their competitiveness in order to integrate in world market.

As capital markets become more developed and sophisticated, central banks should increase their ability to use the instruments of monetary policy, both on the leading shoe, as well as on the secondary market of government securities. If the open-market is the main instrument for the implementation of monetary policy, it follows that other instruments must be adjusted so that it is ensured that the objectives. Adjustments depend to a large part, the strategies adopted in the management of daily operations of open-market, by the structure of the market, the stability and predictability of the relationship between the offer currency and macroeconomic variables.

⁴⁴ Tumnong Dasri, Open market operations: its nature and extent in ASEACEN countries, in 1991, the South East Asian Central production unit (SEACEN), Malaysia. http://www.seacen.org/GUI/pdf/publications/research_proj/1991/rp16.pdf.

⁴⁵ It is composed of Eurosystem Natinale banks in the countries of the euro area and Central European Bank (ECB). Not to be confused with Central European system of production unit (ESCB) which is the regulatory body for the EU's monetary, and is made up of all central banks of all EU member states.

⁴⁶ Dardac, Nicolae, Moinescu, Bogdan. Monetary policy and banking techniques. Bucharest, 2007. http://www.ase.ro/upcpr/profesor/756/PMTB_cig.pdf.

For the central banks to implement operations to open-market, it is necessary to a specific architecture and performance of the market. Thus, the authority prefer monetary markets with trading continue with increased transparency, features that encourage participation of a large number of investors. It also has important interbank market, whereas serves as barometer of frequency and volume government securities. A significant number of countries are concerned about the increasing competitiveness and interbank that way to increase the role of operations to open-market. Market infrastructure, namely the development of the two segments, and the correlation between these can be found in close connection with the operations of open-market.

Operations on the money market is characterized by flexibility and Precision accuracy is an essential feature of the open market operations, which are also known as "fine-tuning operations". Operations through open-market, the central bank shall exercise a direct control and accurately on commercial banks' and on monetary base (M). Another feature of the operations on the free market is flexibility. These operations may be carried out on a daily basis by the European Central Bank, which gives the option of focusing monetary policy quickly.

In most cases, the central bank conducts open market operations on the basis of papers value (bonds), and in particular with treasury bills. Also subject to open market operations and the effects of trade, warrant of entitlement-changer, the effects of mobilization of creitelor mortgage and consumption, estimates, etc. , are not prefer securities issued by the private sector, on the one hand, in order to avoid conflicts of interest which would arise on such operations, and on the other hand bonds market, in the developed countries, is the most liquid and record the largest volume of transactions. The market has the capacity to absorb a large volume of transactions of the central bank without causing too large fluctuations in prices which could have on history market.

When central bank sells securities on an open market economy, this influences on three directions:

- investments are influenced by credit in the economy;
- change the price of papers value (as a result and their related income);
- change your expectations for the future.

The effect of implementation of monetary policy through open market operations shall be achieved by influencing monetary mass quantity in circulation: sale of the securities by the European Central Bank decreases the tender, and vice versa, and the possibility to buy them a increases. In this way, by means of a complex of influences and signals are influenced lending rate and the level of inflation.

3.Place the open market operations in the framework of the monetary policy instruments in the Republic of Moldova

The Republic of Moldova since 2015 have b\rought important changes law on⁴⁷ National Bank of the Republic of Moldova, which fixes principle definitively non-

⁴⁷ Law No 548 of 21.07.1995 with regard to the National Bank of the Republic of Moldova, as amended by the law 147 of 30.07.2015 for the modification and completion of legislative acts of legislative acts.

crediting of the National Bank of Moldova and state, National Bank of Moldova "will not be granted loans and guarantees in any form of State or its bodies, including by procuring on the market of primary papers of value by the State or by the provision of overnight loans" (Article 41) and relating to the fact that "operations against the claims issued by the state can be carried out by the Central Bank (only on the secondary market" (Article 15). It also lays down the National Bank of Moldova to buy and sell securities issued by the state on the secondary market of the capital, "provided that the Central Bank They will buy only by open market operations, papers which have been issued public" (Article 42 (a), (a)).

Each central bank shall draw up its own tools for intervention on the market open and use them to achieve the objectives of monetary policy. In this context, the Central Banks shall approve regulations on the open market operations. With effect from October 2014, by the Decision No 188 of the Board of Directors of National Bank of Moldova⁴⁸ has approved a new Regulation with regard to the operations of monetary market in the National Bank of Moldova, which replaced Regulation approved in 1997. By this Regulation, shall be established for use by National Bank of Moldova on the money market following tools (p. 9, OF THE Regulation):

- 1) transactions repo/reverse repo operations with eligible assets (in accordance with p. 12 they are VMS); REPO transactions (purchases reversible) - are operation for the purchase by the European Central Bank of eligible assets from eligible participants, with their commitment to buy back the assets at a later date and at a price determined at the time of the transaction. Reverse the transaction, the sale of assets eligible by central banks is called reverse repo operations or sales reversible. From the definition of these operations it is to be noted that when central bank decides to minimize monetary mass uses transactions repo operations and to increase monetary mass uses Reverse repo operations. It is good to be mentioned that during transaction repo/reverse repo operations with eligible assets ownership of such assets is transferred to creditor.
- 2) simple transactions (sales and purchases definitive VMS); A transaction for the sale /purchase assumes full transfer of ownership from the seller to the buyer, without involving a titular property. shall be used only to structural operations .
- 3) loans guaranteed with eligible assets (are VMS, certificates National Bank of Moldova, as well as other categories of financial assets eligible, as determined by the Central Bank, p. 10); SEPARATE main characteristic of these transactions is the fact that ownership of assets secured for the period transaction remains the owner. In the case RM what can serve as security is established by Article 18 (6) Article 1 of the law on BNM.
- 4) issue of certificates of National Bank of Moldova; National Bank of Moldova is Certificates of debt obligation as recorded National Bank of holders these instruments.
- 5) attract the term deposits; Operation, in which the Central Bank attracts deposits with agreed maturity set point, for the purpose of absorption of liquidity from the participants eligible.

⁴⁷ The judgment no. 188 of 25.09.2014 with regard to the Regulation with regard to the operations of monetary market of National Bank of Moldova.

6) foreign exchange swap transactions. They are foreign currency transactions which include operation simultaneously the purchase, as well as for the sale of the volume of foreign currency respectively, against national currency or other foreign currencies, at different dates of currency and foreign exchange rates for the purposes of implementing the respective dates. Difference being expressed in swap point, which ditch determined from the date of the transaction foreign exchange swap.

Conduct of the operations of "open-market" shall be carried out in different ways, depending on the market conditions, structure and the role of the banking system, the degree of development and regulation of financial system, as well as on the availability of government securities or money market instruments. Influenced by other factors, the policy of open-market can be transmitted in two ways: - the mode is active, the amount of the currency "dismissed" center; - in passive mode, by someone has the interest rate on the money market liquidity or by measuring banking system; to absorb excess liquidity, monetary authority has at its disposal transactions with two types of securities, the government and those issued by the central bank, a situation involving a series of difficulties. When coexist the two types of securities, the main problem is the public confusion concerning the relationship between them.

Table 1. Open market operations classification on the basis of the result of banking system liquidity

Withdrawal of liquidity (sterilisation)	Injection of liquidity
Reverse repo operations	REPO
Sale of the swap	The swap Purchase
Sale of securities.	Purchase of securities.
Attract deposits	Loans colateralizate with eligible assets
Issue of certificates of deposit	

Final transactions have a considerable part in the operations of open-market and are represented by nonreversible operations through which central bank sell or buy on the market eligible assets (government bonds, currency). Within the framework of these transactions, ownership of assets concerned is, definitively, transferred from the seller to the buyer with no possibility reversal transaction. These operations may be carried out with the two-fold aim absorptions, as well as provision of liquidity in the system whenever there is need for their deployment. Their completion is done by bilateral contracts.

Instruments referred to in those applied by Euro system and are equivalent to those applied in Romania. Main difference compared to the Euro system consisting in the fact that the latter, by adding the word reversible transactions have the effect of a wider range of operations, which also includes the tool (3) of Regulation BNM. A more detailed comparison of the categories and monetary instruments are shown in Table 2.

Table 2. Comparative feature open market operations of the Republic of Moldova and the euro zone

Categories of operations	Euro zone/RM	Types of instruments		Maturity	Frequency	Procedure
		Supply of liquidity	Absorption of liquidity			
Main refinancing operations	Euro	Reversible transactions (only)	-	1 Week	Weekly	Standard tenders
	RM	REPO transactions	Reverse repo transactions	1 OR 2 weeks		
		Guaranteed loans		NON-STANDARDIZED	NON-STANDARDIZED	Competitive or non-competitive
			Certificates of National Bank of Moldova	OF up to one year		Standard and quick tenders
Longer-term refinancing operations	Euro	Transactions reversible(only)	-	-3 MONTHS, -In 3 months on a non-regular	-Monthly -On a casual basis (can)	Standard tenders
	RM	It is not				
Fine-tuning operations	Euro zone	Reversible transactions	Reversible transactions	NON-STANDARDIZED	NON-STANDARDIZED (ad-hoc)	Quick tenders (may be and standard)
		Foreign exchange swap	Foreign exchange swap	-	-	Bilateral procedures
		-	Attract deposits	-	-	-
	RM	REPO transactions	Reverse repo transactions	NON-STANDARDIZED	NON-STANDARDIZED (ad-hoc)	Quick tenders and bilateral procedures
		Guaranteed loans		NON-STANDARDIZED	NON-STANDARDIZED	Competitive or non-competitive
			Certificates of National Bank of Moldova	Up to one year	NON-STANDARDIZED	Standard and quick tenders
			Attract deposits	Up to one year	NON-STANDARDIZED	Bilateral or through quick tenders
	Foreign exchange swap	Foreign exchange swap				
Structural operations	Euro zone	Reversible transactions	Reversible transactions	NON-STANDARDIZED	NON-STANDARDIZED	Standard tenders
		-	Debt certificates of the ECB	Under 12 months	NON-STANDARDIZED	Standard tenders
		Purchases simple	Simple Sales	-	NON-STANDARDIZED	Tender bilateral procedures
	RM	REPO transactions	Reverse repo transactions	NON-STANDARDIZED	Periodic or occasional	Standard tenders and bilateral procedures
		Purchases simple	Simple Sales	NON-STANDARDIZED	NON-STANDARDIZED	Tender bilateral procedures
		Guaranteed loans		NON-STANDARDIZED	NON-STANDARDIZED	Competitive or non-competitive
			Certificates of National Bank of Moldova	Up to one year		Standard and quick tenders

Source: 2015/510 of orientation of the Central European Bank of 19 December 2014 and Regulation with regard to the operations of monetary market in the National Bank of Moldova (from 25.09.2014).

In Moldova instruments used for operations on the money market are divided into 3 categories (p. 8): (i) main, (ii) fine-tuning operations and (iii) structural operations. These categories are very similar to those provided for the Euro system, in addition to those referred to in National Bank of Moldova may contain a category in addition, namely - refinancing operations on a long-term basis (Table 2).

Thus, the new Regulation for the most part is similar to the orientation (EU) 2015/510, but also contains a few differences. Differences in the first instance it is observed in the manner of use of the instruments, i.e. for which category of transactions are used. Even if categories are in one form or another established arbitrarily, they shall establish a framework for the implementation of the instruments according to the needs of the intervention agency.

For example, ECB debt certificates are used solely for structural operations, while in the Republic of Moldavia, the certificates National Bank of Moldova shall be used by all categories of operations. Also, in case there was a 97% greater maturity discrepancy in the application toolbar. Dividing operations is useful in typing interventions on the basis of impact you want. In the case when in all categories shall be uses a range too wide periods of maturity of the instruments shall be forfeited this utility, but it is nevertheless important to note that the spirit of the rules is not restricted by central banks very much in solving tasks which they may have.

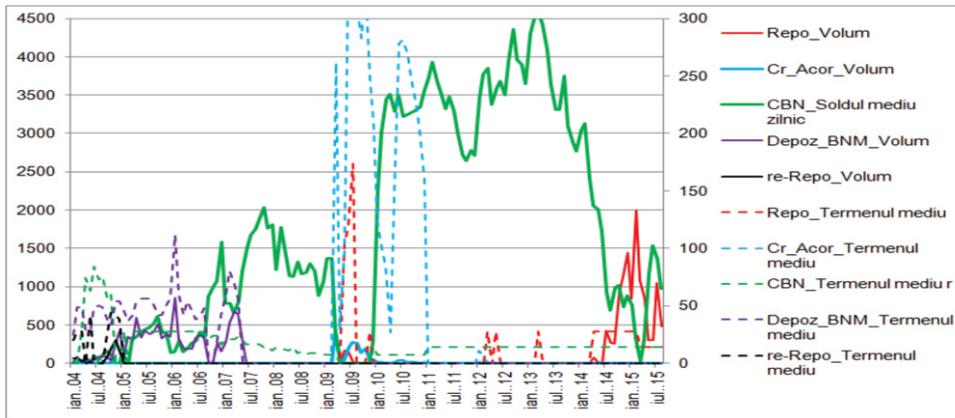
The tool "loans guaranteed with eligible assets" is covered for the most part on the legal framework with regard to credit, including the law on National Bank. In 2014, on September 28 has been brought to a change of the law on the National Bank of Moldova, without which probably Moldova does not have a fault "buyer" (credit operations of the banks in question, they have not been included in money market instruments). Through this change (Article 18 (6) Article 3 shall be neither enacted nor be entitled National Bank of Moldova to "granted banks, to the full to discretion, emergency loans in the short term, guaranteed with state guarantees or securities issued by the government under similar conditions credit terms of international financial institutions to the Government of the Republic of Moldova and in terms of its capacity to service the debt of the state, negotiated in advance with the National Bank of the Republic of Moldova, in accordance with the provisions of the legislation".

Thus, it can be seen that monetary instruments applied out operation of capital markets should be better regulated, and their application to have a better justification. There is currently no studies in which it is possible to state with certainty that the interventions National Bank of Moldova by granting credits were essentially wrong or incorrectly implemented.

4. Use open market operations in the Republic of Moldova

According to the data presented by National Bank of Moldova in the data bank in box operations National Bank of Moldova on the money market, it can be said that of the instruments referred to (in addition to the transactions of the swap rate) after the year 2004, National Bank of Moldova has not used by place the instrument of - simple transactions (sales and purchases of definitive VMS).

Figure 1. Changes in the volume of transactions (MIL lei, the line on the left) and of ripening (days, the line to the right) on the money market instruments applied in 2004-2015, (without swap exchange rate changes)



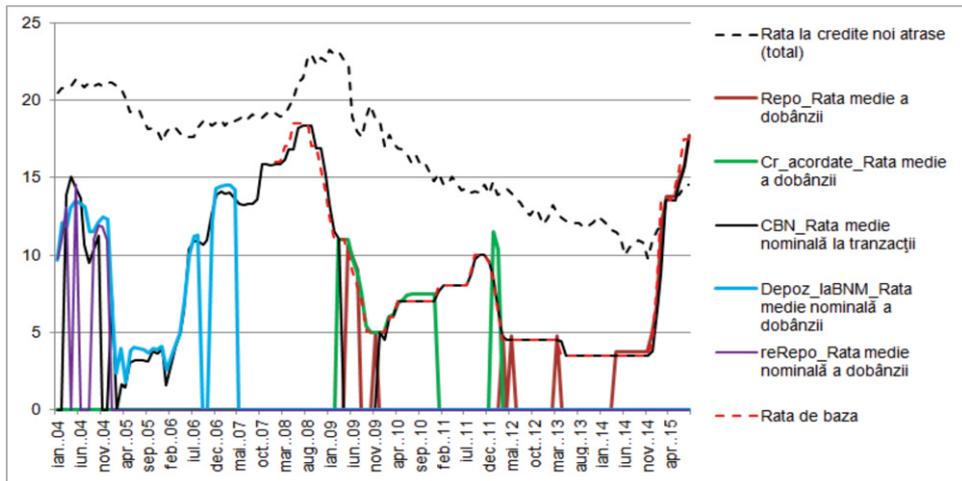
Source: interactive data bank the National Bank of Moldova

In the period under consideration it may also be noted that, once the monetary policy change "dismissed" (in 2009), there is a more intense activity of the National Bank of Moldova by means of the instruments of the monetary market. This has occurred in the first instance, by the issue of the certificates of the National Bank of Moldova with a maturity of 14 days for the absorption of liquidity. Also, starting from the end of 2014 and the beginning of 2015, there have been increases in repo operations. Also, it is observed that in crisis management in 2009, the National Bank of Moldova has been involved in market operations in particular by reducing the issuing of National Bank of Moldova and by granting loans against eligible assets.

Crisis in 2009 has created a favorable situation to cut interest rates on credits, while minimizing during the period 2009-2014 with approximately 12 p. p., amounting to about 10% for new credits attracted (Figure 2). However, the problems in particular in the banking sector at the end of the year 2014 and the beginning of 2015 have led to an increase in the inflation rate exceeding the target set. In this way, the National Bank of Moldova considered justified to use one of the tools that increase the rate of the main base. Under these conditions, taking into account the fact that the basic rate changes take effect on inflation in relatively long periods of time, and taking into account the previous situations, this would mean that the rate for pre-financing may not exceed 20% for an average. This obviously will create serious problems in the real sector.

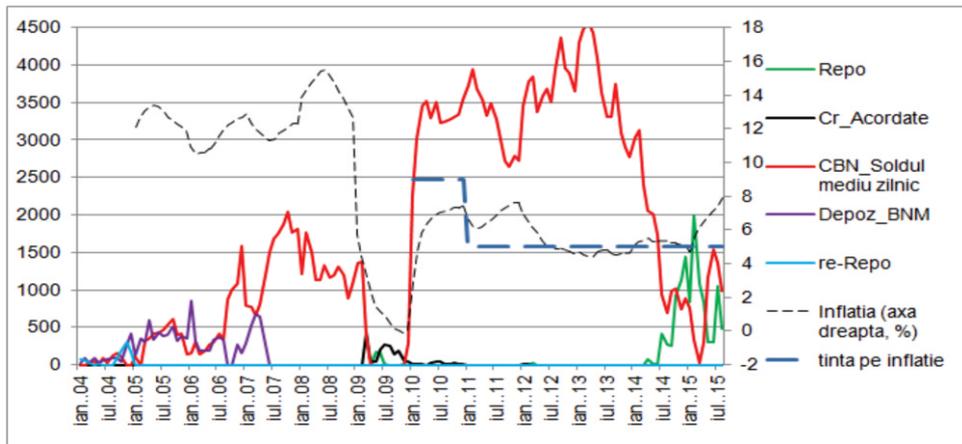
For this purpose, in order to verify that the National Bank of Moldova has chosen correctly by using the tooling, more detailed research is required, which goes beyond the purpose of this report.

Figure 2. Changes in rates applied to monetary instruments (2004-2014), the rate of the interest on loans for new loans in the banking system and of the basic rate, %



Source: interactive data bank the National Bank of Moldova

Figure 3. Volumes evolution operations on the money market (mil, left axis), the inflation target and inflation (% , right axis, with the inflation rate in 2005, calculated from previous period of the previous year, the target of 2009)



Source: data and information National Bank of Moldova and BNS

During the period 2010- end 2014 it is to be noted that National Bank of Moldova failed to maintain inflation in the area near to the proposed range, for the first time in the history of the Moldovan Republic this and production reasonably stable (Figure 3). However, if it is to the real causes of a trend is resumed the steep rise in the inflation rate

at the beginning of the year 2015, it may be observed that National Bank of Moldova shall not put great emphasis on the effectiveness of money market instruments. So it can be seen from our operations relatively significant levels of monetary mass absorption. Probably the National Bank of Moldova wishes to achieve desired effect in the first instance, by implementation of the instruments rates and minimum reserve requirements.

In the last 12-13 months it may be observed that National Bank of Moldova has had similar operations in volume with CBN and repo operations at the same time with a maturity of 28 days and 14 days at repo operations and 14 days at CBN. In other words, National Bank of Moldova at the same time carry out absorbing operations and the provision of liquidity.

5. Conclusions

There is currently no classification of the instruments of monetary policy unequivocally accepted theoretically and conceptually. All at once, and the need for implementation of coordinated policies at the level of countries of the euro area and the EU, by the Central European Bank, International Monetary Fund activity is created ruling for the unification, typing of the monetary policy instruments.

In accordance with studies carried out at the global level on the use of monetary policy instruments has been found that the instruments of monetary policy will tend to increase. Covered by application of the money market instruments is greater than in the developed countries.

The money market instruments of the National Bank of Moldova approved are for the most part in line with those recommended by Euro system. Also, in order to increase the effectiveness and efficiency of applying instruments in the money market is good for National Bank of Moldova to improve instruments typology on the basis of operational objectives and in the medium term. National Bank of Moldova application at the discretion of the instruments by applying irregular, ad-hoc is a matter good but, they should be applied in exceptional circumstances but not as a rule.

National legislation and the regulatory framework for the National Bank of Moldova creates fundamental He specified that the instruments of the money market to become the main monetary policy instruments in the Republic of Moldova. However, practice has shown that the provision relating to the granting of the National Bank of Moldova of credits under the state has not operated correctly even if in principle, and provision should be made for legal is good (the "buyer"). For this purpose it is necessary that existing framework to be completed with a framework for appropriate procedures to include and the granting of guarantees by the government, in order to avoid these problems in the future.

During the period 2004-present National Bank of Moldova has not used the instrument of simple transactions (sales and purchases of definitive VMS), and the most commonly used instrument that the frequency and volume has been sale of certificates BNM. Such tools as repo and reverse repo operations have been used very little, but in the last period repo is used more insistently. By and large it may be observed that the implementation of the instruments money market soon is seen as a complement to instruments other than a basic tool.

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Unproductive Entrepreneurship, Institutional Change, and the Informal Economy: Entrepreneurial Potential in Moldova

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Abstract

Entrepreneurship is often ubiquitous in developing countries, and many entrepreneurs operate in the informal economy and are often involved in unproductive activity. While entrepreneurs seek to maximize their returns given the existing institutions, they also respond to the level of state capacity and the supporting structures of national and regional governance. We tackle the question of governmental legitimacy given that entrepreneurs in Eastern Europe operate in states with weak governance institutions. We test the degree to which the standard maximization of private returns decision holds by surveying informal entrepreneurs in the Republic of Moldova. The institutions that determine high versus low state capacity motivate entrepreneurs toward a productive or unproductive use of resources and the capacity of government also impacts their pursuit of private returns resulting in higher social costs. We find that Moldovan entrepreneurs evade taxation for reasons beyond simple maximization rules.

Keywords: entrepreneurship, talent, informal economy, development, tax compliance, institutions, Unproductive Entrepreneurship, state capacity

JEL Codes: O52, P26, L26

1. Introduction

Developing countries rely heavily on entrepreneurial behavior for economic progress and increases in standards of living. This entrepreneurial behavior takes many forms and is driven by the institutions that frame individual incentives. William Baumol (1990) wrote about this phenomena analyzing from a historical perspective the behavior of entrepreneurs since Ancient Rome, and he concludes that entrepreneurial behavior is not driven by some “spirit of entrepreneurship” that either exists or not within a specific society. Rather, it is not a lack of entrepreneurship that impedes economic development but a skewed reward structure that drives this behavior toward unproductive activity. The institutions within the countries of the former Soviet Union are still evolving, as democratic forms of government and market activity struggle to take hold after decades of communism. Entrepreneurs find themselves at a point in this evolution where the choice still exists whether to choose a productive versus unproductive use of their resources, and this choice has profound implications for the

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future of economic development.

In addition to Baumol's seminal research, Murphy et al. (1991) and Acemoglu (1995) find that the rewards that exist in a particular context determine how talented individuals will utilize their resources. One example of entrepreneurial effort described as unproductive by Baumol is the means by which entrepreneurs engage in tax evasion and avoidance. This effort represents a drain of resources away from productive uses, and it also pushes economic activity into the informal economy. Both of these uses of resources, tax avoidance and efforts to operate in the underground economy, are problems that plague developing countries. The "black" economy exists for many reasons due to, lack of adequate jobs in the formal sector, lack of skills and education to seek employment in the formal sector, and ease of entry, to name a few; yet, the incentives are broader and are driven by the overall institutional framework and state capacity in these countries. In some countries with low state capacity, specifically those transitioning countries of Eastern and Central Europe, lack of trust in government pushes entrepreneurs into the informal economy as well (Wallace & Latcheva, 2006). This informal economy operates both illegally and with governmental sanction, but the entrepreneurs often choose this path for reasons specific to perceived governmental legitimacy.

Since the collapse of the Soviet Union, countries in Central and Eastern Europe have transitioned from command style economic and political systems to those more market-based and democratic. This path of transition has occurred at varying rates within these countries, and the institutions that both support this change and that are necessary for this change to occur dramatically impact resource allocation within these countries. North (1990) explains how these institutions, the formal and informal rules that govern economic activity, can encourage entrepreneurial activity and also constrain it given the opportunities and incentives that exist. Thus, as the institutions evolve and civil society deepens the trust relationships between individuals, the market, and the state; entrepreneurs will utilize their resources differently (Fukuyama, 1996). This is a complex system of relationships, and many times the institutional framework pushes (or pulls) entrepreneurs into the informal (underground, black) economic sector due to weak institutions.

The decisions for entrepreneurs to utilize their resources for productive versus unproductive means is a crucial one. As North explains, entrepreneurs are the agent of change and they are both guided by the existing institutions in which they operate, but they are also agents that help institutions evolve and strengthen. Since the process of change is "overwhelmingly" incremental, it is necessary for entrepreneurial decisions to lead toward productive outcomes.

In this paper we analyze this informal sector in the Republic of Moldova in order to understand how individual entrepreneurs view paying taxes, their rationale for tax avoidance, and their perceived trust in institutions. In this post-Soviet economy, a question that hinders development is whether the problem of tax avoidance is embedded in the decision to invest in the informal economy or are there other institutional factors which direct entrepreneurial resources away from formally reporting income. One solution might be following the trend of several Eastern Europe economies that have adopted a flat income tax system, and previous research indicates that this simplification of the tax code has improved compliance thus lessening evasion

(Ivanova, Keen, & Klemm, 2005).

In order to investigate the problem of tax avoidance in Moldova we survey entrepreneurs in the informal sector, questioning their behavior toward taxation and the reasons behind their decisions. It is believed that institutions make the difference in how entrepreneurs utilize their resources, but that this choice is not simply one of profit maximization. There is a much deeper incentive toward unproductive uses of resources that catalyzes entrepreneurs to use their talents in activities that ultimately hinder the effectiveness of government and the development of civil society.

Recently, Weitzel et al. (2010) analyzed the allocation of entrepreneurial talent determining whether the institutional incentives drive these entrepreneurs to the highest private returns regardless of the activity. In experimental testing they find that the type of entrepreneur, creative versus business talent, explains the differences in productive, unproductive, or destructive entrepreneurship. In short, they find that the more business talented (and less creative) the entrepreneur, the more likely they will pursue the highest private return regardless of the social cost. We find evidence that supports this experimental analysis, yet the institutional incentives are more complex than this research or previous research suggests. Specifically, tax evasion represents a social cost and previous models of entrepreneurial choice indicate that the highest private returns, regardless of social returns, determine entrepreneurial decisions (Murphy et al., 1991). We find this to be true to a point, but trust in the ability of government to use resources for socially optimal outcomes significantly impacts the decision to evade. The institutions that determine high versus low state capacity motivate entrepreneurs toward a productive or unproductive use of resources and the capacity of government also impacts their pursuit of private returns resulting in higher social costs.

What follows is an analysis institutional change in transition economies and an examination of the informal economy in Moldova (to what extent does entrepreneurial activities elude government reporting). In addition, we tackle the question of how these entrepreneurs utilize their resources given that they operate in a state with weak governance institutions. Is their decision to avoid formal reporting and subsequent tax laws due to a simple calculation of maximizing private returns, or are these entrepreneurs also considering the social cost of their decisions? Thus, we report on a survey of entrepreneurs operating in the informal economy in order to better answer how the institutional framework of Moldova incentivizes unproductive entrepreneurial behavior. We conclude with policy recommendations that are targeted at improving the allocation of entrepreneurial resources.

2. Institutional change

Institutions are an essential component of the market process and subsequent entrepreneurial activity. Economists define institutions as the rules of the game in society or the “humanly devised constraints that shape human interaction” (North, 1990, p. 3). Institutions allow people to interact and transact in a market because of the establishment of trust and the reduction of uncertainty. These constraints on people's choices can be formal in that they are written down, or they can be informal, tacit rules that are difficult to articulate (Harper, 1998). Institutions consist of governing laws, contracts, property rights, and other legal and operational codes that provide

predictability. In post-Soviet transitioning economies, institutions are evolving and the pace of economic transition in the countries of Eastern Europe depends on the rapidity of institutional change. Since the remnants of an institutional framework that developed under communism still abounds in these countries, the entrepreneurial opportunities that exist are shaped by incentives that may not lead to productive market-based development and change.

A problem that plagues entrepreneurs in these countries is a lack of trust in the enabling institutions that structure entrepreneurial opportunities. So, one means of analyzing the current institutional framework is to analyze the behavior of entrepreneurs that operate in a post-Soviet economy. Economies at varying stages of transition since the collapse of communism can be a useful environment to study institutional change, and focusing on entrepreneurial decisions in these countries helps to more clearly understand the strength of the existing institutions. For example, a predictable and efficient regulatory regime helps to facilitate economic development by promoting productive entrepreneurial decisions (by reducing transactions costs and uncertainty), but inadequate and corrupt institutions constrain growth and encourage unproductive behavior. In Moldova, Welter and Smallbone (2011) note the example of a minibus driver who sought to start a transportation business. It took several months for her to obtain a license at a cost of bribing each agent she was forced to meet with, and once she began her route she was forced to bribe the police and the State Traffic Inspectorate in order to remain in business.

Institutional change takes time, and the informal institutions which are embedded in society often change more slowly than the formal ones. Also, institutional change does not mechanically affect entrepreneurial behavior because of the lasting presence of communist identity which constrains the informal changes even as formal change occurs (Chavance, 2008; Welter & Smallbone, 2011). Entrepreneurial decisions provide a particularly insightful picture as to the level of both formal and informal institutional strength of a transitioning economy, because these local business owners have a realistic picture of the strengths and weaknesses of the current environment. As indicated above, the extent to which decisions are made to engage in unproductive entrepreneurship (evading both taxation and operating in the formal economy) are a strong indication of the strength (weakness) of the existing institutions.

As this process of institutional change transpires, entrepreneurs are both drivers and responders to these evolving patterns which structure their incentives. Entrepreneurs are often viewed as responders to the rules of the game, but they also may play a role as change agents that help improve institutional deficiencies (Frank & Shockley, 2011; Kalantaridis, 2007). In post-socialist economies, the transparent institutional weaknesses are well documented, namely corruption within the government, yet the struggle to develop strong informal institutions is a primary part of the economic development struggles in these countries. An analysis of entrepreneurial behavior in the informal economy highlights this dual role of entrepreneurs both responding to the existing institutions and making decisions that alter the existing institutional framework.

3. The informal economy in Moldova

The informal economy is a broad term referring to economic activity that exists

outside of formal government regulation. This activity may consist of the “black” economy, household production, or other economic activity that hidden from the formal sector (such as unreported economic activity that may have a loose formal structure). The existence of the informal economy is, to a degree, common among all nations. Yet, in developing countries or those transitioning in Central and Eastern Europe the informal sector is in part a legacy from the collapse of communism. After the fall of the Soviet Union, entrepreneurs began to utilize new opportunities for profit in the burgeoning market economy that followed political change. As the institutions have evolved in these post-communist countries, so have the incentives that catalyze opportunities for entrepreneurs. Countries with more rapid transition from communism have seen a predominance of economic activity in the formal sector, while others that have taken a slower path to change maintain a large percentage of informal economic activity.

According to World Bank data, Moldova is the poorest country in Eastern Europe with a GDP per capita of \$1,631 in current dollars (2010). Only Tajikistan, Kyrgyzstan, and Uzbekistan have a lower GDP per capita of the former Soviet countries. As with many countries with low GDP per capita figures, there is considerable evidence that a significant portion of economic activity goes undeclared. In Moldova, much of the previous research has put the size of the informal economy averaging between 45 percent and 50 percent of GDP (Schneider, 2005; Schneider & Buehn, 2009). In 2009 it is estimated that 30% of the Moldovan labor force maintained an informal job. Recent research for European Union (EU) countries suggests that the driver of this labor force location decision is not what earlier research has indicated. When analyzing all 27-nations in the EU, just 16% of undeclared workers admit that participating in such work is due to lack of employment opportunities in the formal sector (Williams, 2009). A study of this magnitude has not occurred in former Soviet economies; yet entrepreneurial location choice is much more complex than simple marginalization from the formal labor market.

One driver of entrepreneurial behavior in the informal economy is the level of state capacity. Specifically, to what degree have governmental institutions evolved since economic and political transition in post-Soviet countries? State capacity is measured, in part, by the degree of corruption (actual and perceived), governmental effectiveness, regulation, and rule of law. One measure, the Corruption Perceptions Index (CPI), annually ranks countries by their perceived levels of corruption, as determined by expert assessments and opinion surveys. According to the CPI for 2010 (see table 1), Moldova scored 2.9 corresponding to the rank of 105th among the 178 countries scored (the last rank held by Somalia). Also, several studies show that countries with more regulation of their economies have larger informal economies. For example, among 84 developing, transition, and advanced economies, a one point increase in the regulation index (ranging from 1 to 5) is associated with a 10 percent increase in the informal economy.

Table 1. Corruption Perceptions Index of Select Countries

Country	Corruption Perceptions Index score & world rank		
	1999	2009	2011
New Zealand	9.4 (#3)	9.4 (#1)	9.5 (#1)
Finland	9.8 (#2)	8.9 (#6)	9.4 (#2)
Denmark	10.0 (#1)	9.3 (#2)	9.4 (#2)
Sweden	9.4 (#3)	9.2 (#3)	9.3 (#4)
Singapore	9.1 (#7)	9.2 (#3)	9.2 (#5)
Estonia	5.7 (#27)	6.6 (#27)	6.4 (#29)
Georgia	2.3 (#84)	4.1 (#66)	4.1 (#64)
Romania	3.3 (#63)	3.8 (#71)	3.6 (#75)
Moldova	2.6 (#75)	3.3 (#89)	2.9 (#112)
Belarus	3.4 (#58)	2.4 (#139)	2.4 (#143)
Russia	2.4 (#82)	2.2 (#146)	2.4 (#143)
Ukraine	2.6 (#75)	2.2 (#146)	2.3 (#152)
Uzbekistan	1.8 (#94)	1.7 (#174)	1.6 (#177)

Source: www.cpi.transparency.org

In general, but more specifically in transitioning countries, individuals are highly mobile between the official and the informal economy, and as wages in the formal economy rise, this shifting between sectors is lessened. The process of transition in Moldova's labor market followed from a reduction in both wages and employment in the public and quasi-public sectors, and at the same time there has been only a slow increase in private sector employment. Although many are employed in the formal sector, they may not make adequate income at their official job. One contributing factor has been government regulations which substantially raise the cost of labor to firms in the formal sector; such as license requirements, labor market regulations, trade barriers, and labor restrictions for foreigners. Employers in the formal economy shift most of the associated costs onto their employees giving them a strong incentive to move into the informal economy.

An additional measure of regulation is the World Bank governance indicator of regulatory quality. This index captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. As institutions evolve, a primary role of government is to establish a framework where economic activity operates in a transparent and stable environment. Markets have a difficult time thriving in a country where regulation causes unpredictability and burdensome hurdles for entrepreneurs to contend with. Table 2 shows the ranking and governance score for countries in Central and Eastern Europe, and as indicated, Moldova is still struggling to weed out both corruption and the corresponding regulatory burden that often plagues weak states.

Table 2. Regulatory Quality in Select Central and Eastern European Countries

Country	Percentile Rank (0-100)	Governance Score (-2.5 to +2.5)
Estonia	91.9	1.45
Czech Republic	85.2	1.24
Hungary	81.8	1.05
Poland	79.4	0.97
Romania	74.2	0.66
Bulgaria	71.8	0.61
Georgia	70.8	0.58
Armenia	58.4	0.28
Moldova	49.3	-0.12
Russia	38.3	-0.39
Ukraine	32.5	-0.55
Belarus	9.6	-1.17
Uzbekistan	3.8	-1.59

Source: www.info.worldbank.org/governance/wgi/index.asp

4. Taxation and the informal economy

Previous research has found strong evidence that the tax regime influences the informal economy. In Austria, the burden of direct taxes (including social security payments) has been the biggest influence on the growth of the informal economy, followed by the number of regulations affecting firms and workers, and the complexity of the tax system. Other studies show similar results for the Scandinavian countries, Germany, and the United States. In the United States for example, analysis shows that as the marginal federal personal income tax rate increases by one percentage point, other things being equal, the informal economy grows by 1.4 percentage points.

In developing and transitioning economies the data reveals a similar trend, which is simply that the tax regime does influence both compliance and the size of the informal economy. But, the size of the informal economy and the level of tax compliance has more to do with the overall trust in government in these countries (Wahl, Kastlunger, & Kirchler, 2010). While the size and scope of the informal economy may depend on the tax burden faced by entrepreneurs, in developing countries this sector is more heavily influenced by overall trust in public institutions. A self-fulfilling system results in that less trust and more corruption leads to tax evasion (Joulfaian, 2009), and more evasion leads to government fiscal problems, and thus new and sometimes complex systems of taxation result in order for government to acquire revenue. Additionally, the result is also a more complex tax system and this complexity hinders compliance as well. As mentioned above there is evidence that a simplification of the income tax system, such as a flat tax common in Eastern Europe, does improve compliance.

Thus in many European countries, including Moldova, other sources of tax revenue have become crucial for the fiscal needs of the state. The value-added tax (VAT) has been the largest contributor to tax revenue in Moldova in recent years. Between 2004 and 2005 it produced nearly 50% of total consolidated budget revenues with over 87% coming from the VAT collected on imports. In 2011, VAT and excise taxes comprised approximately 70% of the total revenue, while corporate and personal income taxes each supply only about 10% of fiscal revenues. The government has aimed to broaden the tax base and increase revenues coming from direct taxation and reduce tax rates. Since 2001, the corporate tax rate has been reduced from 28% to 20% in 2004 and currently has fallen to 15%; and for personal income taxes the highest marginal rate declined from 32% to 25% and is currently 18% on all income over 25,200 MDL (\$2,136 USD) and 7% on income up to 25,200 MDL. Additionally, a corporate tax amnesty was in effect from 2008-2012 that has just recently ended.

Once again there is still an effort to deal with the fiscal needs of the public sector, while trying to establish legitimacy within the government, thus the need for alternate sources of tax revenue. With so little revenue generated by income taxation, partly due to evasion, and such a high percentage of revenue gleaned from VAT taxes, the Moldovan government has limited policy options. As mentioned, the tax amnesty is a policy tool used to give evaders an opportunity to voluntarily pay their tax obligation without penalty. The impact of this recent Moldovan amnesty program is not yet documented, but past research indicates that firms are unlikely to participate unless significant tax system changes are enacted. The evidence of any significant system-wide change is not currently being reported.

5. Allocation of entrepreneurial resources in the informal economy

In order to measure the level of tax avoidance and the rationale for operating in the informal economy, we surveyed entrepreneurs in open urban markets within Chisinau the capital city of Moldova. Chisinau is the business and population center of Moldova with about one-third of the country's 3.5 million residents. As in many developing countries, Chisinau is a city of contrasts with large business and industrial centers adjacent to areas with a sizable presence of informal entrepreneurs. There are several open markets and street vendors throughout the city, and these areas are arranged into more formally defined areas to various street merchants establishing a business on the sidewalk.

We surveyed two open markets, one located just outside the city center in one of the five main regions of the city and the central market in the heart of the downtown region. A randomized sample of entrepreneurs operating in varying parts of the retail goods sector was surveyed. The survey sample included entrepreneurs who produced their own goods from growing agricultural products to making other food items, to importers of household goods and clothing, to sellers of goods purchased from national wholesalers. Of those surveyed, seventy-nine percent were female entrepreneurs and just under half (47%) sold agricultural goods. One-third of the sample sold clothing leaving twenty percent that sold household goods or other items. Additionally, just over forty percent reported that they purchase their goods from national wholesalers about one-third either import their goods or do a combination of importing and buying local. The remaining, approximately twenty-five percent, produces the goods that they sell.

Part of the survey was designed to get a picture of how these entrepreneurs view and subsequently treat their obligation to pay taxes and comply with the existing laws that govern entrepreneurial activity in Moldova. Table 3 presents a summary of these questions and the survey responses.

Table 3: Survey Responses

Question (n)	Yes	No
Do you keep records of your income? (52)	62%	38%
Do you keep records of your business expenses? (52)	46%	54%
Do you report any income to the government? (49)	47%	53%
If yes, do you report your exact income? (34)	24%	76%
Besides income tax, do you pay other taxes? (51)	55%	45%
Do you think the reporting system is efficient and clear? (50)	16%	84%
Do you think the money collected is used properly? (51)	2%	98%
Did someone explain the need for reporting your income and its ways? (50)	12%	88%
Have you seen any improvement technical or organizational improvement in your market during the past 2-3 years? (52)	4%	96%

In addition to these questions, the entrepreneurs were asked more detailed questions in order to analyze their rationale for avoidance and their perceived trust in the state institutions where their money is sent. On average, those surveyed perceived that only about one-quarter of their fellow entrepreneurs report their income to the government. Also when asked what is the main reason for not reporting all of their income, approximately sixty percent responded that the government is corrupt or it is too weak (ineffective). About half also responded that if they paid taxes it would leave them with too little income to live on.

Finally, those surveyed were asked a general question about how to improve state capacity, and they were asked to give further details on their trust in government as it relates to their willingness to evade taxation. Forty-five percent of the entrepreneurs claim that the area that needs the most improvement within the government is the taxation system.

Additionally, fifty-five percent claim that the legal and justice system are the weakest areas of national governance. The entrepreneurs surveyed were also asked

whether paying taxes for the public good (i.e. being socially responsible by paying taxes honestly) would benefit their business and their profitability. Seventy percent of those responding answered that the overall state capacity is too weak (due to corruption or other inefficiencies) to incentivize a socially responsible motivation for tax compliance.

6. Discussion

The survey results presented here reveal important features of the informal economy in Moldova and the nature of unproductive entrepreneurship in terms of tax avoidance. These results cannot be universally applied, but they do reflect some generalizable entrepreneurial behaviors in places with weak state capacity. First, the allocation of effort toward tax avoidance, as a form of unproductive entrepreneurship, is not a decision made solely given the maximization of private returns. Given the institutional framework, there exists an obvious pull of entrepreneurial behavior toward the informal economy and an incentive to evade taxation. Yet, the data demonstrate that these decisions are not one-dimensional (Weitzel et al., 2010). The decision to avoid taxation is significantly influenced by both the perceived efficiency of the tax system and the overall perception of state capacity. This decision is not determined by maximizing private returns (given the risks involved in evading) alone.

Second, the results presented here reveal that socially motivated compliance to tax laws is driven by overall state capacity. While not a surprising result, this does create a dilemma for developing economies with weak governmental institutions. It is difficult to strengthen institutions without resources and it is difficult to attain resources without strong institutions. This fact is evident in the informal economy in that of those entrepreneurs surveyed, those that sought to "play by the rules" were frustrated by others who broke the rules and paid bribes for the authorities to look the other way. For example, one of the entrepreneurs surveyed who pays rent for a booth in one of the open markets complained that paying taxes is difficult when some of her primary competitors sit on the street and sell goods without paying rent for a booth in the market. This practice is illegal, but there is no enforcement mechanism which removes illegal sellers from the street corner. Additionally, some of these street vendors are operating because they have no other source of income.

Lastly, those entrepreneurs who commented on their rationale for tax avoidance spoke about the relationship between government and the formal sector. As indicated, most of the entrepreneurs blamed general corruption within government for their unwillingness to pay taxes, but several respondents also complained about the relationship between government and "big business" in the formal economy. The perceptions of those surveyed in the informal economy are that many formal sector entrepreneurs are benefitting from political favors that allow them to evade taxation (to some degree) as well. Thus, the evidence gathered here indicates that formal sector entrepreneurs are also using resources for unproductive means as they seek to extract rents from the public sector. The pervasive nature of these efforts is not formally documented, but in talking with one formal sector

business the perception is the "most" firms keep two sets of books; one set for their own record keeping and one set available for the public officials."

7. Conclusion

The informal sector is still a very important part of the Moldovan economy, and those who operate in this sector constitute almost one-third of the labor force. Previous research indicates that within a developing country, the entrepreneurs who operate in this sector do so for diverse reasons, but the data gathered here indicates that economic decisions in the informal economy are more complex than previously thought (Temkin, 2009). That is, maximization of private returns regardless of the cost is not the only factor which explains the use of entrepreneurial resources in the informal economy. The question that remains is how to change the incentives whereby these informal entrepreneurs will choose not to use resources for the purposes of tax evasion. This research suggests that the answer lies primarily in the overall level of state capacity and the perceived legitimacy of government.

The effect of changing the taxation system should not be ignored as a viable policy option for Moldova. As indicated above, without a system-wide change (either in policy or enforcement) it is very difficult to change the behavior of those entrepreneurs who utilize their resources to avoid taxation. This is especially true in countries where governmental legitimacy is in question, which is the pervasive belief throughout the Moldovan economy. A significant policy change has the benefit of signaling a shift in the legitimacy of government, and often this perceived change in legitimacy can begin to build the informal institutions (such as trust) that remain essential of economic development. Examples from other former Soviet countries demonstrate that corruption (both by public officials and citizens) is self-reinforcing, yet when people believe they can trust government and each other, they tend to reciprocate and behave fairly (Tavits, 2010).

Policy aimed at removing corruption and incentivizing institutional change, both formally and informally, is often catalyzed by educational reforms. The belief that economic growth leads to better political institutions due to improvements in human capital has long been posited by Lipset (1960), and has been empirically tested examining the differences in development between North and South Korea (Glaeser, La Porta, Lopez-de-Silanes, & Shleifer, 2004). These results indicate that increased education, even under less democratic regimes, can lead to improved institutions that eventually improve democracy and development. Recent research supports this claim that better educated people are more likely to report corruption, and more reporting links to improvement in the quality of government and subsequent growth and development (Botero, Ponce, & Shleifer, 2012).

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