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Email: [revec@univcb.ro](mailto:revec@univcb.ro), [cristina\\_ganescu@yahoo.com](mailto:cristina_ganescu@yahoo.com)

Contact person:

Associate Professor PhD CRISTINA GĂNESCU  
Phone +400744420742  
Email: [cristina\\_ganescu@yahoo.com](mailto:cristina_ganescu@yahoo.com)

## INSTITUTIONAL INNOVATIONS AND ORGANIZATIONAL SUSTAINABILIZING

**Professor PhD Emil DINGA\***, Senior Researcher  
"Victor Slăvescu" Financial and Monetary Research Center,  
Romanian Academy, Romania  
Email: emildinga2004@yahoo.com

**Abstract:** *The innovation capacity (potential) is a necessary feature of any dissipative systems. In the case of organizations that must maintain their structure and the correlative functions, i.e., must verify the state of sustainability, this feature is much more important. The paper examines the role of the innovation regarding especially the institutional innovation in generating and preserving the sustainable state and kinematics of organizations considered in the most abstract way: dissipative systems „endowed” with human beings. Some conceptual clarifications are delivered in order to prepare the considerations on the main mechanisms aimed to react to the external or internal perturbations on the sustainability of the organizations in case. The paper goes beyond the simple resilience or robustness, by convoking some new and still polemical concepts: auto-poiesis, anti-fragility, Oedipus effect and so on. Finally, a logical map of emerging auto-poiesis in organizations are sketched.*

**Key words:** sustainability, auto-poiesis, organization, innovation, institutions

**JEL Classifications:** D50, M10, Q01.

### 1. Introduction

It is generally accepted that the structure of a system generates and preserve the functions of that system [Hayek, 1960]<sup>1</sup>. As the set of functions give the role, we obtain the role of a system is a result of its structure. More than that, the structure is the warrant of the system identity. By identity we understand that situation in which the state vectors of the system between two moments of time have their parameters within a gap pre-accepted. So, being the parameters which fundamentally describe a system:  $s_i^j$ , where  $i = \overline{1, n}$ , and  $j$  is the moment of time, the state vectors for moments of time  $j$  and  $k$  are:  $S^j = (s_1^j, s_2^j, \dots, s_n^j)$ , and  $S^k = (s_1^k, s_2^k, \dots, s_n^k)$ , respectively. Now, be the acceptable gaps for variations of parameters:  $G^{jk} = (g_1^{jk}, g_2^{jk}, \dots, g_n^{jk})$ . We say the structure of the involved system  $s$  invariant between the moments of time  $j$  and  $k$  if:  $|s_i^k - s_i^j| \leq g_i^{jk}$ . In other words, a certain variation of the parameters are acceptable, but only inside the gaps pre-accepted. The invariance of the structure in the mentioned understanding assures us about the identity of the given system. We'll see below the invariance of the system is the crucial benchmark to discuss the question of its sustainability.

But, the invariance of a system seems to be inconsistent with its development or, in the case of social systems, with its progress. In fact, by development it must be understood a variation of a structure as result of growth. As a variation of a structure could means a modification of the system's identity, how might be interpreted that? Generally, the pressure on the structure changes is exerted by innovations (either generated inside of the system, or imported from outside). So, it is important to elucidate these relationships between the sustainability delivered by maintaining the system's identity and the innovations, especially the institutional innovations<sup>2</sup>.

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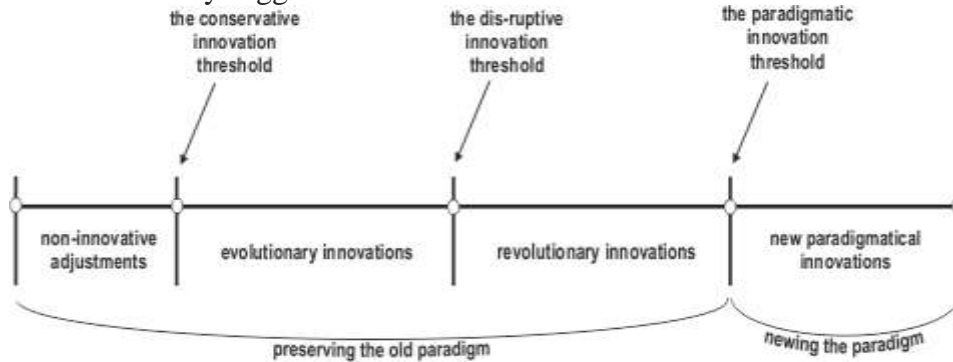
\* Emil Dinga is Professor of Theoretical Economics, and Economic Epistemology, senior researcher and supervisor for doctoral and post-doctoral programs in the economic field, at Romanian Academy.

<sup>1</sup> Remember this assertion is the ground of the Darwinism in the natural evolution of life (NB: it seems, however, **Darwin** is inspired rather from the social evolution which he has „transplanted” on the nature.

<sup>2</sup> To be mentioned that the institutional innovations are a species of the social innovations.

## 2. What the institutional innovation is it?

An innovation (*I*) is, conceptually, something (idea, procedure, mechanism, object etc.) that changes a statu quo in a given system. Of course, overtaking of a threshold is still necessary here to qualify a change as an innovation<sup>1</sup>. As observed, almost all considerations on the economic/social concepts and mechanisms need thresholds. According to the above allegations, the thresholds are needed in order to establish that the identity is conserved or not. So, an innovation is that change within a system that signify such a change in its structure that overtakes a certain threshold but, in the same time, doesn't overtake the threshold that could compromise the identity of the given system. Figure 1 tries to visually suggest this idea.



**Figure no. 1. Innovation general typology**

So, it seems there are, based on the role in the system dynamics, four type of innovations: pseudo-innovations – until the conservative innovation threshold, evolutionary innovations – which maintain the system identity, revolutionary innovations – which change the system identity, and new paradigmatical innovations, which in contrast with the former three types of innovations, do not preserve the current paradigm within which the system evolves, but determines passing towards a new paradigm<sup>2</sup>.

If that is the innovation, we are further interested by the institutional innovation. Before that, we want to specify an innovation doesn't derive from an inferential mechanism, because this case it isn't properly said an innovation, but only a result which, sooner or later, would have appeared anyway. More precise, an innovation must be a novelty, that implies be unpredictable. Or, an inferential mechanism is totally predictable, based on valid inferences within it. Now, what could be the supplementary predicate or predicates which could lead to this species of innovation, that is, institutional innovation? We consider that being given an innovation (*I*), of any type, it becomes institutional innovation (*I*<sup>2</sup>) if:

- (a) the system within which the innovation occurs is an institution<sup>3</sup>; verifying of this predicate generates potential institutional innovations (PII);
- (b) the innovation in case enters (i.e., affects) the structure of the system; verifying of this predicate generates actual institutional innovations (AII);

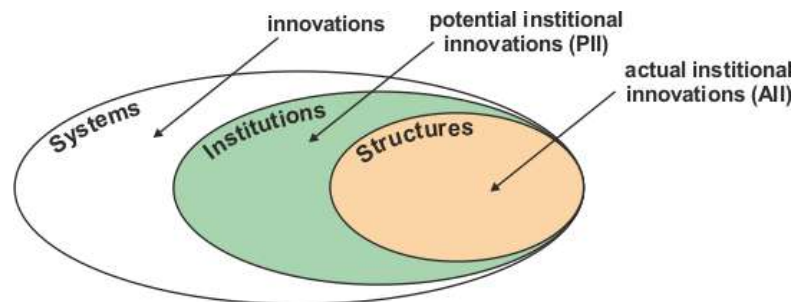
The first supplementary predicate (i.e., the host of the innovation must be an institution, as defined by the footnote no.5) is not problematic, but the second seems need some comments. As was said before, the structure ensures on the keeping of the system identity. By requiring that the innovation must enter the structure of the system, in fact we

<sup>1</sup> Otherwise, small changes that do not pass beyond the established threshold cannot be considered as innovations, but changes in the same „innovational paradigm”.

<sup>2</sup> Of course, the new paradigm will repeat all the four types of innovations, and so on.

<sup>3</sup> Here, the term institution addresses the largest signification of the concept, in fact, so large that its intensiveness is reduced to artefactual systems (i.e., any organization or group with a minimum degree of formalism).

require the innovation have at least two functions in the system evolution: a) maintaining the identity of the system (of course, according to the figure 1, as evolutionary innovation only; b) ensuring on the irreversibility of the change brought by the given innovation. Regarding the second function, it is accepted in the system theory that the structure has a great reluctance to reversibility. So, imposing the structural immersion of the institutional innovation, we locks the possibility the innovation disappear. Figure no. 2 tries to visualize these considerations.



**Figure no. 2. Way of generating institutional innovations**

### 3. Relationship between institutional innovation and sustainability

So, supposing the given threshold was overtaken, an innovation must be, supplementary, persistent, i.e., irreversible. This feature is assured, as mentioned above, by the type on innovation called actual institutional innovation (AII). It is of importance to discussed now two issues: 1) how the actual institutional innovation can guaranty the sustainability of the institution involved; 2) how the actual institutional innovation can re-sustainabilize an institution di-sustainabilized.

(1) Generally, an innovation disturbs the system within which it occurs. There are at least two reasons to claim that: a) by definition, an innovation is no predictable. This means: a.1) it is not part of an occurrence model, i.e., an algorithmical device that make us to expect (at limit, to predict with a reasonable accuracy) its appearance. As a result, any innovation has the potential to destabilize the host system<sup>1</sup>; b) it is focused on the system structure. As a result, its impact is not at all superficial and passable, but, by the contrary is deep and irreversible. So, an innovation comes with a strong „intention” to destabilize (or di-sustainabilize) the host system. But how can we be ensured against the non di-sustainabilizing of that system? We think there are a single but strong principle in the matter: empowering the given system with a sufficient capacity of robustness (capacity to grossly resist against perturbations), redundancy (capacity to replace internal devices to resist against perturbations, i.e., capacity to rebuild the robustness), and resilience (capacity to re-bring the system in its initial state after the perturbations impacted t). So, this kind of the phenomenon addresses the case in which the targeted system tries to

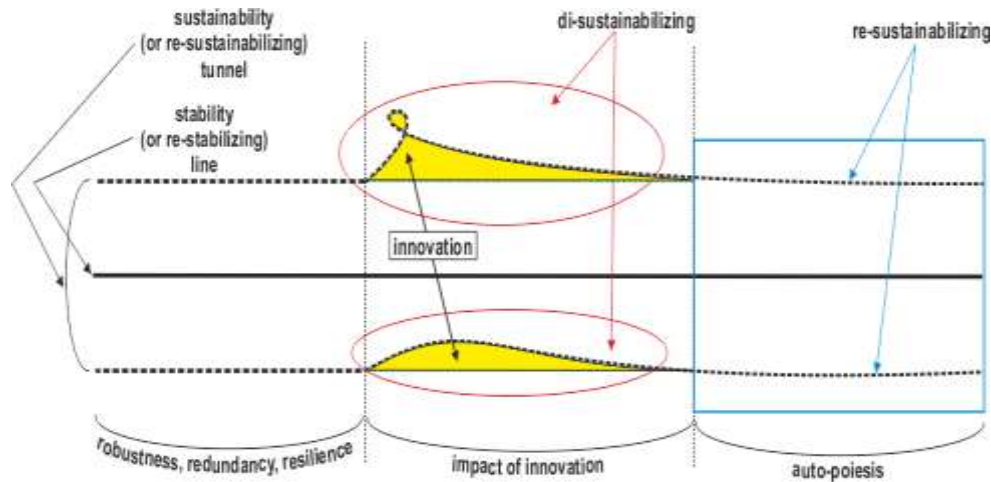
<sup>1</sup> Of course, only if the given innovation exceeds the threshold under the system in case maintain its identity. In principle, there two sides of such a threshold: 1) the size, which means the innovation must have an amplitude of change under the dimensional side of the threshold; 2) the speed, which means the innovation must enter the system with a speed under the limit within that system can absorb the perturbation brought by the innovation. Unfortunately, because the unpredictability of any innovation, the overcome of the two mentioned limits of the threshold are established/observed always after the innovation have produced its impact. To be mentioned an innovation anyway disturbs the host system, but by fitting the two limits, the perturbations can be maintained inside the system identity, so, in a way, the innovation impact is managed.



preserve itself, that is, to maintain the perturbations generated by innovation within the limits which ensure on the system identity.

(2) The second case is that when the limits of preserving the system identity are overcome. Now a new issue arises: how can the system involved in such a process return to its initial state. We think this case require to introduce the concept of auto-poiesis, so we think the system in case must be „endowed” with the auto-poietic capacity. If it is well-known, the biological living systems have such an auto-poietic capacity, which means a capacity to self-repairing, self-organizing (or self-reorganizing)<sup>1</sup>. Consequently, the system in case must be built up and conceptually understood as being a logically (not just biologically) living system. In such a way, sufficient degree of auto-poiesis could be „injected” into the system structure, functioning and behaviour so its identity be re-gained after the innovation applies its impact by putting it off its identity. To get that, the system in case must hold at least: a) an (internal or external<sup>2</sup>) accessible and indestructible memory regarding its former (i.e., before the innovation impact); b) an (internal or external) mechanism of repairing the damages caused by the innovation; c) an (internal or external) device to verify the achievement of repairing. To be noted, the re-sustainabilize is not the same with the re-stabilize: the first does allow some degree of variation from the initial state (structure, functioning, and behaviour) of the system, under the condition of preserving its identity, while the second does not allow such a gap, requiring a punctual remaking of the initial state.

The Figure no. 3 indicates the phenomenology of the innovation impact in a host system.



**Figure no. 3. The phenomenology of innovation impact regarding the sustainability state of a system**

#### 4. Innovation and anti-fragility

The issue of the benefits from innovation is an old one. It must be said that there are many other types of small adjustments inside systems aimed to improve its functioning in the framework of the same basic structure, but these are not innovations in the sense here stipulated, but fine tuning changes that punctually bring small enhances of functioning. As mentioned above, an innovation hold risks, primarily regarding the sustainability of the host system, because the two reasons already examined (unpredictability and structurality).

<sup>1</sup> Of course, again, within the limits which preserve the system identity.

<sup>2</sup> And accessible.

Beyond the interest to counteract the de-sustabilizing impact of the innovation, another question can be (and, actually, is) putted: if is it possible and how could be objectified the way to gain from perturbation, more specifically from the innovation occurrence. Some considerations are to be done here.

(1) Generally, an innovation brings advantages (gains of certain kinds), but many times not the advantages are the system targets, but its sustainability. In this context, the most innovations are expected to bring advantages, but their impact on the system sustainability still remains problematic<sup>1</sup>. So, another question arises now: even in the case an innovation, although brings some advantages for the host system, but these advantages means some risks (or costs, what is equivalent) for the host system sustainability, what can be said about gaining just from these risks. In other words, how is it possible to benefit from perturbing the system's sustainability. The concept of anti-fragility [Taleb, 2012] answer this question. We do not detailed examine the concept of anti-fragility, but only want to mention that such a concept has as basic consequence the uselessness of taking into consideration the risk<sup>2</sup>. More than that, neither uncertainty<sup>3</sup> is needed to be taken into consideration. Of course, these „savings” (of taking into account the risks or/and the uncertainty) require a cost: ensuring the anti-fragility as a parameter of the system structure. Such a parameter will have just the function (or role, if it embedded more convergent functions) to deliver gains from perturbations. For example, any removing of the system in case from its sustainability tunnel (see figure 3) should acquire some gains (of no matter kind) for that system. How is it possible is the subject of another paper;

(2) It is important to specify that the concept of anti-fragility is not inconsistent with the other concepts already evoked: robustness, redundancy, resilience. The crucial difference between it and the mentioned concepts consists in the capacity of an anti-fragile system to gain from perturbations. An interesting question that arises here is: an anti-fragile system gains from perturbation even in the case in which such a perturbation di-sustabilizes the given system? In other words, the anti-fragility do not deliver principles and mechanisms to preserve the system identity under the perturbation? The issue is not yet approached in the dedicated literature, so, for the moment, we'll offer only some general considerations: a) an innovation is a special case of perturbation – in the most cases, it occurs in order to improve the system structure and functioning; however, for the host system, the innovation remains a perturbation, but the risk to have a net negative impact from it is small; b) in the (a) case, the anti-fragility should acquire supplementary gains compared to those brought by the innovation itself; c) is not necessary, for the anti-fragility do its impact, that the system be removed from its sustainable trajectory through the innovation, so, the anti-fragility and the resilience capacity of the given system could form an integrative defensive mechanism.

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<sup>1</sup> The main reason here is, of course, the unpredictability of an innovation in its sense held in this paper.

<sup>2</sup> Any kind of risk needs distributions of probabilities (either objective, or subjective), but the new (unknown) risks have not such distributions of probabilities.

<sup>3</sup> To be remembered that uncertainty cannot be not at all credited with distribution of probabilities, unlike the risks.

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# RELATIONSHIP AMONG COMPLEXITY, SUSTAINABILITY AND DIVERSITY IN SOCIAL JUSTICE

Ph.D. Student Gabriela-Mariana IONESCU

School of Advanced Studies of the Romanian Academy (SCOSAAR), Romania

E-mail: gabrielaionescu13@gmail.com

**Abstract:** *Economic product distribution inside society implies not only rationality calculus but also the analysis of some specific features of the social justice. The paper identifies the relationships among the concepts of complexity, sustainability, and diversity in social justice. In the same context a certain ambiguity maintained in the specialty terminology is clarified between the issue complicated and the issue complex regarding the systems and processes, by proposing a new signification for the complexity issue. Effects of synergy between sustainability and social justice are identified, and analysed both from the view point of fundamental causes leading to social imbalances and in terms of achieving environmental objectives which can lead to significant economic and social outcomes in terms of welfare and environmental quality. Regarding the diversity concept, the paper proposes as criterion the distinction between the commutative justice and the distributive justice thus separating what it is merited from what is fair in the distribution of economic product. Finally, an institutional and behavioral mechanism of the triad complexity, sustainability, diversity is proposed and examined.*

**Key words:** *complexity, sustainability, social justice, distributive justice, economic product.*

**JEL Classification:** *A13, E00, O11.*

## 1. Complexity in Social Justice

### 1.1. The Concept of Complexity

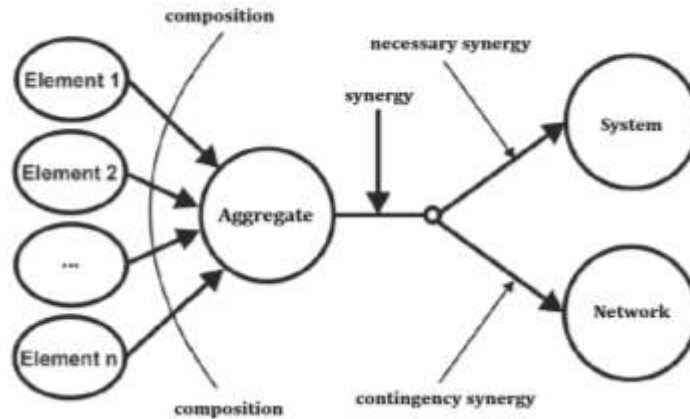
In order to understand and define the concept of complexity, it is necessary to clarify some related concepts and to justify the motivation for which these clarifications are needed.

Thus, in the literature, some economists believe that there are three categories of existential entities in the Universe: objects, properties and relationships that can be known as phenomena under three fundamental forms of existence: as aggregates, as systems, and as networks (Dinga, 2015). We will further define these three categories, pointing out that we can talk about the concept of complexity with regard to aggregates, the concept of complexity about systems and the concept of network complexity.

An *aggregate* is a set of components characterized by a single predicate of sufficiency, that is, it must be a decomposable entity (the decomposability of an aggregate goes to its indivisible components, depending on the stage of knowledge and on the interest of the subject, a particular component studied can be indivisible or not). Regarding *the system* concept we say that is the form of existence that simultaneously checks two predicates of sufficiency, namely: the existence of an aggregate and the existence of synergy (synergy refers to the property of an aggregate, which once formed, must possess properties that before aggregation there were not found to its components, taken separately). In other words, a system is a synergic aggregate (Dinga, 2015). As for the notion of *network*, this concept involves checking two predicates of sufficiency: existence of a system and existence of novelty; so, a network is a system that contains the novelty element. Figure no. 1 shows the general scheme of the relationship among the three concepts defined above.

Based on the definition of the concepts so far we can discuss the concept of complexity considering two aspects namely: defining the notion of and the fact that complexity can be said only in the case of networks, so only in the case of systems characterized by the production of novelty (complex is only that system that is not completely predictable). The notion of complicatedness refers to the degree of difficulty in structurally, functionally, functionally describing the functioning of an entity (Dinga,

2018). We call complicated a system with a rich structure, the point from which a system can be called complicated is given by the state of scientific knowledge at that time.



**Figure no.1. The general scheme of the aggregate-system-network path**

Source: Dinga E., *Predicție și predictorii în economie*

In conclusion, the concept of complexity can be defined as: a state of a system „endowed” with cultural subjects (capable of free will). It can be said that a complex system is not necessarily a complicated one (it can be a simple system), but the presence of free will gives the complex system a necessary-unpredictability.

We will retain for the field of interest of the present work that we meet the concept of complexity only in existential forms characterized by unpredictability (which appears only where the novelty appears - the source of the novelty is the presence of the subject) involving the presence of free will (we understand by free will an opposition / denial / avoidance of positive necessity, more exactly, of the social necessity).

According to some authors, the antonym of the concept of complex is considered the concept of simplex (which signifies the absence of the subject from the analyzed existential form) (Dinga, 2018). It is thus stated that an existential form can be simple and complex if it contains subjects, or complicated and simplex, if it does not contain subjects. Figure no. 2 summarizes what has been said and shows the connections that are established between the two concepts:

	NATURAL <i>SIMPLEX (S<sub>x</sub>)</i>	SOCIAL <i>COMPLEX (C<sub>x</sub>)</i>
SIMPLE (S)	$S - S_x$	$S - C_x$
COMPLICATED (C)	$C - S_x$	$C - C_x$

**Figure no. 2. Connections of complex and simplex concepts in the natural field and in the social field**

Source: autor’s work

The simple-complex association ( $S - C_x$ ) shows that an existential form belonging to the social domain can be simple and complex, so it includes cultural subjects, capable of free will, which are embedded in a system, induce properties of unpredictability. Complex-complicated association ( $C - C_x$ ) indicates that such an existential form in the social domain is characterized by systems with a rich structure that are not fully predictable.

## 1.2. Generation and Impact in the Issue of Social Justice

Generating social justice is a combined result (a mix) of the project based on social rationality and of emergence induced by free will. Social disciplines are characterized, from an epistemological point of view, by the fact that the economic object contains, functionally and structurally, the economic subject. Thus, we say that social justice is an artefact that focuses on the subject, it contains the concept of free will and it is generated by norm, the norm itself being the result of a subjective action.

The complex nature of generating social justice makes predictability of its evolution not guaranteed, although it is partly the result of a calculation (the calculation being completely predictable). While the projected component has the nature of the calculation (of the logical inference from a rationality model), the emerging component is of the nature of heuristics (of ad hoc purposes). Consequently, it can be said that the generation of social justice is a phenomenon characterized by complexity.

Regarding the impact of social justice, it applies to all subjects, its application is based on norms, but the decision to apply social justice also contains contingency or free will. Hermeneutics associated with the application of social justice, normative adjustment, is not predictable either from the legislator's perspective or from the perspective of the person to whom the law is applicable. Since social justice is not entirely in the nature of the rational project, it can not avoid unacceptable effects from a rational perspective (leading to social injustice). At the same time, as social justice is not fully emerging, it can not avoid unacceptable effects from a moral perspective (leading to social wrongness).

## 2. Sustainability in Social Justice

### 2.1. The Concept of Sustainability in Social Justice

Sustainability is a state of a system that has principles (internal and / or external) through which the system is replicable under conditions of preservation of its identity. The identity of a system is given by the preservation of its structure (from a point of view that interests the analysis) and the preservation of the structure must not necessarily be made punctual (a margin of variation of the structure is acceptable where the system remains identical to itself).

Sufficiency predicates identified for defining the concept of sustainability of social justice are as follows:

- **Predictability (P)** - social justice aims to ensure identical effects for identical causes;
- **Regularity (R)** - refers to preserving the identity of social justice, in fulfilling its purpose;
- **Self-similarity (S)** - the property of social justice to be identical to itself, refers to respecting the values (of the axiological matrix of the nation) and tradition in the implementation of the rule of law.

In view of the above, a definition of the concept of sustainability of social justice can be formulated as follows: it is a predictable construct that preserves the identity of social justice, by preserving the values and traditions in the implementation of the rule of law, having a continuous character and an institutional origin .

In the qualitative analysis of the predicates of sufficiency we will examine: a) consistency; b) independence; c) completeness.

#### a) Consistency Analysis

- **P/R:** by ensuring identical effects to identical causes does not compromise the identity of social justice (accomplishment of its purpose); reciprocally, preserving the identity of social justice does not invalidate the guarantee of

ensuring identical effects to identical causes in the functioning of social justice;

- **P/S**: by ensuring identical effects to identical causes, the values (of the axiological matrix of the nation) and the tradition in the implementation of the rule of law are respected; reciprocal by respecting values and tradition in the implementation of the rule of law, ensure identical effects to identical causes;
- **R/S**: preserving the identity of social justice implies respecting the values (of the axiological matrix of the nation) and tradition in the implementation of the norms of law; reciprocal, by respecting the values and the tradition in the implementation of the rule of law leads to preserving the identity of the social justice.

**b) Independence Analysis (non-redundancy)**

- **P/R**: from ensuring the same effects in identical causes (social situations), cannot be inferred that social justice fulfills its purpose. For example, a small variation in the effects associated with the same causes can still maintain the goal of social justice (for example, by sending an explicit, normative message that changes economic behaviors towards the goal of social justice); from the fulfillment of the purpose of social justice, the identity of the effects to identical causes cannot necessarily be inferred (there may be situations in which the differentiation of the effects to the same causes fulfills the purpose of social justice - for example the progressive taxation of personal income);
- **P/S**: from the observance of the condition of identical causes generating identical effects, the invariance of social justice cannot be extracted (institutionally or operationally). For example, changes in the values that govern economic behaviors can occur in society without being due to compliance with the condition of identical effects to identical causes; from the preservation of the axiological matrix of society does not necessarily follow that in its implementation the social justice will respect the identity of the effects to the same causes;
- **R/S**: from the invariant maintenance of the social justice macroinstitution cannot logically, validly, infer that the axiological matrix of society is preserved, it is possible that this very invariance of social justice generates an axiological revolutionary process in society, in order to accelerate the social progress, and reciprocally, the preservation (invariance) of the system of values in society does not necessarily imply the invariance of the social justice system, since the same values can be served by different systems of social justice (e.g. the value called equality can be implemented either by a single income tax rate of personal income, or by a variable tax rate, as progressive taxation).

**c) Completeness Analysis**

The third predicate of sufficiency (**S**) provides (filters) the set of values both formal and informal (tradition) that underpin the distribution of the economic product in society. The second predicate of sufficiency (**R**) ensures the homogeneity of the treatment applied by social norms both vertically (between „occupants" of the same socio-professional sector) and horizontally (among the different socio-professional categories). The first predicate of sufficiency (**P**) ensures that the invariance of an input in the social justice system corresponds to an invariance in its output (or, what is the same, a change in the input of the social justice system be associated to the corresponding modification in its output). Based on these considerations, we consider that the system of the three predicates

of sufficiency of the concept of sustainability of social justice is complete, i.e. it allows the functioning of social justice in a sustainable manner.

In the paper we have examined so far whether a certain abstract construct that verifies the three identified predicates (**P**, **R**, **S**) can be conceptually qualified as **SSJ** (the concept of sustainability of social justice). We will continue to examine, logically, whether the **SSJ** can generate (by analyzing each predicate of sufficiency or by combining them) other predicates that characterize it as called new necessary predicates.

From the three predicates of sufficiency identified, the predicate predictability (**P**) generates a new necessary predicate that we will call *the structurality* ( $N_{St}$ ) and refers to

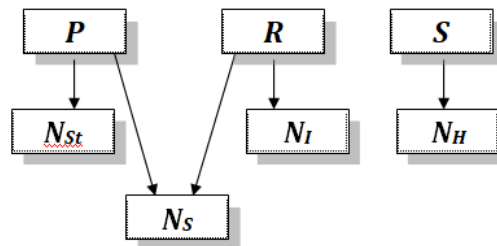
the permanent character and continuous action of the rules imposed by the functioning of social justice in a sustainable manner. The second new necessary identified predicate refers to *the institutional origin* ( $N_I$ ) and derives from the regularity predicate (**R**), being of a

normative nature, this normativity gives it a conservative capacity of maintaining, of permanence. The predicate of self-similarity (**S**) will generate the third new necessary predicate, *the historicity* ( $N_H$ ) that refers to the influences of the social-historical context

on the sustainable functioning of the social justice system.

Sufficiency predicates of predictability and regularity will together generate a new necessary predicate, namely *the separability* ( $N_S$ ) that refers to the ability to individualize,

according to a certain criterion, the application of the rules of sustainable operation of distributive justice or commutative justice.



**Figure no. 3. The logical scheme of generating the new necessary predicates of the concept of sustainability in social justice**

Source: autor's work

Successively, according to the adopted notations, we can write:

$$P_N = \{P, R, A, N_{St}, N_I, N_H, N_S\}; \quad P_N^n = \{N_{St}, N_I, N_H, N_S\};$$

## 2.2. Genesis and Impact of Sustainability in Social Justice

The genesis of the state of sustainability in social justice implies the replication, through meme, of the values and behaviors generally accepted in the given system, between its evolutionary cycles. As a result of the replication of values and behaviors, it is possible to replicate institutions that implement social justice. There is thus a sui generis test of the model of social justice just by replicating it in conditions, as a rule, changed.



The viability of the model of social justice following this test is a criterion for assessing the sustainability of social justice.

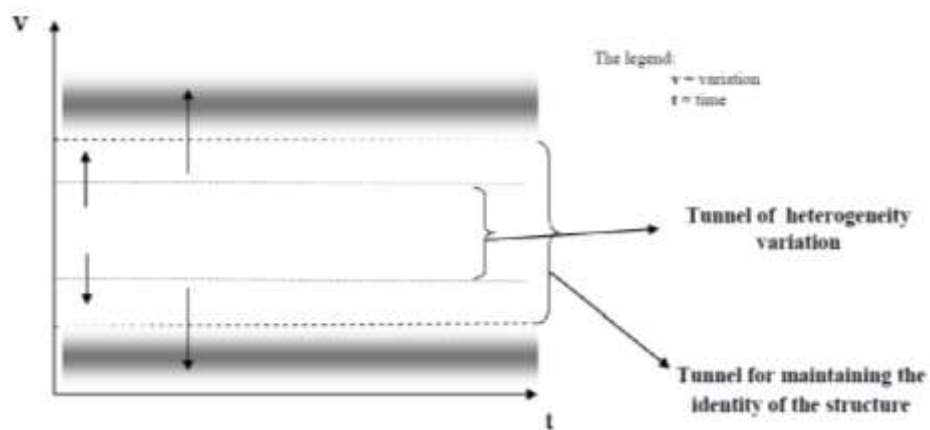
The impact of sustainability in social justice is to conserve the overall social model, including social traditionalism and social stability.

There is a certain equality of treatment, from the perspective of social justice, of both the contemporary and the non-contemporaneous generations that allow the spatial and temporal replication of the fundamental principle of any society, namely individual freedom.

### 3. Diversity in Social Justice

#### 3.1. The Concept of Diversity in Social Justice

The concept of diversity refers to a state of a system in which heterogeneous components coexist which do not compromise the functioning of the system based on its structure. The acceptable (maximum) degree of coexisting heterogeneity is that in which the set of functions of the system is not altered, however, it must be accepted a certain variance of heterogeneity within which the structure is considered to maintain its identity (NB: of course the variance of heterogeneity is other thing than the margin of variation of the structure). The following figure graphically illustrates what has been said above.



**Figure no. 4. Graphical illustration of the margin of variation of the structure of a system**

*Source: autor's work*

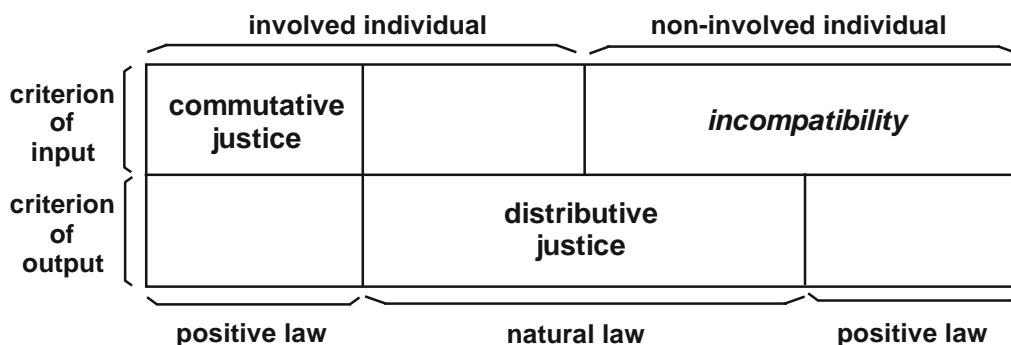
Particularly in the social sphere, the concept of heterogeneity must be seen under the following main aspects: a) the heterogeneity of the economic structure of society (by sectors, by branches, by social location, etc.); b) the heterogeneity of individual value systems that, although sharing a core of common values at society level (usually generated by history and traditions) may differ among individuals or even among social groups, structured according to different criteria; c) the heterogeneity of idiosyncratic behaviors of individuals who share the same system of values; d) heterogeneities occurring in the distribution of the economic product by not respecting the first predicate of the sufficiency of the sustainable social justice (equal effects must be ensured for equal causes).

#### 3.2. Genesis and the Impact of the State of Diversity in Social Justice

Generating diversity in social justice is the combined effect of two types of social diversity: the diversity of the positioning of individuals in the social hierarchy (by gender, age, wealth, training degree, geographic or national location, etc.) and the diversity of the

positioning of individuals from the point of view of the Weltanschauung, which simply leads to various intellectual models (theories) of social justice. The two categories of individuals, involved and non-involved, and the two categories of social justice: commutative justice, which is based on the principle of commutateness and distributive justice, which is based on the principle of solidarity, governed either by principles of natural law or principles of the positive law are logically systematized in Figure no. 5.

It should be noted that diversity can only be identified based on criteria (how many individuals so many criteria), individuals being indiscernible among themselves.



**Figure no. 5. Diagram of the diversity of social justice**

*Source: autor's work*

In Figure no. 5, by the involved individual it is understood the individual on whom the purpose of social justice is directly exercised (from the perspective of adjusting the distribution of the economic product), while by an non-involved individual it is understood the individual on whom the purpose of social justice is indirectly exercised (meaning that this individual bears the cost of redistributing the economic product in favor of the involved individual). By the criterion of input it is understood the criterion that justifies the distribution of the economic product by the individual's contribution concerned in obtaining that product, and by the criterion of output it is understood the criterion which justifies to the consequences of distributing the economic product independently of the individual's contribution to cause of that product. It is now obvious that commutative justice can only work for the involved individual who checks the entry criterion while the non-involved individual is incompatible with this criterion. On the other hand, the exit criterion is compatible with both the involved and the non-involved individuals, so the distributional justice involves both categories of individuals (e.g. additional taxation of the non-involved individual in order to achieve redistribution of the economic product to the involved individual). It should be noted that commutative justice assumes the positive right, while the distributive justice assumes the natural right.

The impact of the state of diversity on social justice refers to the unacceptability of the design of social justice on the profile of the average representative agent and the acceptability of the adaptability of the model of social justice depending on the structural changes of diversity regarding the social justice.

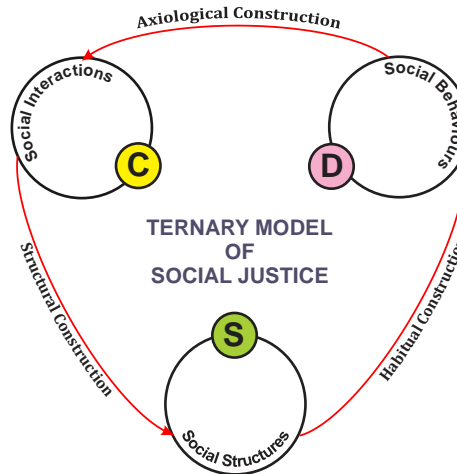
### **3. A Ternary Model of the Functioning of Social Justice (complexity, sustainability and diversity)**

The ternary model of social justice includes three classes of property:

- **Class I** - class of constitutive properties, derived from the complexity property (C), occurs through the simple existence of the social system endowed with subjects and encompasses the social interactions of the subjects;

- **Class II** - the class of functional properties, derived from the diversity property (D), comprises the behaviors of subjects belonging to the social system;
- **Class III** - the class of structural properties, derived from the sustainability property (S), comprises the social structure (social institutions) of a social system.

The logical model linking the three properties as defined above is shown in Figure no. 6.



**Figure no. 6. The ternary model of social justice**

*Source: autor's work*

The mechanisms that aggregate the three classes of property of the social justice system are, as has been shown so far, the axiological construction, structural construction and habitual construction. The axiological construction includes the values of freedom, dignity, equality, equity, democracy, but also other values that impose, resist or change the importance of forming a common system of values, specific to behaviors and social interactions between individuals. Structural construction (Hodgson, 2004) is both of emergence type (significant relationships between individuals lead to causal interactions: rules, norms, meanings) and of deliberative nature (institutions may arise as an intellectual project). Habitual construction refers to the coherence of behavior within the social justice system (behavioral patterns).

Given that social justice needs to develop a certain ethic, the present work has identified the relationship between the concepts of complexity, sustainability and diversity, proposing an institutional and behavioral mechanism of the triad complexity, sustainability, diversity, and the author will develop in his future research other characteristic concepts of the social justice system.

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## THE BUDGET DEFICIT OF ROMANIA IN 2016. FINANCING AND PERSPECTIVES

**Associate Professor Ph.D. Cristian MOROZAN**  
“Constantin Brâncoveanu” University of Pitești, Romania  
E-mail: cgmro@yahoo.com

**Abstract:** *Studies regarding the determination of the budget deficit, the ways of financing it and the assessing of the debt level are specific to different economies, due to the existing disparities in terms of the adopted development models and the issues of financial, social and administrative nature found and implemented through governance programs. These differences raise a number of issues that involve a rigorous approach to the potentially unfavorable outcome of a budget deficit and the public debt establishment beyond a non-inflationary level of funding. In our country, taking into account the fact that the economic activity unfolds in a complex and often unstable context, and due to the preoccupation to establish the place of the budget deficit, a special role is assigned to the calculation of the weight of the public financial deficit within the expenditures and revenues of the general consolidated budget and the permanent concern for its diminution.*

**Keywords:** *deficit, budget, public administration, economic crisis, financing, investments.*

**JEL Classification:** *H62.*

### 1. Introduction

In the current period, the idea that the budget deficit becomes a means of relaunching the economic activity, given the fact that it is not already inflationary, is becoming increasingly popular (Cioponea, 2007). It is possible to act on the demand for public goods and services through the use of short-term funds, thus achieving a flexible budget policy, whereby public spending can be resized in relation to the size of these funds. In the absence of changes in tax regulation, tax revenues may be instruments of short-term regulation.

In this respect, a process of crucial importance is the efficiency of public spending. The desired objectives can be achieved more efficiently, sometimes faster and with lower costs, without reducing the quantity or quality of the services provided. It is enough to eliminate the excessive staff in the central and local government to see a decrease in the cost of providing certain public services (Kolodko, 2015).

Moreover, it is considered that the government is the only economic actor that can maintain the level of demand in the economy, spending more than it wins, by registering a budget deficit (Chang, 2014).

In turn, the economic crisis of recent years has revealed the failure of cognitive and operational models. Some authors consider that the most telling example is the thesis that price stability equates to financial stability, with full use of resources (Dăianu, 2015).

The idea that the budget deficits would be a particularly important problem for the economy is partly true, as it must to appear, through the provision of redistribution of income between generations, tax relief in the case of variation in taxable income etc.

### 2. The budget deficit in Romania in 2016

#### 2.1. Economic situation and synthetic budget indicators

Recently, it has been noted that both the euro area and the EU member states the perspective of the public finances have improved due to the strengthening of the economy and flexible monetary policy, and unemployment is gradually decreasing as the economic recovery.

In 2016, Romania recorded an economic growth of 4.8%, being the sixth consecutive year of positive developments (1.1% in 2011, 0.6% in 2012, 3.5% in 2013, 3.1% % in 2014

and 3.9% in 2015), which places us among the top three performers in the EU28. The main factor of this increase was the final consumption as a result of the private growth of 7.4%, in the conditions of improving the purchasing power of the population. On the other hand, government consumption increased by 4.5% (MPF, Budget execution report 2016).

The exports of goods and services increased by 8.3%, while imports of goods and services grew by 9.8%, with net external demand contributing negatively (0.7%), mainly because the increase of domestic demand could not be fully covered by domestic production.

In 2016, compared with 2015, consumer prices declined for the second consecutive year, both as an annual average (-1.55%) and at the year-end (-0.54%). These price reductions were based on the reduction of the VAT rate from 24% to 20% for the rest of the product categories, which entered into force on 1 January 2016.

Romania's structural deficit increased to 2.4% of GDP in 2016, in line with the increase in the general government deficit. The GDP gap versus potential was still negative, down with 0.8 percentage points versus 2015, which led to a cyclical component of the budget deficit of 0.3% of GDP.

**Figure no. 1. The structural deficit in Romania (% in GDP)**

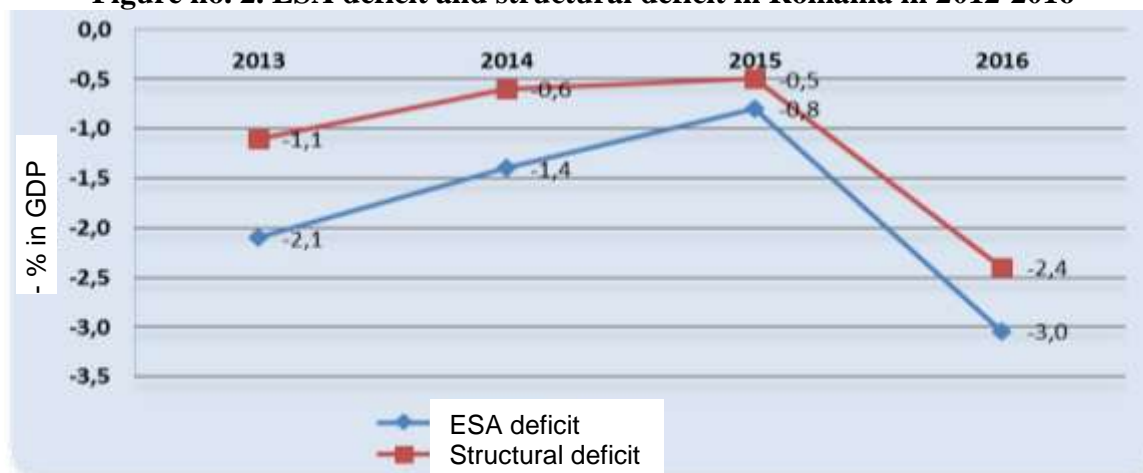
	2013	2014	2015	2016
<b>The structural deficit</b>	<b>-1.1</b>	<b>-0.6</b>	<b>-0.5</b>	<b>-2.4</b>

Source: Ministry of Public Finance, *Report on Final Budget Execution for 2016*, [www.mfinante.gov.ro](http://www.mfinante.gov.ro)

Although the structural deficit is periodically reviewed, including for the values of previous years, it can be appreciated that Romania has been among the deepest reductions in this deficit after the emergence of European regulations in this area.

In turn, the budget deficit for 2016 represents -3.0% of GDP, above the average of the budget deficit for the euro area of 1.5% of GDP and for the EU28 of 1.7% of GDP.

**Figure no. 2. ESA deficit and structural deficit in Romania in 2012-2016**



Source: Ministry of Public Finance, *Report on Final Budget Execution for 2016*, [www.mfinante.gov.ro](http://www.mfinante.gov.ro)

In our country, the economic developments have ensured the maintenance of macroeconomic balances recovered after the international financial crisis. Of the 16 EU countries identified by the European Commission as having some macroeconomic challenges, Romania is included in the risk category that can be relatively easily managed

(Belgium, the Netherlands, Finland, Sweden and the UK) (NBR, Financial Stability Report 2015).

## 2.2. Analysis of the state budget revenues and expenditures in 2016

Taking into account the final data, between 1 January and 31 December 2016, the implementation of the general consolidated budget ended with a cash deficit of 18.3 billion lei, respectively 2.4% of GDP, compared to an expected deficit of 20.9 billion lei.

Compared to the previous year, the general government deficit in 2016, on a cash basis, declined as a percentage of GDP by 1.05 percentage points from 1.35% in 2015 to 2.4%.

**Figure no. 3. Romania's cash budget deficit**

		2015	2016	Differencies 2016-2015
<b>Deficit</b>	<b>Mil. lei</b>	<b>-9630.7</b>	<b>-18304.3</b>	<b>-8673.5</b>
	<b>% in GDP</b>	<b>-1.35</b>	<b>-2.40</b>	<b>-1.05</b>

Source: Ministry of Public Finance, *Report on Final Budget Execution for 2016*,  
www.mfinante.gov.ro

• **The revenues of the consolidated general budget** in the year 2016 totaled 223.9 billion lei, representing 29.4% of GDP and a rate of achievement compared to the 95.1% annual estimates (MPF, Budget Execution Report 2016).

**Figure no. 4. The degree of achievement of the consolidated general government revenues in 2016**

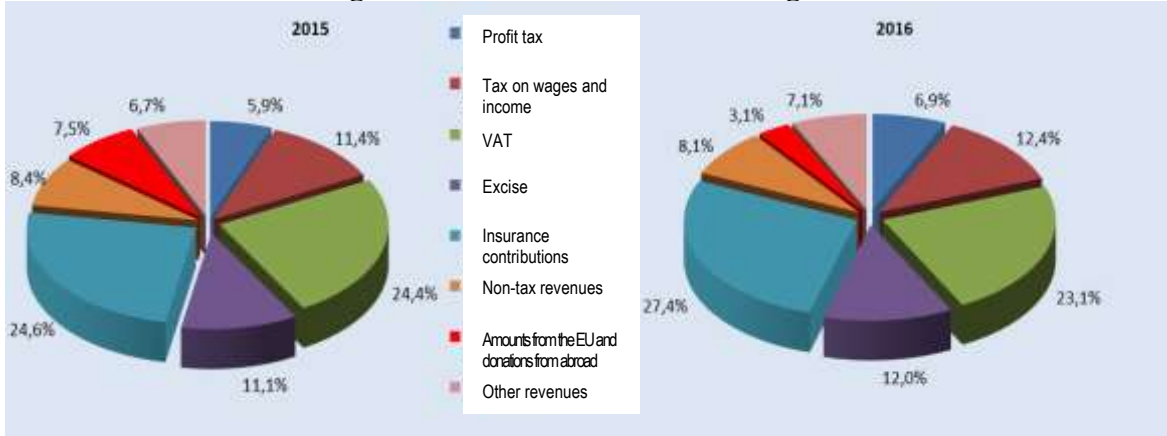


Source: Ministry of Public Finance, *Report on Final Budget Execution for 2016*,  
www.mfinante.gov.ro

The budgetary incomes were influenced by both economic developments and tax policy decisions, such as: raising the minimum wage, widening salaries in the public sector, increasing the retirement point, increasing the contribution rate for privately managed pension funds, such as and the change in the amount of excise duty.



**Figure no. 5. The structure of budget revenues**



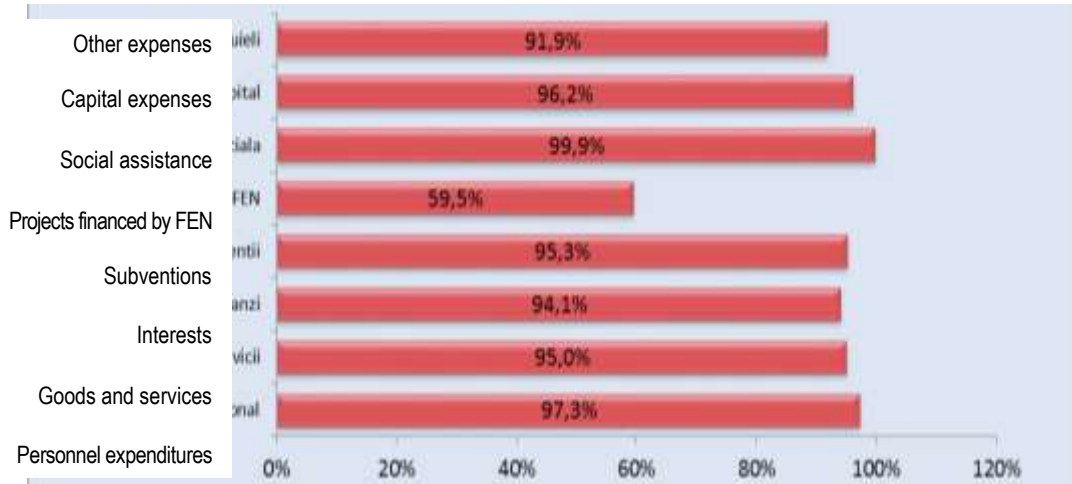
Source: Ministry of Public Finance, *Report on Final Budget Execution for 2016*, [www.mfinante.gov.ro](http://www.mfinante.gov.ro)

Compared with the previous year, the general consolidated budget revenue in the year 2016 decreased by 4.2% and as a percentage of GDP decreased by 3.5 percentage points from 32.9% in 2015 to 29.4 % in 2016.

**Amounts received from the European Union** for payments made (including donations) in the year 2016 amounted to 6.9 billion lei, 60.2% below the level recorded in 2015. Also, as a ratio to GDP, they declined by 1.6 percentage points from 2.5% in 2015 to 0.9% in 2016.

- **The expenditures of the consolidated general budget** in the year 2016 amounted to 242.2 billion lei, which represents 31.8% of GDP and a degree of achievement compared to the planned level of 94.5% (MPF, Budget execution report 2016).

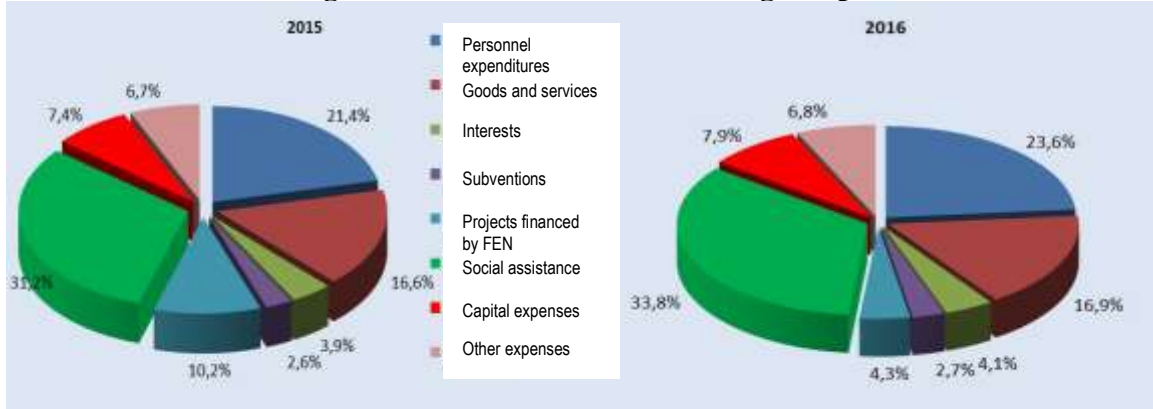
**Figure no. 6. The rate of achievement of the general consolidated budget expenditures in 2016**



Source: Ministry of Public Finance, *Report on Final Budget Execution for 2016*, [www.mfinante.gov.ro](http://www.mfinante.gov.ro)

From the point of view of the annual program achievement, the main categories of budget expenditures registered the following evolutions: 97.3% personnel expenses, 95.0% expenditures on goods and services, 94.1% interest expenses, subsidies 95.3%, social assistance expenses 99.9%, capital expenditures 96.2%.

**Figure no. 7. The structure of budget expenditures**



Source: Ministry of Public Finance, *Report on Final Budget Execution for 2016*, [www.mfinante.gov.ro](http://www.mfinante.gov.ro)

Compared to the same period of the previous year, general government expenditures declined by 0.5% and as a percentage of GDP by 2.4 percentage points from 34.2% in 2015 to 31.8 % in 2016.

### 2.3. The financing of the budget deficit in 2016

According to EU methodology, government debt stood at 37.6% of GDP on 31 December 2016, down from 38.0% of GDP as at the end of 2015, below the limit of 41% of GDP set by Law no. 338/2015 for the approval of the limits of some indicators specified in the fiscal-budgetary framework for 2016.

From government debt, on 31 December 2016, domestic debt accounted for 19.4 percent of GDP, and external debt was 18.2 percent of GDP.

In 2016, the budget deficit financing was mainly driven by domestic sources through issues of government securities on the domestic market and in addition from external sources. The sources needed to refinance government debt were provided by the markets on which these debts were issued and by the foreign currency reserve available to the MFP, which at the end of 2016 covered 4.8 months of gross financing, including holdings in foreign currency from the privatization proceeds.

The debt instruments used to finance the budget deficit and debt refinancing in 2016 were (MFF, Budget Implementation Report 2016):

- government securities denominated in lei, on the domestic market, amounting to 45.4 billion lei. Thus, treasury certificates with maturity of up to 1 year amounting to 13.7 billion lei and benchmark government bonds worth 31.7 billion lei were issued, according to the announced calendar;
- government securities denominated in euro, on the domestic market, amounting to EUR 775 million;
- eurobond issues launched in foreign capital markets. In 2016, the MFP drew from the foreign markets a volume of 3.25 billion euros through three programs under the MTN Program;
- issue of government securities exclusively for individuals, FIDELIS. This issue had a significant success, attracting a volume of 735.26 million lei, compared to the initially announced volume of 100 million lei;
- entries of external credits to finance projects amounting to approximately EUR 59 million related to the loans contracted from international financial institutions.



### 3. The perspectives on the state budget deficit

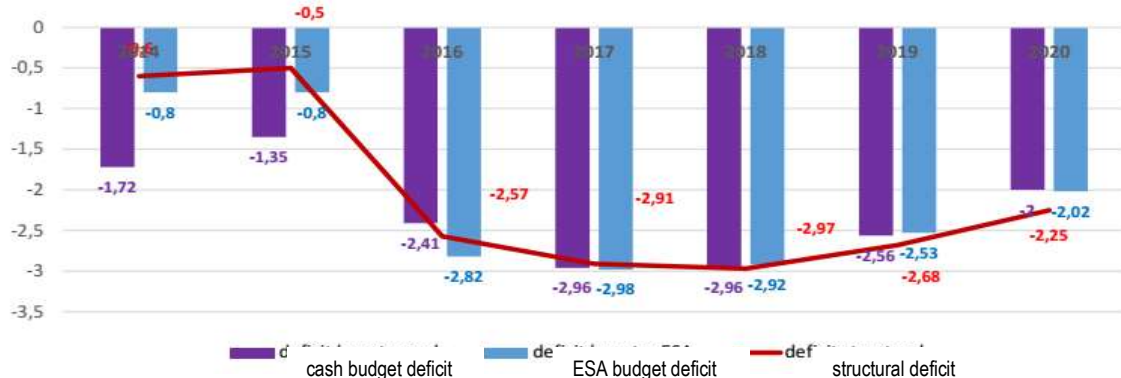
If we relate to EU member states, economic recovery has manifested itself in all member states, but it has been slow, supported by factors such as falling of the oil prices, flexible monetary policy and the relatively low external value of the euro. It is estimated that the pace of economic growth in Europe will remain moderate, the growth favoring factors being the decrease of unemployment and the increase of private consumption, but, in contrast, some obstacles appear or even the anticipation of other favorable factors is expected.

The average annual growth rate of potential GDP estimated by the European Commission for the period 2017-2018 is 3.7%, while for the same period, at national level, an average annual growth rate of 4.9% is projected (MPF, Macroeconomic Situation Report 2017).

Compared to other European countries, Romania is, however, among the least indebted. The EU average is 87% of GDP, according to Eurostat, the European countries with the largest debts now being Greece, Italy and Portugal.

It is also worth mentioning that the European Commission estimates those in the Autumn Forecast 2016, where economic growth for 2017 and 2018 does not take into account the impact of measures in the Governance Program, being below the macroeconomic framework taken into account in the budget for 2017. The private consumption would remain the main source of growth until 2018, sustained by the projected increase in employment rates (continuing the current trend) and wages (in a slight upward trend).

**Figure no. 8. The evolution of budget deficits in Romania during 2014-2020**



Source: Ministry of Public Finance, *report on the macroeconomic situation for 2017 and its projection for the years 2018-2020*, [www.mfinante.gov.ro](http://www.mfinante.gov.ro)

Romania has made good progress in meeting the medium-term budgetary objective defined in terms of structural deficit in 2014-2015, which reached 0.6% of GDP and 0.5% of GDP respectively, which is in line with the provisions of the Treaty on Stability, Coordination and Governance within the Economic and Monetary Union.

On the other hand, it is noted that the structural balance deviates from 1% of GDP from the Medium-Term Budget Objective (MTO), starting from 2016. The main reason for this evolution is the fiscal relaxation started in 2015-2016, determined by the new tax code, salary increases and social security rights and continued by the recently adopted measures such as the abolition of contributions for pensioners, the non-taxation of pensions under 2,000 lei, the law on the elimination of 102 taxes, decisions which have effects since 2017.

In the context of those previously presented, in structural terms, a deviation is estimated on the reference horizon of MTO set for Romania, 1% of GDP, the structural

deficit for 2017 being estimated at 2.91% of GDP, and in the year 2018 to 2.97% of GDP, with a downward trajectory starting in 2019 and 2020 respectively.

Given this risk, the deviation from the MTO would occur under conditions of maintaining a sustained level of government debt below 40% of GDP over the entire planning horizon, the ultimate goal of European rules on budget deficit being assured.

If the beginning of 2019 it would recover from the deviation of the MTO, this could generate sufficient fiscal environment for some budgetary policy measures, such as increasing public investment in infrastructure.

This deflection recovery at the end of the forecasting horizon is also necessary in view of the fact that a deterioration in the structural position of public finances would result in a potential market reaction, with consequences on the increase in the cost of financing the budget deficit.

#### 4. Conclusions

The main effects of public spending can be equated to „crowding out”, which in this case refers to the deflection of market resources from those sectors that the market sees as profitable to the areas considered as being interesting by the state. Also, a hidden cost of budget deficit and public debt influencing the country rating, a major indicator for investors looking for business opportunities.

Taking into account the current conditions, when Romania tries to define its role and place in the world, when it is desired to identify and encourage those branches and sub-branches of the national economy that can be developed in the world economy, it is necessary to use tax levers in concordance with the requirements of the European Union and taking into account the other macroeconomic policies that can be adopted to overcome the current economic situation. Thus, the theory that, during the crisis period, it is preferable to ensure an increase in budget expenditures, with the objective of contributing to the revival of economic activity, the effects being reflected in the increase of the employment and the reduction of the unemployment.

The economic growth model needs to be reassessed, taking into account the experience of the past years when the economic growth in our country was based on consumption, a situation that did not allow sustainable economic development. For this reason, another investment-oriented approach is needed in sectors with high added value.

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## ABOUT INSTITUTIONAL DEFICIT AND INSTITUTIONAL EXCESS

**PhD. Student Grațiela-Denisa IORDACHE**

School of Advanced Studies of the Romanian Academy (SCOSAAR), Romania

E-mail: gra\_den@yahoo.com

**Abstract:** *The present paper aims to define the concepts of institutional deficit and institutional excess. The clarification of these concepts will be useful in assessing the European Union excess or deficit of institutions in achieving its major objectives. Firstly, I will define the concepts of institutional deficit and institutional excess using the method of sufficiency predicates (logical analysis). Secondly, I will analyse the impact of institutional excess and institutional deficit on achieving Union's major objectives.*

**Keywords:** *institutional excess, institutional deficit, sufficiency predicates, European Union.*

**JEL Classification:** *F49, O43, R11.*

### 1. Introduction

According to 2016 European Union's general budget in 2015, the number of EU's civil servants was 46,356 divided as it follows (The Conversation, 2018):

- 24,428 European Commission;
- 1,998 European Court of Justice;
- 3,072 Council of the European Union and European Council;
- 6,739 European Parliament.

The large number of „Eurocrats”and both the extensive number of European organizations and the large number of rules, regulations, directives and treaties are the subject of an ample debate among the EU's member states.

The present paper aims to switch this debate from quantitative approach to a qualitative one, that takes into account the institutional deficit and institutional excess.

Therefore, the main objectives of the document are:

- Defining the concepts of Institutional Excess and Institutional Deficit;
- Analysing the impact of Institutional Excess and Institutional Deficit on fulfillment of European Union's objectives.

### 2. Methodological Aspects

From methodological point of view I use the logical analysis- Sufficiency predicates method for concepts' definition. Through sufficiency predicates we understand those attributes that can describe specific features of an entity. The sum of the sufficiency predicates defines the entity.

Using the logical analysis-Sufficiency predicates method to defining concepts implies (Dinga E., 2009, Economics studies.Contributions of logical, epistemological and methodological analysis) the following steps:

- a) Identifying the list of sufficiency predicates
- b) Qualitative analysis of the attributes:
  - i. independence (none is the logical result of another)
  - ii. consistency (none is contradictory with another)
  - iii. completeness of the sufficiency predicates that generate a construct

Therefore, noting with  $P_s$  the multitude of sufficiency predicates we may write:

$$P_s = \{P_1, P_2, P_3\}$$

### 3. Defining the concept of Institutional Deficit-ID

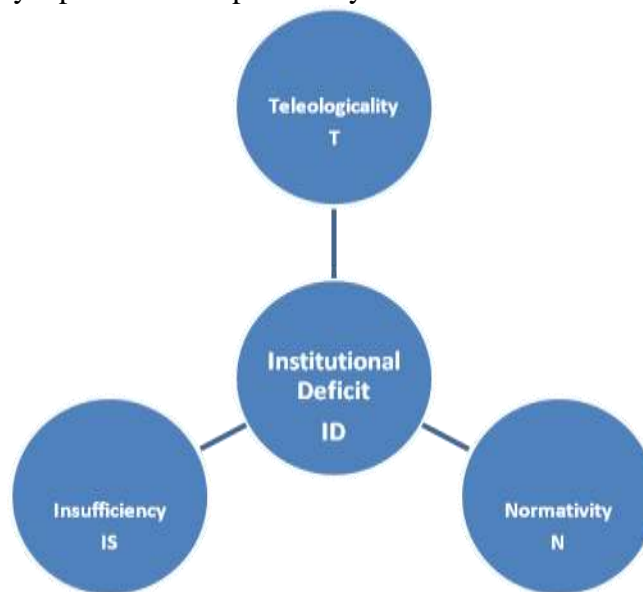
a. The list of sufficiency predicates that define the concept of Institutional Deficit:

- Teleologicality-(T)-the entity needs institutions to accomplish a specific goal/objective
- Normativity-(N)-it has a normative character
- Insufficiency-(IS)-it indicates an absence or a lack of institutions

Therefore, from the logical point of view the concept of Institutional Deficit may be describe as it follows:

**ID = (T)  $\wedge$  (IS) )  $\wedge$  (N)**, where  $\wedge$  is the symbol for logical conjunction.

Analyzing the list of sufficiency predicates we may conclude that it is complete. Hence, the Institutional Deficit represents the lack of institutions, both norms and/or organizations, needed by a phenomenon/process/system to fulfill a certain goal.



**Figure no. 1. The Sufficiency Predicates of Institutional Deficit**

Source: realised by author.

b. Qualitative analysis:

i. Independence

- T does not involve IS and vice versa: the teleological character of a phenomenon/process/system does not involve the lack or absence of institutions (both rules and organizations) and the lack/absence of institutions does not imply the existence of a certain goal
- T does not involve N and vice versa: the teleological character of a phenomenon/process/system does not involve the normative character and the normative character does not involve that the phenomenon/process/system has a certain goal
- IS does not involve N and vice versa: the lack or absence of the institutions does not involve the normative character and the normative character does not involve the absence of the institutions

ii. Consistency

- T is not contradictory to IS and vice versa: the teleological character of a phenomenon/process/system does not contradict the lack or absence of institutions (both rules and organizations) and the lack/absence of institutions does not contradict the existence of a certain goal
- T is not contradictory to N and vice versa: the teleological character of a phenomenon/process/system does not contradict its normative character and the normative character of a phenomenon/process/system is not contradictory to its teleological character
- IS does not contradict N and vice versa: the lack or absence of the institutions does not contradict the normative character and the normative character does not contradict the lack or absence of the institutions

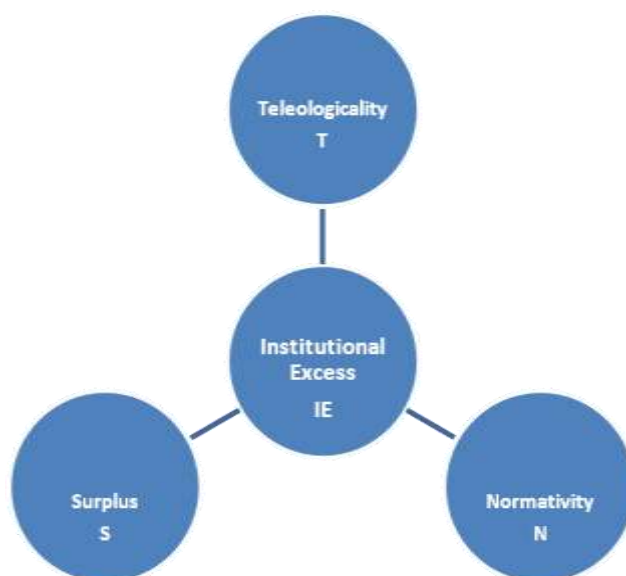
**4. Defining the concept of Institutional Excess**

- a. The list of sufficiency predicates that define the concept of Institutional Excess:
- Teleologicality-(T)-it is connected to a certain goal/objective
  - Normativity-(N)-it has a normative character
  - Surplus-(S)-it indicates a surplus of rules, regulations and institutions, formal or informal

Therefore, from the logical point of view the concept of Institutional Deficit may be describe as it follows:

**IE = (T)  $\wedge$  (S)  $\wedge$  (N)**, where  $\wedge$  is the symbol for logical conjunction.

Hence, the Institutional Excess represents the surplus of formal or informal rules, regulations and institutions needed by a phenomenon/process/system an intellectual project to fulfill a certain goal.



**Figure no. 2. The Sufficiency Predicates of Institutional Excess**

Source: realised by author.

b. Qualitative analysis:

i. Independence

- T does not involve S and vice versa: the teleological character of a phenomenon/process/system does not involve the existence of a surplus of formal or informal rules, regulations and institutions and a surplus of formal

or informal rules, regulations and institutions does not involve a teleological character of the phenomenon/process/system

- T does not involve N and vice versa: the teleological character of a phenomenon/process/system does not involve its normative character and the normative character of a phenomenon/process/system does not involve its teleological character

- S does not involve N and vice versa: the surplus of formal or informal rules, regulations and institutions does not involve the normative character of a phenomenon/process/system and the normative character does not imply the surplus of formal or informal rules, regulations and institutions of a phenomenon/process/system

ii. Consistency

- T does not contradict S and vice versa: the teleological character of a phenomenon/process/system does not contradict the existence of a surplus of formal or informal rules, regulations and institutions and a surplus of formal or informal rules, regulations and institutions does not contradict a teleological character of the phenomenon/process/system

- T does not contradict N and vice versa: the teleological character of a phenomenon/process/system does not contradict its normative character and the normative character of a phenomenon/process/system does not contradict its teleological character

- S does not contradict N and vice versa: the surplus of formal or informal rules, regulations and institutions does not contradict the normative character of a phenomenon/process/system and the normative character does not contradict the surplus of formal or informal rules, regulations and institutions of a phenomenon/process/system

## 5. The impact of Institutional Deficit and Institutional Excess on European Union's objectives

According to Lisbon Treaty (Art. 3), the main objectives of European Union are (Europa.eu, 2018):

- the promotion of peace and the well-being of the Union's citizens
- an area of freedom, security and justice without internal frontiers
- sustainable development based on balanced economic growth and social justice
- a social market economy - highly competitive and aiming at full employment and social progress
- a free single market

The subsequent treaties extended the European Union's objectives including:

- Creation of Economic and Monetary Union
- Common Foreign and Security Policy
- Creation of an Area of Justice and Home Affairs

In the following Table, I will analyze the impact of Institutional Excess and Institutional Deficit on fulfillment of European Union's main objectives.

**Table no. 1. Impact of Institutional Deficit and Institutional Excess on European Union's objectives**

European Union's Objectives	Institutional Excess	Institutional Deficit	Impact
O1	X	X	High administrative costs
			Unfulfillment of the objective Delay in reaching the goal Threat to the existence of Euroepan Union
O2	X	X	High administrative costs Limitation of freedom Failure to develop voluntary compliance skills
			Unfulfillment of the objective Delay in reaching the goal
O3	X	X	High administrative costs Limitation of initiative and innovation
			Unfulfillment of the objective Delay in reaching the goal
O4	X	X	High administrative costs Limitation of initiative and innovation Threat to competitiveness
			Unfulfillment of the objective Delay in reaching the goal
O5	X	X	High administrative costs Limitation of initiative and innovation Limitation of free movement of persons and capital
			Unfulfillment of the objective Delay in reaching the goal
O6	X	X	High administrative costs Limitation of free movement of capital Limitation of initiative and innovation
			Unfulfillment of the objective Delay in reaching the goal
O7	X	X	High administrative costs Limitation of free movement of persons
			Unfulfillment of the objective Delay in reaching the goal Threat to European Union existence
O8	X	X	High administrative costs Some limitations to citizens' rights Limitation of free movement of persons
			Unfulfillment of the objective Delay in reaching the goal

Where:

- O1- the promotion of peace and the well-being of the Union's citizens
- O2- an area of freedom, security and justice without internal frontiers
- O3- sustainable development based on balanced economic growth and social justice
- O4- a social market economy - highly competitive and aiming at full employment and social progress
- O5- a free single market
- O6- Creation of Economic and Monetary Union
- O7- Common Foreign and Security Policy
- O8- Creation of an Area of Justice and Home Affairs

## 6. Conclusions

A better understanding of the concepts of Institutional Excess and Institutional Deficit may help in the debate regarding the formal and informal European Union's institutions.

Furthermore, the analysis of the impact of Institutional Excess and Institutional Deficit on achieving the European Union's objectives help us to understand the impact of both concepts on the fulfillment of European Union's main objectives.

We may conclude that in order to reach its main purpose, European Union should find the level of sustainable institutionalization.

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## INNOVATIVE HUMAN RESOURCES PRACTICES ON AN ORGANIZATIONAL LEVEL

**Associate Professor Ph.D. Nicoleta BELU**

“Constantin Brâncoveanu” University of Pitești, Romania  
E-mail: nicolbelu@yahoo.com

**Associate Professor Ph.D. Alina VOICULEȚ**

“Constantin Brâncoveanu” University of Pitești, Romania

**Abstract:** *In the current economic, social and political context characterized through instability, competitiveness and volatility, the future development of any organization is based on a single factor that generates durable competitive advantages, and that is innovation. Sustainability of any business means rehabilitation and continuous repositioning to be able to answer any market demands. In this context, innovation can no longer be limited to just new technologies, it must be extended to new forms of organization, new practices, which in turn generate new performance standards in order to withstand the challenges of the internal and external environment. The human resource has an essential role in this innovative process through its creative capacity in generating, promoting and implementing change. And so, at an organizational level, human resource management should increasingly focus on those innovative human resource practices that focus on attracting, motivating and developing employee skills to raise their creative potential and implicitly their performance.*

**Key Words:** *innovation; human resource; change; durable competitive advantages.*

**JEL Classification:** *O15.*

### 1. Introduction

For a long period of time the human resources issue at an organizational level has been considered complementary, where most of the organizations were profit orientated, based on a solvable demand. Afterwards, as the social purpose of organizations began to take contour, the fields of activity of the human resources and the concerns in the field became more developed, placing the employee in the forefront, his role and place in the organization.

Today, in a society based on knowledge, innovation is the way to efficiency and efficacy on all levels and domains, process in which the human resource has an essential role to play.

Stimulating innovation, the creation of a good framework for this complex process has to be a permanent concern at the top management in any organization.

Thus, the innovative organization has some essential characteristics:

- flexibility, adaptability to market demands;
- high technical and technological level and implicitly the possibility to quickly adapt to the new;
- creative human resource, innovative, strongly motivated and implicated;
- productive and financial force.

As a result of the creativity of the human mind, innovation is materialized in translating ideas into new products and services at an organizational level. As a result, the innovative process relies on a systematic development of human resources that primarily targets training and qualification processes.

Efficiency and performance of every employee is based on skills, knowledge, experience, but also a quick rate of adaptability for technical, technological, financial, managerial changes generated by a dynamic business environment. In this context, there is a growing awareness of true *culture of innovation* at an organizational level, viewed as a source of sustainable competitive advantage.

## 2. Innovative human resource practices at an organizational level

In a process of continuous changes, in a competitive, dynamic and aggressive business environment, innovation in human resource activities becomes a necessity for all types of organizations. Development of innovative practices at the level of human resource management is the primary method used to connect policies, processes and practices of human resources on one hand and organizational results on the other.

Innovative human resource practices are defined as a change to the old ones, change that determinates novelty and improvement. In a more complex approach, innovative human resource practices represent ideas, programs, practices, or systems that are related to the human resource function, new to the organization that adopts them. For this concept in the specialty literature we also find other terms such as: human resource practices that lead to high commitment, advanced human resource practices, alternative human resource practices.

At the level of human resource management, the main areas in which innovative practices can be implemented are:

- Attracting and maintaining candidates;
- Specialty training;
- Career planning and developing your potential;
- Managerial development;
- Performance evaluation;
- Rewards;
- Benefits and recognition;
- Working relationships;
- Social responsibility.

In this complex process of permanent innovation regarding the human resource we must take into account the change of generations and the so-called *generation that lives their lives online*. Once these new generations enter the labor market, they follow the financial aspects, and also the quick development of their career. This perception changes organization policy regarding human resource management towards the development of talent management policies that are based on attracting, motivating and developing those talents whose innovative capacity can be translated into practice.

Thus, in symbiosis with the market dynamics, recruitment and selection actions are based more and more on techniques specific to the current period but also on socio-cultural characteristics. Emphasis is placed on the need of creativity, on social media use in the recruitment process, utilizing the social networks towards identifying young people with high potential but also on internship programs towards for improvement and quick career development to maintain them. More and more companies are developing employer branding programs, through which they strongly promote their employer image to attract new talents.

The Characteristics of the new generations are: high level of professional training, efficient career management, easily assuming new roles therefore new unique responsibilities, they desire balance between personal and professional life, but at the same time security and stability. Expectations from organizations are focused on coordination, a dynamic and creative work environment, but also a flexible work schedule.

Regarding staff development, successful companies combine internships with personal development workshops that track the identification of personal values, creative and critical thinking, communication efficiency. More and more organizations, out of the desire for new flexible structures, but also maximum efficiency, already successfully

implemented freelancers, independent professionals and are externalizing some specialized business functions.

Another innovative element regarding the human resource is related to the organizational culture. More and more, the new generation is interested in a flexible work schedule, home work, medical subscriptions, gyms, rather than salary increases. The idea is to create a collaborative organizational culture that can generate innovation and, of course, leadership.

### 3. The impact of innovative human resources practices have on employee performances

Innovative human resources practices have a direct impact over employee performance, as well as in their career development,

Generally speaking, the performance of an organization has the following dimensions:

- *Financial performance*, given by a series of specific economic and financial indicators (cash flows, added value, return on capital/assets employed, working capital, etc.). Knowledge of financial performance of a company is of major interest, especially for the investors, both effective and potential ones, because it reflects the way the organization produces value and plus value;

- *Marketing performance*, generated by the fact that the main marketing asset is the customers, followed up by the branded capital, both being generators of value, for both the organization and the stakeholders. For these reasons, it is appreciated that evaluating and quantifying marketing performance is a strategic priority at an organizational level, under all aspects: customer relationship management, marketing efficiency, distribution chain, etc.;

- *Human resource performance*, a relatively complex dimension that vides the measurement of employee results, but also their behavior at a organizational level. Result based measurement holds the risk of being affected by teamwork results or by other factors that an employee can not control. Behaviorally speaking, human resource performance measurement involves identifying the competencies required for the effective deployment of a specific activity and defining standards that describe performance levels. The performance of human resources is evaluating both what employees have obtained, the results, but also how they managed to achieve these results;

- *Intangible performance*, difficult to evaluate and quantify, it is generated by those intangible assets (intellectual capital), that, according to the specialists in the domain, have a far higher contribution to the overall performance of the organization compared to the tangible assets;

- *Social and environmental performance*, that dimension of performance that has as main idea the fact that every organization has to evaluate their performance, not only towards the direct interested parts, with which they are in collaborative relationships, but also towards the local communities and the surrounding environment. Social performance targets the organizations impact towards the community in which they carry their activity, and the environmental performance targets the utilized resources and the impact towards the environment.

Most of the times, an organizations performance has been reduced to the financial one, placing less accent on employee performance or it has been made formal. Management primarily pursues financial performance and thus has less interest in human resource development and innovation, although both financial and operational performance are achieved *with and through people*.

Major changes from all the present areas of economic and social life tend to modify this perception at an organizational level, highlighting a series of factors that determine the types of performance previously described and that refer to employee knowledge, organizational climate, rewards, motivation. In these conditions, to evaluate the performance of an organization just from a financial point of view does not suffice anymore towards ensuring its viability and sustainability.

In the process of work organizing, innovative practices with a direct impact towards professional performance and implicitly the organizational one may concern:

- Reductions or increases in hierarchical decision-making structures, as well as involving other categories of personnel in this process;
- New responsibilities towards work processes for some categories of personnel;
- Forming new self-responsive teams, with a direct impact towards performance;
- New systems of vocational training and retraining, and, implicitly, career management at an organizational level;
- Modifications regarding communication channels, from the vertical ones to the horizontal ones etc.

The organizations performance is based on implicated employees, instructed and motivated, being the result of the performance of their own employees. The performance of every employee is measured by specific standards of every organization. In these conditions, the way objectives are set, the way tasks are approached, but also the relation system are, in the organization, just a few elements that have a direct impact towards professional performance.

Employee performance in an organization targets both the results and a necessary employee, as well as the behaviors required to the employee in order to be successful. Thus, positive perceptions of employees in regards to innovative practices from the human resource field are loyalty, affective engagement but also organizational behavior.

#### **4. Conclusions**

Innovation as a process has a strong impact on welfare. Any organizational entity in order to be viable and sustainable must be competitive on the market, competitiveness that is generated by the growth in innovation capacity by utilizing specialized human resources. The human resource has an essential role in the innovative process through its creative capacity used in generating, promoting and implementing change.

One of the premises for organizational success is given by the existence of some human resources specialized, but also by promoting some innovative practices in this domain. Today the most performant organizations are looking for highly qualified human resources that can bring significant added value at low costs, related generally to coordination and organizational integration.

The practice of innovative human resources must target objectives that support innovation and development, respectively reward policies for ingenious ideas, intellectual capital development training, but also changes in the organizational climate and the working schedule flexibility.

Promoting such practices will generate an increased level of involvement at an organizational level, of capacity and implicitly of employee performance. Thus, innovative policies of human resources lead to sustainable competitive advantages, capitalizing on superior organizational resources and, at the same time, massively investing in intellectual capital.

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# THE RELATIONSHIP BETWEEN INSURANCE AND ECONOMIC GROWTH IN GERMANY, NETHERLANDS AND SPAIN

**Student Bianca COSTACHE**

The Bucharest University of Economics Studies  
E-mail: bianca.costache95@yahoo.com

**Abstract:** *This study is focused on a highly relevant subject in the economic literature, more precisely how the insurance sector impacts the overall economic growth. The objective of the study is to identify, analyze and evaluate the effects of the insurance sector on economic growth for three countries: Germany, Netherlands and Spain, with data collected for the period 1984 - 2016. The results of the study proved to be important as they indicate the variation in the effects of insurance instruments due to the peculiarity of each economy and the way in which each economy responds to a positive impact from the insurance sector.*

**Keywords:** *insurance; growth; gross written premiums; cointegration; causality.*

**JEL Classification:** *C32, G22, O41.*

## 1. Introduction

Insurance field has an significant economic potential in the meaning of macroeconomic development and this requires capitalization by the regulatory authorities. In this respect, the objective of this study is to identify and assess the effects of the insurance sector on economic growth. This approach will be achieved through an econometric model, which aims to assess the intensity and direction of influence of this economic branch.

In view of this analysis, the following countries are considered: Germany, Netherlands and Spain. State selection has as a starting point an article in the form of a Note issued by EIOPA (2018), which presents the ranking of countries in terms of gross non-life-to-GDP written premiums in the European Union for the second quarter of 2017, thus providing a homogeneous study group.

In order to conduct the analysis, we used different econometric tests and methods to quantify the impact of the insurance industry on the entire economy. The results of the study are important, as they allow the formulation of proposals for guidance of insurance instruments in the direction of stimulating economic growth.

## 2. Literature review

This study analyzes the relationship between the activity of the insurance field and the economic growth. Given that no consensus has so far been reached on this issue, it is important to continue analyzing this correlation.

In fact, so far this relationship has been analyzed in many specialized studies in the economy, but this causal relationship is not clearly defined. On the one hand, researchers show that the development of the insurance sector is driving economic growth, and on the other hand, they indicate that the macroeconomic change of a state determines the expansion of the insurance market. So, despite the wide range of studies in the literature that tried to clarify the issues regarding the relationship between these two factors, this issue remains an opportunity that needs clarification.

The empirical study of Arena (2008) indicates the economic relationship between insurance and economic growth. The results of the study indicate a positive and significant effect of both types of insurance on the economic growth rate. The impact of life insurance on growth is only high for developed countries. For non-life insurance, the impact is

significant in both types of analyzed countries, but the effect has been shown to be higher for developed countries.

Subsequently, Han (2010) studied the connection between the insurance density as a defining factor in the development of this sector and the real GDP per capita as an indicator of economic growth. The conclusion comes to the hypotheses mentioned above, namely the strong influence between the insurance and the increase of the general economic growth. The study also indicates that non-life insurance has a strong correlation with GDP as opposed to life insurance. Both types of insurance have been shown to have a higher influence on developing countries.

Ilhan Ege (2011) addressed the insurance role in the economic growth process and the results of the study indicate that the development of the insurance sector leads further to the macroeconomic progress of the countries included in the study.

Further, the demand of the insurance population is subject to analysis in several respects. Literature studies illustrating this relationship are focused on income in its various forms as the main factor influencing the consumption of insurance.

In this regard, author Campbell (1980) has shown that insurance is positively correlated with income. This influence is explained from the perspective of two components. First, revenue growth determines the increase in the accessibility of insurance by the population. And secondly, demand for insurance increases when national income increases.

### **3. Data and methodology**

The study approaches a way of analyzing the causality between different types of insurance (gross written premiums for life, non-life and total insurance, noted *gwp\_life*, *gwp\_non\_life* and *gwp\_total*) and economic growth (noted *gdp*) at national level, through the VAR model, respectively the VECM model, as well as the impulse-response function.

The four data series were taken over for 32 years (1984 - 2016) from the official OECD database (life / non-life and total insurance) and Eurostat (GDP growth rate) for three states: Germany, Netherlands and Spain. To model the four variables and to get the relationship of influence between each insurance instrument and economic growth, we will use the Eviews 7 program. The use of cointegration as a case study methodology is motivated by the need to represent long-term causal relationships between insurance instruments and economic growth.

### **4. Results**

In order to analyze the cointegration of data series, we need to study the stationarity of the variables as well as the integration order. Using the Augmented Dickey Fuller test meets both conditions. Further, we will use the ADF test to determine the data series integration order used in the model, and the results of running this test indicate that all four time series are 1<sup>st</sup> order integrated. The next step is to check the cointegration of each of pairs surveyed, namely: growth rate of GDP and the growth rate of life / general and total life insurance.

Running the VAR model involves selecting the appropriate number of lags for each model, and this was done by considering the Likelihood Ratio, Final Prediction Error, Akaike information criterion, Schwarz information criterion and Hannan-Quinn information criterion.

The next step is to analyze the results of the Johansen Test to illustrate the long-term relationship between each pair of variables analyzed, and for this it is necessary that the data series be non-static but also integrated by the same order, as evidenced by the results of the ADF test.

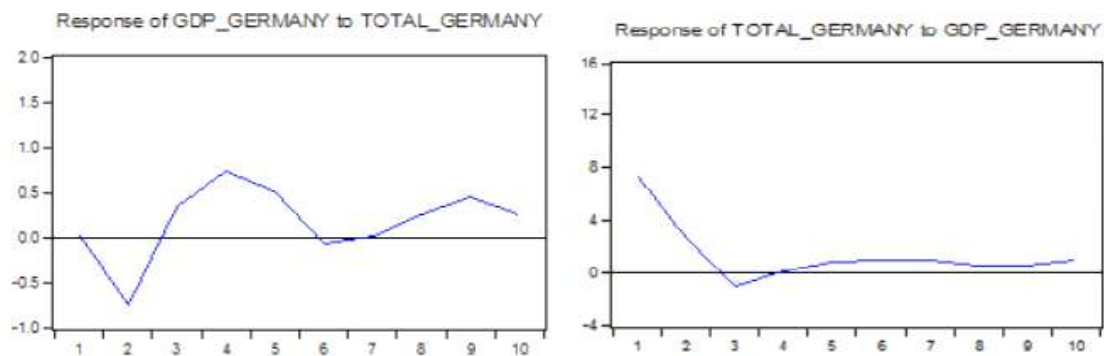
Johansen's test results indicate that there is a long-term relationship between growth of insurance and economic growth for all analyzed countries: Germany, Netherlands and Spain. After lag selection, the patterns are run by using VAR for data series pairs where we have not observed cointegration relationships, respectively rewriting them as VECM for cointegration.

**Table no. 1. VAR / VECM equations**

	<b>gdp_gwp_life</b>	<b>gdp_gwp_non_life</b>	<b>gdp_gwp_total</b>
<b>Germany</b>	$D(\text{GDP}) = C(1) * (\text{GDP}(-1) - 0.0193233596636 * \text{LIFE}(-1) - 2.68500642339) + C(2) * D(\text{GDP}(-1)) + C(3) * D(\text{GDP}(-2)) + C(4) * D(\text{GDP}(-3)) + C(5) * D(\text{LIFE}(-1)) + C(6) * D(\text{LIFE}(-2)) + C(7) * D(\text{LIFE}(-3)) + C(8)$	$D(\text{GDP}) = C(1) * (\text{GDP}(-1) - 0.0731488676997 * \text{NON\_LIFE}(-1) - 2.27074586356) + C(2) * D(\text{GDP}(-1)) + C(3) * D(\text{GDP}(-2)) + C(4) * D(\text{GDP}(-3)) + C(5) * D(\text{NON\_LIFE}(-1)) + C(6) * D(\text{NON\_LIFE}(-2)) + C(7) * D(\text{NON\_LIFE}(-3)) + C(8)$	$D(\text{TOTAL}) = C(1) * (\text{TOTAL}(-1) - 29.2795102433 * \text{GDP}(-1) + 75.393703619) + C(2) * D(\text{TOTAL}(-1)) + C(3) * D(\text{TOTAL}(-2)) + C(4) * D(\text{TOTAL}(-3)) + C(5) * D(\text{GDP}(-1)) + C(6) * D(\text{GDP}(-2)) + C(7) * D(\text{GDP}(-3)) + C(8)$
<b>Netherlands</b>	$D(\text{GDP}) = C(1) * (\text{GDP}(-1) - 0.360206568268 * \text{LIFE}(-1) - 1.82318093284) + C(2) * D(\text{GDP}(-1)) + C(3) * D(\text{LIFE}(-1)) + C(4)$	$D(\text{GDP}) = C(1) * (\text{GDP}(-1) - 0.907028877136 * \text{NON\_LIFE}(-1) + 1.0702390582) + C(2) * D(\text{GDP}(-1)) + C(3) * D(\text{NON\_LIFE}(-1)) + C(4)$	$D(\text{TOTAL}) = C(1) * (\text{TOTAL}(-1) - 1.8761939178 * \text{GDP}(-1) + 1.82305146968) + C(2) * D(\text{TOTAL}(-1)) + C(3) * D(\text{GDP}(-1)) + C(4)$
<b>Spain</b>	$\text{GDP\_SPAIN} = C(1) * \text{GDP}(-1) + C(2) * \text{GDP}(-2) + C(3) * \text{GDP}(-3) + C(4) * \text{GDP}(-4) + C(5) * \text{LIFE}(-1) + C(6) * \text{LIFE}(-2) + C(7) * \text{LIFE}(-3) + C(8) * \text{LIFE}(-4) + C(9)$	$D(\text{GDP}) = C(1) * (\text{GDP}(-1) - 0.884116206354 * \text{NON\_LIFE}(-1) + 1.18965317417) + C(2) * D(\text{GDP}(-1)) + C(3) * D(\text{GDP}(-2)) + C(4) * D(\text{GDP}(-3)) + C(5) * D(\text{GDP}(-4)) + C(6) * D(\text{NON\_LIFE}(-1)) + C(7) * D(\text{NON\_LIFE}(-2)) + C(8) * D(\text{NON\_LIFE}(-3)) + C(9) * D(\text{NON\_LIFE}(-4)) + C(10)$	$D(\text{GDP}) = C(1) * (\text{GDP}(-1) - 0.557100513337 * \text{TOTAL}(-1) - 0.919519549106) + C(2) * D(\text{GDP}(-1)) + C(3) * D(\text{GDP}(-2)) + C(4) * D(\text{GDP}(-3)) + C(5) * D(\text{GDP}(-4)) + C(6) * D(\text{TOTAL}(-1)) + C(7) * D(\text{TOTAL}(-2)) + C(8) * D(\text{TOTAL}(-3)) + C(9) * D(\text{TOTAL}(-4)) + C(10)$

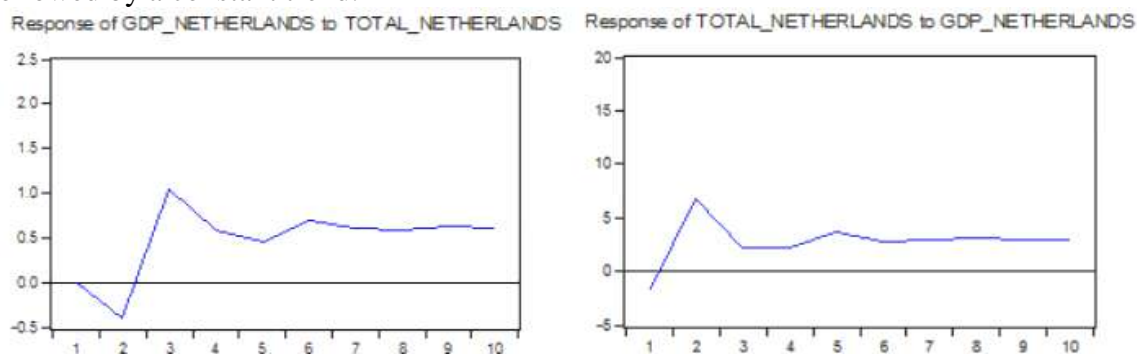


For Germany, the first C(1) negative coefficient (-1.0769) with a significant probability (0.0156), indicates the existence of a causal relationship between the insurance sector and economic growth.. The coefficients obtained for the models ran for Netherlands determine that we can state the presence of causality from insurance to macroeconomic growth in the long run. With respect to models ran for Spain, we have obtained the causality of insurance on long-term economic growth.



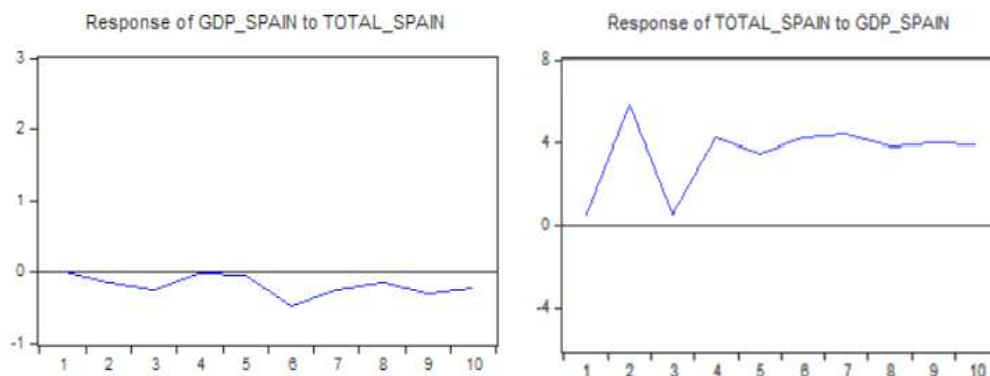
**Figure no. 1. Impulse – response function for Germany**

For Germany, the graphs indicate major differences between each other; in the first case, the positive impact of insurance on the growth rate of GDP determines a decrease in macroeconomic progress in the first two periods and further the trend fluctuates and also an impulse given by total insurance leads to a slightly decrease of economic growth, followed by a constant trend.



**Figure no. 2. Impulse – response function for Netherlands**

For the Netherlands' economy, the economic growth trend in response to the impact given to total insurance is initially declining (periods 1 to 2), and then increases until the third period ending with a steady trajectory until the last period. A similar trajectory is also observed in the case of the insurance response to the rising impact of GDP growth.



**Figure no. 3. Impulse – response function for Spain**

In the case of Spain, a positive influence of insurance is quantified in the economic growth turbulence by successive passes from rises to rhythm cuts. The same trend can be seen in the first periods (1 - 4) of the graphical representation of the positive impact of the growth rate of GDP on insurance field, but starting with the 4<sup>th</sup> period, the total insurance trend as a response to the positive influence of the economic growth is maintained at a level constantly of four units.

**Table no. 2 Selection of statistically significant results of the Granger test**

	Null hypothesis	Prob
<b>Spain</b>	DGDP does not Granger Cause DNON_LIFE	<b>0.0092</b>
	DTOTAL does not Granger Cause DGDP	<b>0.0264</b>
<b>Germany</b>	DNON_LIFE does not Granger Cause DGDP	<b>0.0322</b>

We note the lack of favorable outcomes for the Netherlands' economy, for which we have not identified causal relationships between the growth rate of GDP and that of insurance. So Granger's test results have proven to be similar to those obtained by Horng (2012), respectively that economic growth determines Granger's insurance causality.

It is important to emphasize the significant number of equations for which we have acquired causality, most of them starting from the economic growth to insurance growth, which supports the hypothesis that a developed economy leads to the development and progress of the insurance sector, namely the "demand - tracking". Thus, we can say that an increase of the national income leads to an increase of the demand for financial services, which further determines the necessity of expanding and developing the insurance sector.

## 5. Conclusions

The analysis of the entire set of results for all three states included in the study indicates the causal relationship between insurance and economic growth. Thus, in Spain, we have causal relationships from economic growth to insurance, and in Germany and the Netherlands the causality is manifested by insurance to GDP growth.

Thus, as the economist Liedtcke (2007) determined in his own study, insurance should not be considered by potential insured as an unnecessary expense, but as an effective form of protection and saving of resources.

The significant number of unidirectional and bidirectional causal relationships between economic growth and insurance indicates the possibility of using them in order to increase the growth rate of GDP but also the development opportunity that this sector presents in the macroeconomic context of a state. However, the causal relationship

between insurances and economic growth can be observed, influences that depend on a number of factors ranging from state to state, explained by Liedtcke (2007) in his research paper.

By comparing the results obtained with those already identified within the empirical literature, we obtained both the causal relations from insurance to economic growth, such as the study by Haiss and Sümegi (2008), but also the reverse causality relations from the growth rate of GDP to the insurance sector, coincides with the conclusions of Adams and colleagues (2009), as well as those demonstrated by Hussels, Ward and Zurbruegg (2005).

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## CONSIDERATIONS ON THE RIGHT TO CHILD RAISING ALLOWANCE IN ROMANIA AND THE EUROPEAN UNION

**Lecturer Ph.D. Iuliana CEBUC**

”Constantin Brâncoveanu” University of Pitești, Romania  
E-mail: iulianacebuc@yahoo.com

**Associate Professor Ph.D. Carmen IORDACHE**

”Constantin Brâncoveanu” University of Pitești, Romania  
E-mail: iordache72@yahoo.com

**Abstract:** *The exercise of the right to free movement of individuals in general and of European workers in particular cannot be provided without effective and adequate social protection for migrant workers and their families. The EU legislation on social security coordination does not replace the national social security systems with a single European legislation so that the compliance with the principle of equal treatment in the social security of migrant workers can be achieved through the effective coordination of the Member States' social security systems. One of the areas of social security covered by the European legislation closely related to the national legislation refers to family benefits. This article aims to highlight the important provisions of the Romanian legislation and the European Union legislation on the right to benefit from child-raising allowance as well as the conditions governing the acquisition of such allowance, including the cases when the beneficiary of the allowance has performed different activities on the territory of several European countries.*

**Key words :** *free movement of workers; European Union; child-raising allowance; social insurance system.*

**JEL classification :** *K31, K33, H55.*

### 1. Preliminary considerations

Currently, free movement of people, labor mobility is increasingly perceived as a key instrument in the European integration process, contributing to closer political integration within the EU. It is an essential factor that offers significant benefits to all those involved. On the one hand, free movement allows employment, the economic development of Member States and their sustainable development, and, on the other, contributes to improving the personal development of workers within the European Union.

The right of European citizens and their families to move freely, to perform a lucrative activity and to live in any country in the Union is one of the four fundamental freedoms provided under the European law. According to the data provided by the European Commission, over the last decade, the number of mobile citizens living and / or working in another Member State has almost doubled, reaching to 17 million in 2017.

In this context, the adoption of legislation to eliminate formal social protection disparities and to ensure that self-employed and independently employed persons working in comparable conditions can enter into appropriate social security systems regardless of where they work has represented one of the EU's concern.

Thus, the European Union has a long history in coordinating social security systems, the first Regulation on Social Security Coordination of the European Economic Community (EEC) dating back to 1958. As a result of the increase in the number of EU Member States and the number of migrant workers, a modernized system of Social Security Coordination has been applied since 1 May 2010, the framework being established by Regulation (EC) No 883/2004 of the European Parliament and of the Council as of 29 April 2004 on the coordination of social security systems and Regulation (EC) No 987/2009 of the European Parliament and of the Council as of 16 September 2009 laying down the procedure for implementing Regulation 883/2004. These regulations improve and complete the basic principles set out in the previous regulations, enhancing cooperation between national administrations competent in the field of social security.

The Regulations are binding legal acts in all their elements and directly applicable in the Member States of the European Union, which do not replace the national legislation in this case, but only ensure that they are co-ordinated, leaving it to the EU Member States to determine the scope of the insured persons, the types and levels of benefits, as well as the obligations of beneficiaries and the procedures for entitlement to social security benefits. However, generally, Member States are not allowed to interfere with the direct application of the EU regulation in the national legal order.

The legislative framework created by these regulations has been constantly upgraded through the legislative acts of the EU legislation as well as by the interpretations of the Court of Justice of the European Union (CJEU), the rules constantly adapting to social and legal changes at a European level, constantly expanding the material and personal application area. Thus, they were updated by Regulation (EU) No. 465/2012 of the European Parliament and of the Council as of 22 May 2012, Regulation (EU) No 1368/2014 of the European Commission as of 17 December 2014 aiming at a more effective social protection for European workers and their families and the creation of a modernized system for the coordination of Member States' social security systems that should correspond to the social and economic reality of their level.

In 2016, the European Commission drew up proposals for the coordination of family benefits intended to replace income during child raising periods. 22 Member States offer this type of benefit (1).

## **2. European regulations for the coordination of family benefits intended to replace income during child raising periods**

According to the Regulations, each Member State is free to determine the characteristics of its own social security system, namely the benefits provided, the eligibility conditions, the method of calculating the benefits and the contributions to be paid and the categories of social security such as pensions, unemployment and family benefits, provided that national provisions comply with the principles of EU law, particularly to those concerning equal treatment and non-discrimination.

The basic Regulation 883/2004 sets out such principles as:

- equality of treatment (Article 4), by which nationals of a Member State, and persons residing in that country without being nationals of it, are equal in terms of the rights and obligations provided for by the national legislation;
- equal treatment of benefits, income, facts or events (Article 5) in respect of their legal effects; and - aggregation of periods (Article 6), pursuant to which periods of insurance, employment or residence in one Member State are taken into account in all the other EU countries.

Family benefits are covered by Art. 67-69 (a) of Regulation 883/2004 and Art. 58-61 of the Implementing Regulation. They represent any type of benefits, cash or in kind, necessary to cover family expenses, with the exception of advance payments of child support benefits and special birth or adoption allowances. [Art. 1 letter z)].

Child raising allowances are a distinct category of family benefits intended to replace income during child raising periods designed to meet the individual and personal needs of the parent subject to the legislation of the competent Member State, a compensation for loss of income or salary during the child-raising period.

According to the Regulations, where the national legislation makes the granting of family benefits subject to the condition that a minimum period of insurance, employment or self-employment be fulfilled, the State liable to pay family benefits must take account of periods of insurance completed under the legislation of any other Member State, if this is

necessary to satisfy the conditions for entitlement to benefits (Article 6 of the new Regulation and Articles 12 and 13 of the Implementing Regulation).

Where a person is insured under the legislation of a Member State while his family members reside in the territory of another Member State, benefits shall be provided by the competent institution in accordance with the legislation it applies as if all the family members would reside on its territory.

The Regulations introduce a set of priority rules applicable to situations where it would be possible to overlap with national social security systems due to the fact that they are due to social benefits under the legislation of several Member States for the same period and for members of the same family.

Thus, in the case of rights acquired on different bases, the following rights have priority: rights deriving from the pursuit of an activity as an employed or self-employed person, secondly, the rights resulting from the receipt of a pension and, in the end, the rights acquired based on the residence.

Where benefits could be granted by more than one Member State on the same basis, the order of precedence shall be established by reference to the following subsidiarity criteria: a) in the case of rights acquired on the basis of an employed or self-employed activity, benefits shall be awarded, mainly by the state on the territory where the children reside, provided that the person perform such activity on that territory and, in the alternative, by the State granting the benefits in the highest amount. (b) in the case of rights acquired as a result of receiving a pension, benefits shall be granted mainly by the State where children reside, provided that a pension is paid under its legislation and, in addition, if needed, benefits shall be provided by the State where there is the longest period of insurance or residence under the conflicting legislation; (c) in the case of rights acquired subject to pre-established residence, benefits shall be provided by the state where the children reside.

Paragraph 2 of Article 68 stipulates that in the case of rights overlapping, family benefits are granted in accordance with the legislation intended as having priority, and the rights to family benefits granted under other or a conflicting legislation are suspended up to the amount provided for in the first legislation; and shall be granted, where appropriate, as a supplement representing the difference, for the part exceeding that value. It is not, however, necessary that this additional difference be granted to children who are resident in another Member State if the right to the benefits in question is based solely on the place of residence.

If the application is received by the competent institution and it examines the applicant's rights and concludes that his legislation is applicable as a matter of priority, he shall grant family benefits. If it finds that the person has opened a right for a differential supplement under the legislation of another Member State, it shall forward the file to the competent institution of that Member State and inform the applicant (Article 60 Implementing Regulation).

Where, upon receipt of a application, the competent institution finds that its legislation is applicable but does not take precedence, it shall forward the application to the institution whose legislation has priority, inform the applicant of such transmission and, where appropriate, grant a differential supplement. The competent institution of the Member State whose legislation applies as a matter of priority shall deal with the application as if it had been submitted directly and the date when it was submitted to the first institution shall be considered the date of its receipt at the priority institution (Article 68 of the new Regulation).

In order to ensure that during these periods the applicants receive the family benefits to which they are entitled, in the event of delays in communication between

institutions or in the absence of an answer within the prescribed time limit, the Regulation provides for the provisional payment of benefits (Article 60 and Article 6 of the Implementing Regulation).

In accordance with the provisions of Article 68, where the family benefits are not used by the person to whom they are to be provided for supporting his/her family members, the competent institution shall be exonerated by its legal obligations by granting such benefits to the natural or legal person actually providing the support of family members at the request and through the institution of the Member State of residence or the institution or body designated for that purpose by the competent authority of the Member State of residence.

### **3. Childraising allowance in compliance with the Romanian law**

In Romania, the conditions for child raising allowance are set by GEO no. 111/2010 and the Methodological Norms for the Application of the Ordinance, adopted by the Government Decision no. 449/2016, published in the Official Gazette of Romania, Part I no. 473 / 24.06.2016. The legislation on child-raising allowance was successively amended in the Romanian legislation, the controversies surrounding the subject being determined, first of all, by the conditions for granting the allowance, its amount and possible limitations, but also the extent of the time of the right to child-raising allowance.

The most recent changes occurred following the adoption of GEO no. 55/2017 amending and supplementing Government Emergency Ordinance no. 111/2010 on parental leave and indemnification (published in the Official Gazette No. 644 of 7 August 2017), and GEO 82/2017 for amending and completing some normative acts.

According to the current regulation, applicants who meet the requirements of the law may benefit from parental leave up to 2 years and 3 years, respectively, in the case of a disabled child, as well as a monthly allowance.

According to the provisions of art. 8 of 1 and 2 of Government Emergency Ordinance 111/2011, the monthly allowance is granted to the natural parents of the child, the person who adopted the child, the person entrusted to the child for adoption or who has the child in placement or in emergency placement, except for the professional nursing assistant who can benefit from these rights only for his / her children and the person who has been appointed tutor.

The right to parental leave and child raising allowance shall be granted if the applicant fulfills cumulatively a number of conditions listed in Article 12, namely he is a Romanian citizen, a foreign national or a stateless person, has, according to the law, his domicile or residence on the territory of Romania, he or she lives in Romania together with the child / children for whom he / she claims his / her rights and takes care of him/them and fulfills the condition regarding the contribution period. Regarding the fulfillment of the contribution period, it is necessary that during the last 2 years prior to the date of the child's birth, the applicant has earned for at least 12 months income from wages and salaries, income from independent activities, income from agricultural activities, forestry and fish farming, subject to income tax according to the provisions of Law no. 227/2015 regarding the Tax Code, as subsequently amended and completed, or was in one of the assimilated periods. If a person simultaneously earns incomes subject to tax from several sources, all the monthly income earned by him / her will be taken into account for determining the amount of the allowance. In the income situation listed above, if the person simultaneously earns income subject to tax both in the country and in the European states applying Regulation (EC) no. 883/2004, only revenues earned in the country are taken into account.

The overall periods of activity completed in other Member States is possible if persons who have carried out professional activities in other Member States are subject to the legislation of Romania at the time of the child's birth. If the person performed professional activities in Romania during the period before the child's birth, then according to the provisions of art. 11 par. (3) letter (a) of Regulation (EC) No. 883/2004, is subject to the Romanian legislation in force. He/she can benefit from child-raising allowance in Romania by cumulating the periods of activity in other EU Member States, EEA or Switzerland, applying the provisions of Art. 8 of Regulation (EC) No. 883/2004 and art. 12 of Regulation (EC) No. No 987/2009 of the European Parliament and of the Council of 16 September 2009. According to these provisions, the periods of activity performed in another Member State shall be cumulated and added to those completed in Romania, to the extent necessary to open the right to child raise allowance.

Regarding the amount of the allowance, art. 2, paragraph 2 of the GEO 111/2010, establishes that this represents 85% of the average of the net income of the applicant in the last 12 months of the last 2 years preceding the date of childbirth. The monthly parental allowance has a minimum limit of 85% of the amount of the gross minimum wage per country guaranteed in payment, so starting with 1 January 2018 the minimum value is 1,250 lei, rising from 1,232 lei (the minimum value in 2017), but there is also a maximum limit of 8500 lei.

In case of multiple pregnancies, twins or triplets, the current regulation provides in Article 5 that the level of monthly allowance shall increase by 85% of the amount of the country's gross minimum wage guaranteed for each child born in a gemelar pregnancy, of twins, triplets or multiple babies, starting with the second child from such a birth.

The applicant's right to return to work also remains in the current form of the law as a potestative right, which once exercised, entitles the person concerned to an insertion incentive, an incentive amounting to 50% of the allowance which would have been granted.

The rule established in Article 16 of GEO 111/2010 is that in principle the allowance cannot be cumulated with other income. Thus, in case the beneficiary earns income subject to tax and the child has not reached the age of 2 years, respectively 3 years, in the case of the disabled child, the right to allowance is suspended unless the person receives various amounts under the law, the collective labour or individual labour contract granted during parental leave other than those resulting from the actual carrying out of an activity in the period of parental leave or allowances as a local or county councilor, regardless of their level or the level of income made in a calendar year shall not exceed three times the minimum amount of the allowance

#### **4. Conclusions**

We can conclude that there has been a constant concern both at European level and internally for improving the mechanisms for the effective implementation of the principle of equal treatment for Union workers and members of their families exercising their right to free movement and to allow for the elimination of formal disparities in the field of social protection.

The actions have been carried out in a number of areas: on the one hand, there has been achieved the synthesis and improvement of the existing legal framework, including the solutions provided by the CJEU jurisprudence and, on the other hand, efforts have been made to establish mechanisms that allow correct application and uniformity of European rules, together with an efficient and coherent system of coordination of social systems between Member States that corresponds to the social, economic and legal reality.



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## THE ROLE OF INNOVATION IN THE ECONOMIC DEVELOPMENT OF SOUTH KOREA

Lecturer Ph.D. Gica CULIȚĂ

”Constantin Brâncoveanu” University of Pitești, Romania

E-mail: ggculita@yahoo.com

**Abstract:** *The world is constantly changed by new scientific and technical discoveries, which benefit the developers of these technologies, the host states and, last but not least, the users. Of the many areas available, we have chosen the market of smartphones, more specifically the one of Samsung, a company which has constantly evolved and has been able to compete with Apple. This development has not only affected the company, but it also generated an increase in the formation of GDP in South Korea and, as a result, it impacted the country's economic development.*

**Keywords:** *economic development, South Korea, Samsung, smartphones, innovation.*

**JEL Classification:** *O1, O3, O5.*

### 1. South Korea - a short history of a nation's evolution

A nation that has still not yet reached its full potential, with a young and educated population, with an enviable standard of living even for many EU countries. More than 60% of South Koreans have university studies, with an enormous interest in education and school. With a growing GDP, South Korea has a promising future in the coming decades, being a country where you really feel in the future during this century.

Korea belongs to one of the world's oldest civilizations. The national history of the Korean people begins in the second millennium BC, with the founding of the Gojoseon kingdom on the banks of the Liao River in south-east of contemporary Manchuria. Not much is known about Altaic tribes, who were the ancestors of modern Koreans, but we know that in the fourth century, Koreans adopted Buddhism as a religion, along with Chinese writing, both having a profound effect on the native society. We now know, from the rich literature, that the Korean state has maintained its political and cultural independence despite the Mongol invasions of the 13th century and the Japanese invasions of the 16th century. In the fifteenth century, during the reign of King Sejong the Great, the first Korean alphabet, called Hangul, was created.

Korea, one of the oldest nations in the world, was unified for the first time in the 7th century BC. The state was occupied by Japan in 1905 and was annexed to it in 1910.

During the Second World War, Korea was promised independence after Japan's defeat. At the end of the war, Korea was split in two on the parallel of 38° north latitude. Soviet troops occupied the north side and US forces the south. The subsequent reunification efforts were in vain.

In 1947, the United Nations accepted elections for a new government. The elections took place in the south, and on 15 August 1948 the US Army withdrew and the Republic of Korea, with Syngman Rhee as president, was proclaimed.

On September 9, 1948, the government of North Korea, controlled by the Communists, proclaimed the independence of the Democratic Republic of Korea, led by Kim II Sung. On June 25, 1950, North Korean troops attacked South Korea, trying to rebuild the country's unity.

The North Korean troops crossed the 38th parallel on June 17, 1950. The South Korean army was disorganized and did not have the necessary weapons to face the northern troops, and the American units in the Korean Peninsula did not count many soldiers, so they had to retreat to the south. Then, however, the world reacted to the invasion.

After all the statements of the Americans, it is likely that both Stalin and Kim Il-sung were surprised by the strong reaction of the United States. In fact, if the Soviet Union or China had expected Truman to respond with armed forces, these countries wouldn't have allowed Kim Il-sung to attack.

Also, they would have certainly not allowed the invasion to take place while boycotting the UN Security Council. Since the Soviets were not participating in the meetings of the Security Council, it could adopt a resolution approving a massive contingent to help South Korea.

Before this conflict ended, 50,000 UN soldiers (mostly Americans) were killed, and the two Koreas and China lost hundreds of thousands of soldiers and civilians. The war had never ended. North Korea and South Korea ended an armistice in 1953, but incidents between the two armies have been taking place up to the present day.

North Korea and South Korea became members of the UN in 1991 and signed a peace treaty in December. But the attacks between them continued. North Korea agreed to hold talks with South Korea, China and the US. Thus, negotiations began in Geneva on 9 December 1997.

In 2018, in his New Year message, Kim Jong-Un spoke to improve relations between the two Koreas. "We need to improve the North-South relations that are frozen and make this year a turning point in Korean national history," he said. Following was the acceptance of a resumption of dialogue between the two nations and North Korea's participation in the Winter Olympic Games, which were held in South Korea in early 2018, was decided.

These actions bring hope on both sides of the border that they will be able to reunite their territories, population and resources in the future because Korea's political division has left most coal and metal resources, most forests and hydroelectric power in North Korea. South Korea, on the other hand, has the best land for agriculture and a great workforce.

Education is a priority in the south, students start going to school at the age of six. The school year begins in March and ends in February. In terms of health services there are great many specialist doctors. Tourism is well developed, with Seoul - Toksu Palace, Kyongbok Palace, Changdok Palace, Secret Garden, Capitol Building, Great South Gate, Great East Gate, Seoul Tower. Other attractions include Kyongju Tumuli Park, Star Tower and Kyongju National Museum. The village near Seoul, Suwon, is a "living" museum. Cheju Island and Mount Sorok are also frequented by tourists.

**Table no. 1. South Korea in digits**

<b>Indicators</b>	<b>Value</b>
Population (2016)	50,9 mil.
Birth rate	16,1%
Mortality rate	6,3%
Population 65 years and older	6%
Population under 15 years	24%
Life expectancy	70 years for men, 77 for women
Rate of urban population	81%
Rate of illiteracy	2%
Univeristăți	127
University teachers	65.000
Students	1.200.000
Public libraries	200

Books in libraries	7.000.000
Physicists	54.000
Hospital beds	182.000
Access to drinking water	80% of population

Source: Romanian Culture Club of Korea, 2017. *Date importante despre Coreea*. [online] Available at: <<http://www.kccro.ro/en/date-importante-despre-coreea>> [Accessed 12 December 2017].

Korea has grown rapidly and has become one of the world's developed countries also because of its interest in education. Thus, as shown in Table 1, the number of students is very high, 1,2 million, with a large number of university professors, over 65,000.

The population the country is a young one, with a quarter of the population under the age of 15 and only 6% of the population aged over 65.

Since the Korean War, South Korea's economy has been relaunched with the help of the US in the mid-1960s, also receiving Japan's help. The annual growth rate was between 7% and 10% from the 1960s to the 1970s. In 1996, the annual growth rate declined, but South Korea was, however, among the developed states of the world. As in Japan, government and industry have played an important role in the country's development. South Korea is the third economic power in Asia, after Japan and China.

The manufactured products have an important role in the country's exports. The post-war industry focused on the manufacture of footwear and textile products. But South Korea has become a developed country, competing with countries like Japan in shipbuilding, automobiles, electronic equipment etc.

Seoul is the main industrial center, followed by Pusan, Ulsan (automobiles, shipbuilding, refineries) and Yochon (steel, petrochemicals) but many natural raw materials have to be imported.

After the Korean War, Korea began to also develop electricity networks, including the construction of nuclear plants, which produce 40% of electricity consumed.

About 21% is arable land; agriculture bringing 10% of national income. Rice is the main plant grown in the summer. Wheat, barley, corn, potatoes and sweet potatoes are planted in the dry season. South Korea's rice production, among the largest in the world, is achieved through intensive fertilization, irrigation, mechanization, and a strong cooperative system. Foods, including meat, are imported in large quantities. Soybeans, cotton, tobacco, ginseng, pigs, goats and silkworms are also grown. Fish, a traditional part of the Korean diet, is mostly fished from the Sea of Japan. Since the 1950s, fish production has significantly increased, South Korea ranking third (after Japan and China) in Asia for fish production. Forests occupy around 66% of the country but intense deforestation has recently begun.

The main rail link connects Seoul, Taejon, Taegu and Pusan. A second main line starts from Seoul and continues south and then to the west, and a third goes to the east coast. A large network of motorways and other transport routes have led to a decline in railways. Roads, metro and many sports facilities were built in preparation for the 1988 Olympics, which were held in Seoul and recently those of January 2018, which were held in Pyeongchang.

The length of the roads is 6,559 km and the length of the railways is 78,833 km. In total there are 11 big ports and 4 big airports. There are also good services in

communications. South Korea has 3 Intelsat stations. Daily publications in South Korea are around 100. There are 84 AM stations and 53 FM stations.

The key to South Korea's success is foreign trade, which has grown enormously since the 1960s. South Korea exports: textile, machinery, ships, electrotechnical products, automobiles, rubber products, canned fish, porcelain, and the main imported products are: oil, petrochemicals, chemicals, raw materials.

## **2. South Korea and North Korea - countries at opposite poles**

After about 70 years of tensions, the conflicts remained constant between South Korea and North Korea. There was no official end to the war, but a truce between them, from which the North Koreans retreated in 2013. The Korean War of 1950-1953 has caused disasters for both sides, and this memory seems to be the reason why none of the two states plan another major attack.

In his memoirs, US President Truman summed up views on this war: *"All the decisions we have made in connection with the Korean War have taken into account this objective: the prevention of a Third World War and the terrible destruction it could bring to the civilized world. This meant that we should not do anything that would give the Soviets the pretext and throw the free nations into an open, large-scale war . "*

But the speculators analyzed the fighting capabilities of the two countries and launched the predictions of a possible war. Who would be declared winner?

Both North Korea and South Korea are currently some of the world's most powerful military forces. With about 3,5 million soldiers, South Korea currently has one of the most numerous armies. Even so, South Korean troops are few compared to the five million North Korean soldiers and other five million available in the event of prolonged war. According to North Korea policy, people must put the army above all, even before the food, fuel and other resources. Enrollment is mandatory so that all North Koreans can have a minimal military experience.

Although it owns 605 combat aircraft and 43 warships, North Korea's technology is outdated and faded compared to the military resources of the southern peninsula. From a technological point of view, South Korea is considered one of the most advanced countries in the world. In addition, gross domestic product is 50 times higher than the one of North Korea, making South Korea's defense investments about five times higher than their neighbor's.

The military alliances played a very important role so far. If the North Koreans can't even count on China, the only foreign support they have received during the Korean War, the strong link between South Korea and the Americans is what would change the fate of a new military conflict. The 30,000 soldiers sent by the United States to the South Korean territory, but also the 3,800 people in Japan and the 5,700 in Guam represent, along with the air force in the region, the detail that could make the difference.

A North Korean attack would give them the surprise advantage, but only for a few days. Placed in the mountains of the border, North Korea's artillery, one of the most powerful in the world with about 10,000 pieces in the arsenal, would remain hard to detect and strong for only four days. Allied air forces would have trouble penetrating North Korea, Pyongyang itself being a real fortress. However, US devices would quickly establish the airborne superiority in the region and destroy the Nordic command points. The next target of the alliance would be North Korea's infrastructure - the destruction of bridges and roads, especially those linking the capital and the border, which

is the strategy that would make Nordic troops unable to withdraw. Also strategic is the stage where Americans would launch humanitarian packages outside large cities to attract non-combatants outside the conflict zones, thus lightening their way to regime representatives.

According to studies by military analysts, despite a successful start, North Korea would lose a possible war with its southern neighbors. That does not mean, however, that they would not be capable of massive destruction of conventional weapons in Seoul, South Korea's capital, just 57 km from the border, and in nearby areas. One of the mysteries of this war remains, however, North Korea's decision to use nuclear weapons. Although North Korea threatens to own them, there is no evidence that they have been successfully tested.

The huge losses left by such a war in the Korean Peninsula would mean for South Koreans and Americans a victory only in history textbooks. In fact, war damage and the cost of rebuilding the North Korean state infrastructure, which the Kim regime ignored for over 60 years, would cost them about 2 trillion \$.

There are many other issues that support the differences between the two countries.

#### **1. Dynasty versus Democracy**

Since 1948, North Korea has had only three leaders, while South Korea has had 12.

#### **2. Access to technology**

Only 3,2 million people in North Korea have mobile phones (one in ten people). However, there are 58,9 million people in the neighboring country who own such a device.

#### **3. Road conditions**

North Korea has about 25,554 kilometers of roads. Of these, only 3% are paved, equivalent to 724 km. It is also estimated that only 11/1000 of North Korean have a car. In South Korea, the percentage of paved roads is 99%.

#### **4. Exports**

North Korea is dependent on coal exports to keep its economy afloat. In contrast, South Korea depends on integrated circuits exports.

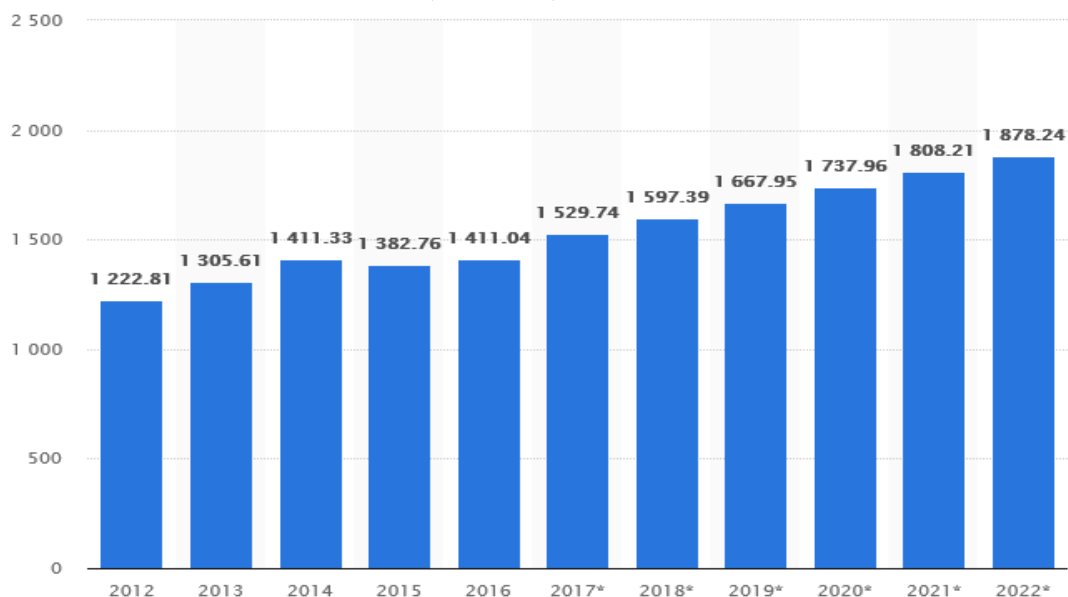
#### **5. Life expectancy**

Life expectancy in North Korea is 67 years, and in South Korea it is 77 years.

The differences are extreme in terms of GDP. North Korea has a population of 25 million and a GDP of 40 billion \$ (1,600 \$ per resident), while South Korea has 50.9 million citizens producing a GDP of 1,934 trillion \$, ranking 14th in the world and 37,900 \$ per resident. Practically, the southern economy is 21 times higher than the economy of the north.

The explanation for this big difference is easy. In South Korea there is a market economy, democracy and freedom, while in North Korea there is a centralized economy, communism and an oppressive regime at the extreme.

**Chart no. 1. Evolution of Gross Domestic Product in South Korea, 2012-2022  
(trillion \$)**



Source: Statista, 2017. South Korea: *Gross domestic product (GDP) in current prices from 2012 to 2022*. [online] Available at: <<https://www.statista.com/statistics/263579/gross-domestic-product-gdp-in-south-korea/>> [Accessed 12 December 2017].

The historical evolution of GDP was one of natural growth until 1987, but nothing spectacular. In 1987, South Korea's GDP was somewhere at 100 billion \$, and we can assume that the GDP per resident in the North and South was roughly the same. It is worth mentioning that real data on the economic performance of the North, like any communist country, are questionable. Foreign investment in South Korea began to rise after 1990, and the economy has boosted. When communism flopped, the role of the USSR (Russia) became insignificant in the world and China emerged from the sphere of influence of the USSR and began their own foreign policy.

But still South Korea was not what it is today, it was far from it. In 2007, the US, the old ally of the South, concluded a free trade treaty with it, and since then foreign investment has grown dramatically, propelling the South Korean economy. Russia recovered from the fall and has started to recover global status. In 2016, foreign direct investments in South Korea reached 21 billion \$ (the second consecutive year with over 20 billion \$). During this time, North Korea was under American sanctions and was not allowed to sell or buy anything.

The US and South Korea have been strategic partners since the 1950s, but when the USSR fell, and China became independent, the US felt the need to give economic impetus to its ally. And only in 2007, when Russia was reborn from its ashes, the US helped South Korea become what it is now. Because the US fears nothing more than the Chinese reunification plan of the two Koreas: losing an important ally, a military base, much of the influence it now exerts in the Asia Pacific and an essential military lever against China and Russia if it is the case.

China and Russia are potential candidates for being the world superpower, as they are heads of BRICS countries that have decided to pull the dollar off the market as an international currency (and thus kneel and crash US economy forever). Any failure in any part of the world is potentially disastrous for the United States, and the US war now covers all levels: the attempt to destabilize the BRICS. Since 2016, Brazil has a non-elected pro-American president, appointed by Parliament, after a major corruption scandal that forced the resignation of the elected president, Russia was attacked by Ukraine, China was visited by the South China Sea traffic with the attempt of a control of the traffic of Southern China, where all Chinese export takes place and which the Chinese want to protect at all cost.. India is actively courted by the United States. If Syria had the outcome desired by the US and today Islamic state flags would flutter in Damascus, Iran would be next on the list. and from Iran, the way would be open to "Islamic springs" from the provinces of Russia, which include an important Muslim minority. The American plan to maintain its hegemony over the world does not imply friends, but only vassals and enemies, as it turned out in the recent history of the world.

### **3. The role of innovation and the implementation of new technologies in economic development and the expansion of the phenomenon of globalization**

Globalization means expanding the principles of market economy, democracy, civil society and human rights as a sign of economic and social modernity, without the valuable traditions of every people losing their importance in a modern society. Mentality, according to which the principle "or / or" applies, opposing exclusivity, globalization and localization, diversity, ignoring the role of tradition and continuity, can only be perishable and inappropriate to the realities and prospects of the development of the contemporary world.

#### ***Microprocessors and Telecommunications***

One of the most important breakthroughs of the last century is the microprocessor, which has made it possible to upgrade high-power computers and reduce costs, enabling companies and individual users to process a much larger amount of information. The microprocessor is also attributed to the evolution of the telecommunications system. In the last 30 years, telecommunications have revolutionized the improvement of satellites, fiber optics and wireless technologies, and now also by the Internet and the international web (network) system. All of these technologies are based on the power of the microprocessor to encode, transmit and decode a huge amount of information that circulates between these electronic networks. The cost of microprocessors continues to decrease as their power increases (a phenomenon called Moore's Law, which states that the power of microprocessors doubles and the cost of production drops by half every 18 months). This means that, and the total cost of communications is decreasing, making the control of a global organization more accessible.

#### ***The Internet***

The Internet is the last expression of development. In 1990, less than 1 million people were connected to the Internet, while in 2000, over 330 million users were registered, of which over half were only in the United States of America. There are currently more than 3.2 billion global users.

From practically nothing in 1994, the value of transactions made for websites exceeded 300 billion \$ in 2003, only in the US. Companies like Dell Computer make over 4 million \$ a day using transactions based on website sales or creation, while Cisco Systems, a much larger corporation, can make \$ 20 million a day.



At the same time, the value of international transactions concluded through websites increases. From a global point of view, the Internet has an equalizing role. It makes access to information possible as well as transactions, without the impediments created by the time difference, standards, geographical distance. The website allows large or small businesses to expand their businesses at the lowest cost. Through the website, the seller and buyer can meet more easily, regardless of their size, where they are and at any time of the day.

### ***Technology transfer***

In addition to the development of communications technology, there have also been some major innovations in its transfer. From an economic point of view, the most important was the development of commercial aircraft and the introduction of containers, which simplifies the transport, loading and unloading of goods from one place to another. Practically, by introducing aero-ships, travel time has been considerably reduced and the planet has become a smaller and more familiar place. From the point of view of travel time, New York is now closer to Tokyo than it was to Philadelphia in colonial times.

Container usage virtually altered transport economy by reducing goods transport costs over long distances. Prior to containerization, the loading and unloading of the goods involved very high costs and a lot of labor involved in the process. Sometimes, it took days or even weeks, to unload the cargo from the ships and then loading into trucks or trains took place. And with that, hundreds of people were needed for the whole operation. Now, all these operations are running in a maximum of 2 days and with only a few people.

As a result of the introduction of the containers, in the 1970s and 1980s international goods forwarding around the world became more profitable, with prices now being particularly advantageous. This contributes to the globalization of markets and production. In the United States, for example, the cost of rail goods transport has fallen from 3 \$ / ton in 1985 to 2.4 \$ / ton in 1997, and only because of the use of containers.

As we say, due to technological innovations, the real cost of processed information and the cost of communications has dramatically fallen over the past two decades. Due to the use of containers, the transport costs associated with the globalization of production have also diminished. These things make it possible for a corporation to lead a globally dispersed production system, facilitating the globalization of production. Transnational companies have numerous subsidiaries all over the world. A satellite communications system enables it to carry out all the activities on a global scale: production planning, accounting costs, financial planning, marketing, public relations and human resources.

Developing of technologies has led, in addition to globalization of production, to the one of markets, as well. If transport cost reduction makes shipping easier around the world, the Internet and the web help create global electronic markets.

Globalization of the world economy is worrying, the loss of national culture and identity is theorized, or even more, the dissolution of nation-states, but this does not seem to be yet an acute problem. The nation states need corporations as much as corporations need countries - markets, to do their business in. Globalization is based on the formation of interdependencies, the connectivity of which is currently becoming increasingly diverse in the context of constantly developing network structures. A part of the quality of life is influenced by the quality of our networks, so by paraphrasing Marshall McLuhan, in the contemporary world, we form our networks and later they form us.

In the economic and business networks, the engine is the technology that can be used normally or abusively. As an example, we mention the case of mobile phones, which, economically and sociologically, are a day to day reality.

Not mobile phones as such, they transform the world as a whole, but small groups of individuals linked and intertwined by technological networks, especially through mobile communications that not only mediate information and analyzes but also behaviors that can be positive or negative. As evidenced by Howard Rheingold, "*the longest-running social effects of technology have always gone beyond the quantitative efficiency of making old products faster or cheaper. The most profound transformational potential of connecting social-human inclinations, to the efficiency of information technologies, is the chance to produce together new things, the potential for cooperation on a scale and in ways that have never before been possible.*"

Through the interdependent and functional networks they create, globalization offers the potential of new and unprecedented economies of scale that obey the laws of mathematics, exponent, and power, denigrating economic considerations that until recently have been considered immutable.

Under the conditions of globalization, based on innovation, information and the communication technology, the principle of efficiency has radically changed in the sense that the more participants in an information network, the chances of economic and social efficiency are greater, provided that the requirements of certain laws globalization-specific. In this regard, it is worth mentioning Newton remark : "to master nature, you must obey it."

Thus, entrepreneurs and inventors can master networks, provided they know their laws and obey them. Knowing the system of laws governing nature, society and the economy is an essential condition for acting transformer, not against, but in the sense of this system.

Even though globalization is governed by the laws of networks that still do not know how future technologies and economic choices will be dimensioning, we can now speculate that it will cause more individuals and institutions to be connected in the future, the more networks.

From a theoretical and methodological point of view, the investigation of the effects of globalization on the dependencies and efficiency of national economies implies a system of quantitative and qualitative tools, techniques and methods, for each analyzed field, so that a complete scoreboard of strengths and weaknesses, opportunities and threats can be seen.

South Korea is one of the most appropriate examples, as we have argued earlier, to support the important role of innovation and introduction of new technologies in economy, with aid of the state, but also with important transnational companies such as Samsung, LG or Hyundai.

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## REGIONAL INNOVATION TYPOLOGIES IN CENTRAL AND EASTERN EUROPE: THE PATH TO REGIONAL TRANSFORMATION

**Ph.D., Associate Professor Cristina ȘERBĂNICĂ**

”Constantin Brâncoveanu” University of Pitești, Romania

E-mail: cpantelica@yahoo.co.uk

**Ph.D., Associate Professor Sebastian ENE**

”Constantin Brâncoveanu” University of Pitești, Romania

**Ph.D., Associate Professor Cristina GĂNESCU**

”Constantin Brâncoveanu” University of Pitești, Romania

**Ph.D., Lecturer Iuliana TALMACIU**

”Constantin Brâncoveanu” University of Pitești, Romania

**Abstract:** *The main objective of this study is to revisit some of the typologies of the European regional innovation systems and to shed light on the features and performances of Central and Eastern European regions in this respect. To this aim, we put in comparative perspective different typologies based on indicators related to economic characteristics, sectoral specialization, social filters, knowledge creation and knowledge absorption capabilities, innovation outputs and economic effects. Our findings reveal the heterogeneity of the regional innovation systems in the Central and Eastern Europe, with most of the regions being classified as “lagging-behind” or “intermediate” regions. The pathways towards regional transformation are revealed in the final section of the paper, which emphasizes the need to address first the macro-structural weaknesses, to invest in human capital, skills and institutions and to adopt the broader view of innovation.*

**Keywords:** *regional innovation, regional transformation, innovation typologies, Central and Eastern Europe (CEE), lagging regions.*

**JEL Codes:** *R11, R58.*

### 1. Introduction. Regional innovation systems in the European context

There is a wide consensus among scientists that regions are important engines of economic development and that they should stay at the core of the debates about innovation and competitiveness. The focus on “regions” as units of analysis is motivated by different arguments. According to Porter (2003), there is growing tendency to give priority to micro aspects over the macro ones, as “substantial differences in economic performance (exist) across regions in virtually every nation”. In addition, the literature on innovation systems points to the fact that knowledge has a strong cumulative and tacit character (is difficult to exchange over long distances) and the process of accumulation of knowledge is context-specific and spatially “sticky” (Asheim and Gertler, 2005). For these reasons, the regions became the most suitable units of analysis and planning for both scholars and policy makers, in their attempt to identify and advance policies adapted to the local contexts.

“Regional innovation systems” (RIS) have emerged as the most relevant analytical framework to study economic development and innovation at the regional level. Even if there is no standard definition of a RIS, there is agreement in the literature that a RIS contains “subsystems of generation and exploitation of knowledge that interact with other regional, national and global systems for the commercialization of new knowledge” (Cooke et al., 2004). What differentiate RIS approaches from similar concepts (e.g. regional clusters) is the focus on interactive learning processes between actors in geographical proximity and the attempt to gain a better understanding of the uneven geography of innovation. Since its development in the 1990s, the RIS approach has essentially contributed to identifying the factors that shape the knowledge generation and innovation capacities of regions (Asheim et al., 2015), which resulted in the development

of different RIS typologies. Based on the actors and modes of governance constituting RIS, Asheim and Isaksen (2002) distinguish three main types of RIS, namely the "territorially embedded" regional innovation networks, the regional networked innovation systems and the regionalised national innovation systems. Cooke et al. (2004) make a separation between institutional RIS (IRIS) and entrepreneurial RIS (ERISs), the first one being suited to promote incremental innovations in traditional sectors, while the second one offering good conditions for radical innovation and emergence of new industries. Not last, Todtling and Trippel (2005) classify the RIS according to the so-called "RIS failures" – i.e. organizational thinness, fragmentation and lock-in effects – and make a distinction between metropolitan agglomerations, old industrial regions and peripheral regions.

The latter typology brings in useful assumptions to the study of RIS in emerging countries and/or in the regions with less developed innovation systems. As such, the study of RIS in Central and Eastern European (CEE) countries is somewhat hampered by the fact that "important elements of the RIS may be missing", as evidenced by Radosevic (2002). Trippel et al. (2015) made important steps forward for the identification of regions with less developed innovation systems: such regions may suffer from institutional thinness, organizational thinness or a combination of both dimensions of thinness. In line with this classification, large cities in Eastern Europe have organizationally thick, but institutionally thin RIS: they are characterized by the existence of a critical mass of knowledge creation organizations, but they lack the cooperation culture and exhibit a low quality of government institutions. In contrast, the other regions in Eastern Europe are simultaneously organizationally and institutionally thin, as they suffer from the lack of innovation-related organizations and from an institutional set-up that is not conducive to innovation. According to Blazek et al. (2014), the regions located in Central Eastern Europe, with a post-communist heritage, are by far the most lagging behind with respect to the research and innovation systems. Further research focusing on the case of the CEE countries is expected to give attention to the determinants of the transformative capacity of their regional innovation systems and to gain deeper insights into the heterogeneity of less-developed regions.

Our paper acknowledges the research questions raised by Blazek et al. (2014) and aims to revisit some of the typologies of the European regional innovation systems and to shed light on the features of the Central and Eastern European regions.

The purpose is to put in a comparative perspective the existing classification so that to reveal the heterogeneity of the less developed regions in Central and Eastern Europe and to identify the recommended paths for regional transformation. We consider 11 Central and Eastern European countries that were part of the communist bloc before 1990 and are now members of the European Union, i.e. Bulgaria (BG), Croatia (HR), Czech Republic (CZ), Estonia (EE), Hungary (HU), Lithuania (LT), Latvia (LV), Poland (PL), Romania (RO), Slovakia (SK) and Slovenia (SI). NUTS2 level regions have been chosen as of reference for the analysis, as they have proven to be meaningful levels for regional policy analysis.

The remainder of the paper is organized as follows: Section 2 outlines the research method and presents the categorization of CEE regions using economic and innovation-related variables; in Section 3, the research results are discussed separately for three types of regions: the lagging-behind, the intermediate and the most advanced regions; Section 4 concludes the study and reveals different specific policy recommendations that reside from the proposed typologies.

## 2. Research method

The literature uses two dominant approaches to obtain RIS typologies: the first one deals with case study designs, very few of them being focused on the case of the less developed regions, especially on those with a post state socialism heritage (Blazek et al., 2014). The second approach uses statistical analysis for clustering of regions with similar characteristics or creates innovation scoreboards that measure the innovation performance at different points in time. Our study is centered on this second approach and puts in a comparative perspective seven classifications of European regions based on statistical sources (Table no. 1).

**Table no. 1. Regional innovation system typologies using statistical sources**

Author (s)	Aim	Conceptual framework	Classification method	Typologies (No)	CEE Regions (N=56)
Muller et al. (2006)	- to develop a regional typology of innovation capacities in the New Member States and Candidate Countries;	i) knowledge creation, ii) absorptive capacity iii) diffusion capacity iv) demand v) governance capacity	25 variables; principal components analysis;	5	53 CEE regions  Not classified: 3 CEE regions
Dory (2008)	- to produce a categorisation of the EU25 regions according to their long-term, structural techno-economic characteristics;	i) knowledge creation and absorption capacities; ii) economic structure and industrial specialisation	13 variables; hierarchical cluster analysis;	10	54 CEE regions  Not classified: 2 CEE regions
Navarro et al. (2009)	- to depict a typology of regions, capturing the diversity of regional innovation systems (RISs) across the EU-25;	i) knowledge generation inputs; ii) structural characteristics of the region (agglomeration economies & social filters); iii) innovation output; iv) economic output	21 variables; principal components analysis; cluster analysis	8	40 CEE regions  Not classified: 16 CEE regions
Wintjes and Hollanders (2010)	- to highlight the great diversity in development pathways and trajectories of innovation across European regions;	i) the accessibility to knowledge; ii) the capacity to absorb knowledge; iii) the capability to diffuse knowledge and technology	20 variables; factor analysis; hierarchical clustering analysis	7	54 CEE regions  Not classified: 2 CEE regions
Marsan and Maguire (2011); OECD (2011)	- to highlight the diversity of regional profiles across OECD regions on the purpose of the peer group comparisons;	i) Inputs (financial, capital & human capital); ii) Linkages iii) Outputs: tacit outputs, innovation outputs, economic outcomes	12 variables; Ward cluster method	8	35 CEE regions  Not classified: 21 CEE regions
Camagni and Capello (2012)	- to identify different territorial patterns of innovation and empirically test their existence in Europe	i) Knowledge and innovation creation; ii) Regional pre-conditions for i); iii) Inter-regional knowledge and innovation flows; IV) Regional preconditions to acquire external knowledge and innovation.	26 variables; cluster analysis; multinomial logistic regression	5	56 CEE regions
Hollanders and Es-Sadki (2017)	- to provide a comparative assessment of performance of innovation systems across 220 regions of EU Member States, Norway, Serbia and Switzerland.	i) Framework conditions ii) Investments iii) Innovation activities (iv) Impacts	18 variables; aggregated in a composite indicator	12	56 CEE regions

Source: authors' elaboration

As revealed in the Table no. 1, most of the proposed typologies aim to capture the diversity in territorial innovation patterns across Europe (and OECD regions) using indicators that are related to both the regional conditions and the innovation inputs, processes and outputs. There is a large consensus in the literature that the regional

economic conditions (regional GDP, unemployment, agglomeration, accessibility etc.), the sectoral structure of the economy and the so-called "social filters" (i.e. educational achievements, human resources in science and technology etc.) have a pivotal role in spurring innovation and growth at the regional level. Almost all typologies consider the investments in research and development (R&D) as proxies for the knowledge creation capacity and use patents and knowledge flows to measure the innovation outputs and linkages. Not last, the economic effects usually are proxied by the growth rates in GDP, exports, new firm formation in fast-growing industries etc. In order to shed light on the features of the CEE regions, we examine the proposed typologies and place each of the 56 NUTS2 regions into a specific category (from A – K, were A is the least developed category). To make the results comparable, we assign each category into one of the three main classes, i.e. "lagging-regions", "intermediate regions" and "advanced regions" (Table no. 2).

**Table no. 2. Categorisation of CEE regions using economic and innovation-related variables**

Authors	Lagging-behind regions	No.	Intermediate regions	No.	Advanced regions	No.
Muller et al. 2006	Lagging-behind agricultural regions (A)	10	Skilled manufacturing platforms regions (C)	10	Regions with tertiary growth potential (D)	9
	Industrially challenged regions (group B)	17			Capital regions (E)	7
Dory, 2008	Predominantly agricultural (A)	26	Re-industrialising (D)	22	High-income industrial leaders (G)	-
	Diversified agro-industrial (B)	-	Newly industrialised (E) and diversified (F)	-	Diversified high- income economies (H)	-
	Tourism- based (C)	-	Restructuring industrial (G)	6	Service-based high income economies (I)	-
Navarro et al. (2009)	Peripheral agricultural regions with a strong economic and technological lag (A)	20	Central regions with an intermediate economic and technological capacity (D)	1	Service-oriented regions with a certain economic and techno-logical capacity (F)	1
	Restructuring industrial regions with strong weaknesses (B)	12	Industrially restructured regions with a certain economic and techno-logical capacity (E)	-	Technologically advanced region with an industrial specialization (G)	-
	Peripheral regions with an economic and technological lag (C)	5	-	-	Service-oriented innovative and capital regions (H)	1
Wintjes and Hollanders (2010)	Traditional Southern EU regions (A)	-	Knowledge absorbing regions (C)	-	Metropolitan knowledge-intensive services regions (F)	-
	Skilled industrial Eastern EU regions (B)	44	Skilled technology regions (D)	2	High-tech regions (G)	-
		Public knowledge centres (E)	8			
Marsan and Maguire (2011); OECD, 2011	Primary-sector-intensive regions (A)	13	Medium-tech manufacturing and service providers (D)	1	US states with average S&T performance (F)	-
	Structural inertia or de-industrialising regions (B)	9	Service and natural resource regions in knowledge-intensive countries (E)	1	Knowledge and technology hubs (G)	1
	Traditional manufacturing regions (C)	10			Knowledge- intensive city/capital districts(H)	-
Camagni and Capello (2012)	The imitative innovation area (A)	29	The smart technological application area (C)	7	The applied science area (D)	2
	The smart and creative diversification area (B)	18			The European science-based area (E)	-
Hollanders and Es-Sadki (2017)	Regional Modest Innovators – (A)	8	Regional Moderate Innovators (E)	9	Regional Strong Innovators + (I)	-
	Regional Modest Innovators (B)	9	Regional Moderate Innovators + (F)	9	Regional Innovation Leaders – (J)	-
	Regional Modest Innovators + (C)	4	Regional Strong Innovators – (G)	2	Regional Innovation Leaders (K)	-
	Regional Moderate Innovators – (D)	14	Regional Strong Innovators (H)	1	Regional Innovation Leaders + (L)	-

Source: authors' elaboration

Three other classifications were used only partially in our analysis as they reflect exclusively the economic component (EC, 2014/99/EU; EC SWD, 2017) or the innovation component (Blazek and Kadlec, 2018) and not a combination of the two. The EU Regulation No 2303/2013 laying down the common provisions for the European Structural and Investments Funds 2014 – 2020 delimitates three categories of regions (NUTS2) based on their GDP per capita measured in purchasing power parities (PPS), namely: the "less developed regions", whose GDP per capita is less than 75% of the average GDP of the EU-27, the "transition regions", whose GDP per capita is between 75% and 90% of the average GDP of the EU27 and "more developed regions", whose GDP per capita is above 90% of the average GDP of the EU-27 (Article 90). 50 out of the 56 regions in Central and Eastern Europe are classified as "less developed regions", while six of them – the capital regions of the Czech Republic, Hungary, Poland, Romania, Slovenia and Slovakia fall within the "more developed regions" category. It should be noted here the fact that the Baltic countries – Estonia, Latvia and Lithuania – are assimilated to NUTS2 regions (EC 2014/99/E). More recently, "The lagging regions" report launched in June 2015 by the European Commission to examine the factors that hold back growth and investments in Europe defines, for analytical purposes, two types of lagging regions. The "low-growth regions" are those regions with GDP per capita up to 90% of the EU regions that did not converge to the EU average between 2000 and 2013, while the "low-income regions" cover all the regions with a GDP per head in PPS below 50% of the EU average in 2013. 19 regions in Central and Eastern Europe are classified as "low-income regions", most of them being located in Bulgaria, Hungary, Poland and Romania (EC SWD, 2017). Another typology which is useful to our analysis is the one proposed by Blazek and Kadlec (2018), who classify the European regions based on their prevailing knowledge bases and the key segments of R&D systems into three categories: "public R&D", "private R&D" or "mixed R&D" (no dominance of the public or private sector). Out of the 56 CEE regions, R&D systems in 26 regions are dominated by the public sector, eight regions are dominated by the private sector and 10 regions combine public and private R&D (12 regions are not classified).

Annex 1 presents the economic status (EC, 2014/99/EU; EC SWD, 2017) and the R&D status of each NUTS2 region at the CEE level (Blazek and Kadlec, 2018); in addition, it reveals the categories assigned to each region in the proposed typologies (Table no. 2) and provides a general score for research, development and innovation (RDI score) that was computed as follows: we assigned a score of 1 to each A, a score of 2 to each B etc. and computed the average RDI score for each region. The RDI scores range from 1,14 (PL33/72) to 6,14 (CZ01), with large variations both between countries and the regions within the countries, which are detailed in the following sections.

### **3. Research results**

Table no. 2 and Annex 1 give a synthetic overview of the performance of the regional innovation systems in Central and Eastern Europe. Most of the regions fall within the first categories two or three categories in all the proposed typologies and are characterized as being "lagging-behind", "peripheral" or "modest" innovators. At the other end of the spectrum, the number of regions classified as "advanced" ranges from zero to two, except for the typology proposed by Muller et al. (2006), which is to some extent biased by the fact that considers exclusively the CEE regions and not all the European regions. The number of "intermediate" regions is highly variable, and the boundary between the lagging-behind regions and the intermediate ones is very blurred.

Figure no. 1 illustrates the aggregated scores resulted from the proposed typologies (Annex 1), which are grouped into three categories, using a natural breaks algorithm: the



lagging-behind regions (1,14 – 2,43), the intermediate regions (2,44 – 3,99) and the advanced regions (4 – 6,14).

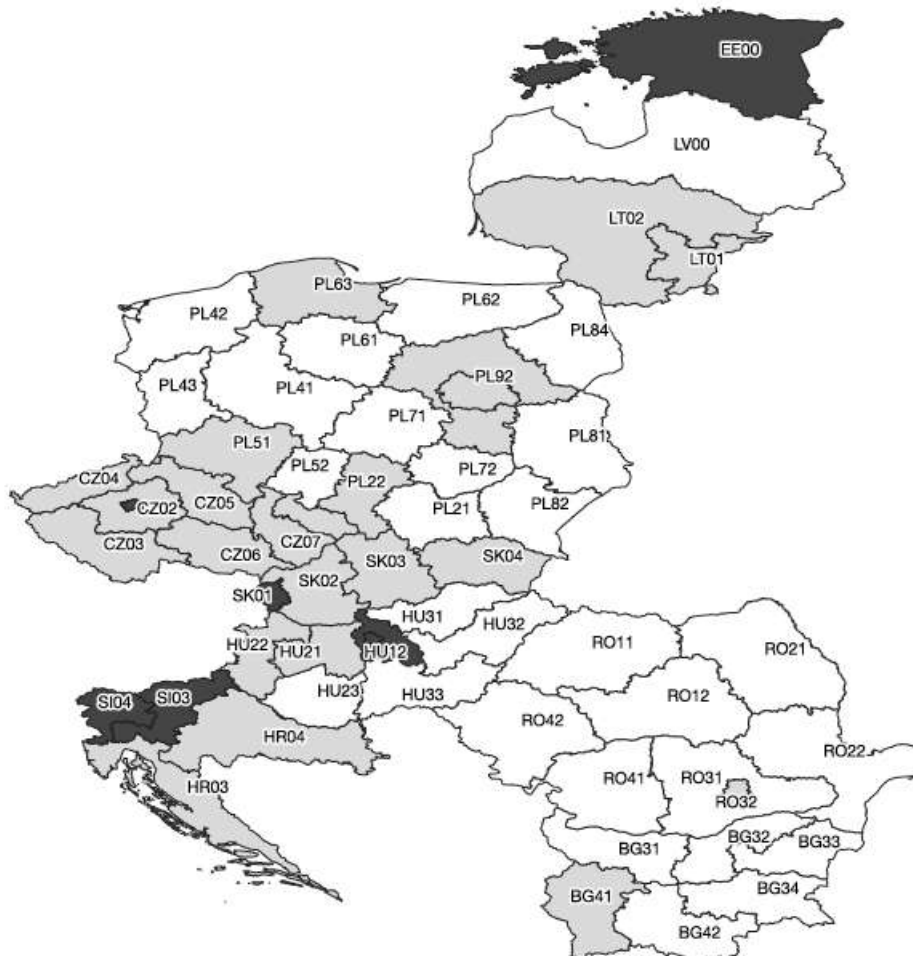


Figure no. 1  
**RDI performance in Central and Eastern European regions\***

\*Own computation based on the scores provided in Annex 1; the darker the color, the higher the RDI performance

### **The lagging-behind regions**

The regions with the lowest performances in innovation at the CEE level can be found in Bulgaria, Romania, Latvia, Hungary and Poland. These regions are characterized by the lowest values on most variables, especially with regard to the economic output (GDP/capita) and productivity (Muller et al., 2006; Dory, 2008; Navarro et al., 2009; OECD, 2011); in fact, all the low-income regions identified by the European Commission as "low-income regions" fall within this category (EC SWD, 2017). The lagging-behind regions appear to suffer from structural problems caused by the weakness of links to both national and global economies (Muller et al., 2006), structural deficiencies in terms of infrastructure and accessibility (Navarro et al., 2009) and the lack of a diversified economic structure. Most of the regions in this group have a very high share of employment in agriculture and are labeled as "predominantly agricultural" (Dory, 2008),

"lagging-behind agricultural regions" (Muller et al., 2006), "peripheral agricultural regions with a strong economic and technological lag" (Navarro et al., 2009) or "primary-sector-intensive regions" (OECD, 2011). At the same time, there are regions in this group with high employment in industry, but with major structural challenges related to this sector, i.e. "industrially challenged regions" (Muller et al., 2006), "restructuring industrial regions with strong weaknesses" (Navarro et al., 2009), "structural inertia or de-industrializing regions", "traditional manufacturing regions" (OECD, 2011) etc. Educational attainment and long-life learning appear to be weak or mixed and the regional knowledge absorption capacity is usually insufficiently developed (Muller et al., 2006; Dory, 2008; Navarro et al., 2009; Wintjes and Hollanders, 2010; Hollanders and Es-Sadki, 2017). Meanwhile, the knowledge creation capacity is limited and these "modest innovators" perform much below the EU average in terms of R&D expenditures (especially in the business sector), linkages between the innovation actors or patenting intensity (Hollanders and Es-Sadki, 2017). In only two regions in this group (PL32 and RO31) there is a dominance of the private R&D over the public R&D, according to typology created by Blazek and Kadlec (2018). Very few positive features are associated to the lagging-behind regions, which should be further considered in policy-making: according to Wintjes and Hollanders (2010), most of the regions in this group are "skilled" industrial regions, which are rapidly catching up from the low levels of economic performance. In addition, Camagni and Capello (2012) point to the fact that the "imitative innovation area" (i.e. the regions in Bulgaria, Latvia, Hungary, Poland, Romania and Slovakia) has a high attractiveness of foreign direct investments, while few agglomerated regions in Poland and Slovakia ("the smart and creative diversification") are strongly endowed with creativity and attractiveness that help to absorb knowledge and to adapt it to local innovation needs.

#### **The intermediate regions**

The intermediate regions can be found in the Czech Republic, Croatia, Hungary and Lithuania, but also in the capital regions of Bulgaria, Romania and Poland. The regions in this group are characterized as being "low-to-medium" income economies (Dory, 2008), whose model of integration was based on "static" relative advantages, i.e. lower costs in all production factors (Muller et al., 2006). They benefit highly from the relocation of European industries (Dory, 2008) or from the above average accessibility to knowledge in the case of metropolitan areas; as such, they are undergoing a strong structural change, thus being labeled as "re-industrializing regions", "restructuring industrial regions" (Dory, 2008), "skilled manufacturing platforms" (Muller et al., 2006), "smart technological application areas" (Camagni and Capello, 2012) or "public knowledge centres" (Wintjes and Hollanders, 2010) in the case of capital regions. Intermediate regions have moderate knowledge creation capacities (Muller et al., 2006) – they are "modest innovators" according to Hollanders and Es-Sadki (2017). The public knowledge base is fairly strong, the medium – to – high manufacturing sectors have taken a larger role in the economy and the quality of human resources is substantially higher than in the case of the lagging-behind regions (Dory, 2008). Even if the R&D performance is still modest when compared to the European strong innovators, intermediate regions ("moderate innovators") have well-above the EU average performances across a number of indicators – i.e. non-R&D innovation expenditures, trademark applications and sales due to new-to-market and new-to-firm innovations (Hollanders and Es-Sadki, 2017), which is pivotal in explaining their relatively high non-R&D innovation performances. Moreover, according to Camagni and Capello (2012), such regions have a high creativity, which could allow translate external knowledge into innovation.

### **Advanced regions**

Estonia, Slovenia and the capital regions of the Czech Republic (Prague), Hungary (Budapest) and Slovakia (Bratislava) are the sole regional "pockets of excellence" that can be identified at the CEE level. By far, the Prague region is ranked the highest in almost all the proposed typologies and the Regional Innovation Scoreboard 2017 highlights the fact that its innovative performance is 75% higher than of the lowest performing region in the Czech Republic (CZ04) (Hollanders and Es-Sadki, 2017). According to Camagni and Capello (2012), Prague and Estonia are "the notable exceptions" at East that belong to the "Applied science area", which is made of strong knowledge production regions, with a high degree of knowledge coming from regions with a similar knowledge base. At the same time, the capital regions of Slovenia and Slovakia are classified as "regional strong innovators", while Budapest, the capital region of Hungary is a "regional moderate innovator+" (Hollanders and Es-Sadki, 2017). According to Muller et al. (2006), the capital regions can be seen as "service centres" of other regions and the "elements for future knowledge-based Europe", as they have a higher proportion of high-tech services and a higher share of population with tertiary education; yet, they have not developed so far as knowledge providers to the global economy.

### **4. Discussions and conclusions**

Developing regional typologies of innovation is not a purpose in itself, but a mean to identify differentiated policy responses and to abandon the "one-size-fits-all" solutions, which are proved to fail to yield the anticipated results (Todtling and Trippl, 2005). There is a large consensus in the literature that the factors shaping the economic performance of regions with variable levels of development differ considerably (Rodriguez-Pose and Ketterer, 2018). As such, different specific policy recommendations reside from the proposed typologies, all acknowledging the fact that "strong growth is possible in all types of regions" (OECD, 2012).

#### **Address first the macro-structural weaknesses.**

Most of the proposed typologies agree with the idea that the lagging-behind regions need to achieve "a certain degree of maturity" to be able to put in place innovation-based regional development strategies (Dory, 2008). Such regions "appear as requiring cohesion policy efforts rather than scientific excellence" (Muller et al., 2006), so they need to reduce first gaps in physical and digital infrastructure (EC SWD, 2017). As among the less developed regions, those growing faster than the national average appear to have more infrastructure (OECD, 2012), tackling the infrastructure deficit should be addressed in the early stage of any development strategy, on condition that the aid is limited in time and is matched to similar efforts to enhance human resources (Rodriguez-Pose and Ketterer, 2018). Non-science and technology driven regions need also support the socio-economic transformations (OECD, 2011), restructure "the obsolete industrial structure" and bring a change into the local economy (Navarro et al., 2009). Developing "niche strategies" for industrial development and finding general schemes of development – e.g. a shift to organic-food sectors, manufacturing-based upgrading, improvement of service-related technologies etc. – are among the recommended actions for the lagging-behind agricultural regions and for the industrially challenged regions (Muller et al., 2006). Not last, improving the regional business environment should be considered, to stimulate the smaller and less productive firms in the lagging-regions (Farole et al., 2018).

#### **Invest in human capital and skills and improve the regional absorption capacity.**

Evidence on long-term economic dynamics of the EU regions shows that human capital is one of the strongest predictors of regional growth for any type of region. Yet, the

positive effect on economic growth of highly educated people is found to be stronger in the less developed regions of EU13 (Central and Eastern European countries plus Cyprus and Malta) than in the rest of Europe (Annoni and Rubianes, 2016). The skilling of the workforce should therefore be a preeminent element of any development strategy; otherwise, as stated by Rodriguez-Pose and Ketterer (2018), "without a properly trained workforce, many low-income regions in many Europe may remain stuck among the innovation averse and even become low-growth in time". Investing in skills should therefore be "a no-regrets policy" for the lagging regions (Farole et al., 2018), which should reinforce access to know-how and long-life learning (Muller et al., 2006), reverse the trend of out-migration of the younger and more educate population (EC SWD, 2017) and acknowledge the crucial roles of universities and providers of vocational education and training in the less developed innovation ecosystems (EC COM, 2017). What is also important to note is the fact that in the case of lagging regions, reducing the proportion of persons with very low skills seems more important than increasing the share of high skills levels (OECD, 2012) because, as explained by Annoni and Rubianes (2016), a high share of the labour force without an upper secondary education has a negative impact on regional economic growth. Meanwhile, according to Camagni and Capello (2012), it is also important to orient the investments towards the knowledge domains in which the region hopes to excel and not towards general education and training policies.

#### **Adopt the broader view of innovation and focus on technology adoption and absorption.**

There is a large consensus in the literature that "R&D support is not the most natural goal" for peripheral, lagging regions (Dory, 2008), as R&D proves to matter more in regions close to the productivity frontier (OECD, 2012). Such regions are highly recommended to "target the broader process of knowledge generation" (Blazek and Kadlec, 2018) and to focus more on technology adoption and absorption, which are more important than R&D (Annoni and Rubianes, 2016). For example, the imitative innovation regions are expected to gain maximum return to innovation from providing incentives to attract multinational corporations and to encourage them to develop creative projects with local firms (Camagni and Capello, 2012); similarly, non-science and technology regions are recommended to focus on innovation diffusion and attract branches of national research organizations, while trying to develop a latent demand for innovation (OECD, 2011). Enhancing the private technology and improving the system of technology intermediaries (i.e. technology centers) are also included among the desirable policy options (Wintjes and Hollanders, 2010). Other crucial factors for such regions are to reach a critical mass of activities and concentrate on endogenous strengths (Dory, 2008), to improve the interactions among businesses and between the productive sector (EC SWD, 2017) and to capitalize more from involvement in EU learning networks (Navarro et al., 2009). To this end, strengthening the ability to ensure access to national and supranational funding (Muller et al., 2006) is of a crucial importance.

#### **Improve institutions and governance and implement smart specialization strategies.**

Smart specialization emerges as the new innovation policy paradigm at the European level, whose main purpose is to ensure that "public resources are targeted at areas which are likely to bring the best returns in terms of raising the innovation level in all parts of Europe" (EC COM, 2017). Smart specialization is particularly relevant for the less developed regions, as its purpose is to address the weaknesses in innovation systems, i.e. the weak governance, the insufficient levels of information flows, inter-regional collaboration, integration in global value chains etc. Strengthening institutional endowments and the regional administrative capacity is seen as "fundamental to expanding

regional potential” (Farole et al., 2018) and to establishing an environment that ”is conducive to growth and investments” (EC SWD, 2017). Such regions are strongly encouraged to take a collective effort of self-assessment using participative approaches (Muller et al., 2006), to establish new institutions - e.g. consultancy services and innovation management for small and medium enterprises (Navarro et al., 2009) and to launch ”a gradual process of policy learning” (Blazek and Kadlec, 2018).

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**Annex I**  
**Categorisation of CEE regions by economic status and RDI score & status**

NUTS 2 2013*	NUTS 2 2016*	Economic status** EC 2014, EC SWD 2017	Dory 2008	Muller et al. 2006	Navarro et al. 2009	Wintjes & Hollanders 2010	Marsan & Maguire 2011	Camag-ni & Capello 2012	Hollanders & Es-Sadki 2017	RDI Status Blazek & Kadlec, 2018	RDI Score ***
<b>(BG) Bulgaria</b>											
BG31	BG31	LDR-LI	A	B	N/A	E	N/A	A	B	N/A	2,20
BG32	BG32	LDR-LI	A	B	N/A	B	N/A	A	B	N/A	1,60
BG33	BG33	LDR-LI	A	B	N/A	E	N/A	A	B	N/A	2,20
BG34	BG34	LDR-LI	A	E	N/A	B	N/A	A	B	N/A	2,20
BG41	BG41	LDR	A	B	N/A	E	N/A	A	D	N/A	2,60
BG42	BG42	LDR-LI	A	B	N/A	B	N/A	A	D	Public	2,00
<b>(CZ) Czech Republic</b>											
CZ01	CZ01	MDR	G	E	H	E	G	D	G	Public	6,14
CZ02	CZ02	LDR	D	C	B	B	C	B	F	Private	3,14
CZ03	CZ03	LDR	D	C	B	B	C	C	F	Mixed	3,29
CZ04	CZ04	LDR	D	B	B	B	C	B	F	Private	3,00
CZ05	CZ05	LDR	D	C	B	B	C	C	F	Private	3,29
CZ06	CZ06	LDR	D	C	C	B	C	C	F	Mixed	3,43
CZ07	CZ07	LDR	D	C	B	B	C	C	F	Mixed	3,29
CZ08	CZ08	LDR	D	B	B	B	C	C	E	Private	3,00
<b>(EE) Estonia</b>											
EE00	EE00	LDR	G	D	C	B	N/A	D	E	Public	4,17
<b>(HR) Croatia</b>											
HR03	HR03	LDR	N/A	N/A	N/A	N/A	N/A	B	D	N/A	3,00
HR04	HR04	LDR	N/A	N/A	N/A	N/A	N/A	B	D	N/A	3,00
<b>(LV) Latvia</b>											
LV00	LV00	LDR	A	D	A	B	N/A	A	E	Public	2,33
<b>(LT) Lithuania</b>											
LT00	LT01 LT02	LDR	A	D	A	B	N/A	B	E	Public	2,50
<b>(HU) Hungary</b>											
HU10	HU11 HU12	MDR	G	E	D	E	D	A	F	Mixed	4,57
HU21	HU21	LDR	D	B	B	B	C	A	E	Private	2,71
HU22	HU22	LDR	D	B	B	B	C	A	D	Mixed	2,57
HU23	HU23	LDR-LI	D	C	A	B	B	A	D	Mixed	2,43
HU31	HU31	LDR-LI	D	B	B	B	B	A	D	Private	2,43
HU32	HU32	LDR-LI	D	C	A	B	B	A	D	Mixed	2,43
HU33	HU33	LDR-LI	D	C	A	B	A	A	E	Mixed	2,43
<b>(PL) Poland</b>											
PL11	PL71	LDR	A	D	A	B	A	B	D	Public	2,14
PL12	PL91 PL92	MDR	A	E	C	E	A	B	E	Public	3,14
PL21	PL21	LDR	A	D	A	B	A	B	D	Public	2,14

PL22	PL22	LDR	D	C	A	B	B	B	D	Public	2,57
PL31	PL81	LDR-LI	A	D	A	B	A	A	C	N/A	1,86
PL32	PL82	LDR-LI	A	A	A	B	A	A	D	Private	1,57
PL33	PL72	LDR-LI	A	A	A	B	A	A	A	Public	1,14
PL34	PL84	LDR-LI	A	A	A	B	A	A	B	Public	1,29
PL41	PL41	LDR	A	D	A	B	A	B	C	Public	2,00
PL42	PL42	LDR	D	B	A	B	B	B	C	N/A	2,29
PL43	PL43	LDR	D	B	A	B	A	B	B	Public	2,00
PL51	PL51	LDR	D	D	A	B	B	B	D	Public	2,71
PL52	PL52	LDR	A	B	A	B	A	A	B	Public	1,43
PL61	PL61	LDR	A	B	A	B	A	A	B	Public	1,43
PL62	PL62	LDR-LI	A	B	A	B	A	A	B	N/A	1,43
PL63	PL63	LDR	D	D	A	B	B	B	D	Public	2,71
<b>(RO) Romania</b>											
RO11	RO11	LDR-LI	A	A	N/A	B	N/A	A	A	Public	1,20
RO12	RO12	LDR	A	A	N/A	B	N/A	B	A	Public	1,40
RO21	RO21	LDR-LI	A	A	N/A	B	N/A	A	A	Mixed	1,20
RO22	RO22	LDR-LI	A	A	N/A	B	N/A	A	A	N/A	1,20
RO31	RO31	LDR-LI	A	A	N/A	B	N/A	A	A	Private	1,20
RO32	RO32	MDR	D	E	N/A	E	N/A	B	C	Public	3,80
RO41	RO41	LDR-LI	A	A	N/A	B	N/A	A	A	N/A	1,20
RO42	RO42	LDR	A	A	N/A	B	N/A	B	A	Public	1,40
<b>(SI) Slovenia</b>											
SI03	SI03	LDR	G	N/A	C	D	N/A	C	F	Public	4,60
SI04	SI04	MDR	G	E	C	D	N/A	C	G	Mixed	5
<b>(SK) Slovakia</b>											
SK01	SK01	MDR	G	E	F	E	E	B	H	Public	5,57
SK02	SK02	LDR	D	B	B	B	C	A	E	Public	2,71
SK03	SK03	LDR	D	B	B	B	B	A	E	Public	2,57
SK04	SK04	LDR	D	C	B	B	B	A	F	Public	2,86

Source: authors' elaboration

\* NUTS2 (2013) are used in all the classifications presented in this paper; NUTS2 (2016) are used to configure Map 1 and Map 2;

\*\* LDR = less developed region; LDR-LI = less developed, low-income regions; MDR = most developed regions

\*\*\* The RDI score represents the average values resulted from all the classifications, where A=1, B=2, C=3, D=4, E=5, F=6, G=7, H=8



# TOURIST GUIDE - AN INTERFACE TO DISCOVER THE TOURIST DESTINATIONS

Lecturer Ph.D. Alina SUSLENCO

”Alec Russo” State University of Bălți, Republic of Moldova  
E-mail: alina.suslenco@mail.ru

**Abstract:** *The conceptual aspects were analysed in the present paper, as well as the methodological aspects of the role and importance of the tourist guide in the discovery of the tourist destinations. In this context, we have to mention that representative aspects that outline the role of the tourist guide, as well as the evolution of tourist guides in the Republic of Moldova, were investigated in the work. For these reasons, there have been reviewed issues related to the evolution of tourist guides in Moldova, the legislation regulating the work of tourist guides in Moldova, as well as the importance of qualified guides for the development of the tourism sector. The methodology used in this paper focused on the following methods: analysis, synthesis, induction, deduction, comparative analysis. In conclusion, we must mention that tourist guides are the vectors of tourism development within tourist regions, in discovering the beauties of tourist destinations.*

**Keywords:** *tourist guide, tourist destinations, tourism, tourist routes, the importance of tour guides.*

**JEL Classification:** *L83, Z32, Z31.*

## 1. Introduction

Today’s tourism has become an activity that acquires new values and shapes its position and occupies a special place in the countries of the world. Tourism becomes the pillar of the visibility of a country, the bearer and the magnet of the attractiveness, investors, and tourists of the country. For these reasons, tourism, in the era of globalization, of the internationalization of market relations has become a country-level interface. That is why many countries pay particular attention to boosting tourism development as a branch of national economies. From this perspective, we have to mention that tourism is becoming more attractive because people want to travel, visit the world, visit different tourist destinations.

## 2. Content

A special place in increasing the attractiveness of tourism and the country as a tourist destination belongs to actors such as tourist guides that help people in organizing tourist routes in visiting various tourist destinations. Therefore, in order to facilitate the development of tourism, the necessity to have tourist guides has risen. The tourist guides facilitate the communication with the tourists who visit certain interesting places and to support the tourist’s knowledge of the tourist destinations, certain historical data, curiosities about the tourist attractions within the tourist trails. For these reasons, there has been a need to investigate the location, role and importance of tourism guides.

If we are to analyze the tour guides then we have to say that according to the legislation of the Republic of Moldova in the tourism sector, especially the Tourism Law no. 352 of 24.11.2006 the tourist guide is “a physical person who accompanies a visitor or a tourist group and grants them, within the limits of the tourist services contract, qualified assistance, providing information about the country (locality) of arrival, its natural and anthropic heritage” (Official Monitor, 2007).

From the analysis of this definition we observe that the tourist guide is the person who makes the connection, informs tourists about the tourist objectives, explains them and tells them about the places visited, their curiosities. From here, we can notice that the tourist guide is the tourist destination interface because if the tourist guide does not know the tourist destination well, the tourist will also not be able to know the interesting elements about this destination. Therefore, we can conclude that the travel guide represents

the destination itself, explains it and reports the most interesting facts about it. In this sense, the tourist guides must be present on both national and international tourist routes, organized by travel agencies. With the help of their work, destinations, tourist attractions and many interesting things can be discovered.

If we are to analyze the legislation in Romania, then we must mention that according to the Romanian Tourism Act, the tourist guide “is a natural person authorized to coordinate and ensure the development of tourist programs, based on the certificate issued by the authority of the central public administration responsible for tourism” (Official Monitor, 1998).

The analysis of this definition shows that the tourist guide is an authorized person, who has passed testing and has a document that attests and gives him/her the opportunity to act as a tourist guide. This definition highlights the fact that travel guides are responsible for the organization of tourist programs, that is, they are the persons who, depending on the needs, requirements, wishes and expectations of the tourist or tourists from a tourism program, will organize and run this program. It is noticeable that the tourist guide is a creative person who assumes the obligation to know the tourist destination to make a tourist program and to offer the tourist the opportunity to be served qualitatively.

If we are to analyze the definition of tourism guides by the World Federation of Travel Guides Associations, the concept of travel guide sounds like this: „*Tourist Guide is a person who guides visitors in the language of their choice and interprets the cultural and natural heritage of an area which person normally possesses an area-specific qualification usually issued and/or recognized by the appropriate authority*” (Ghid Local, 2017).

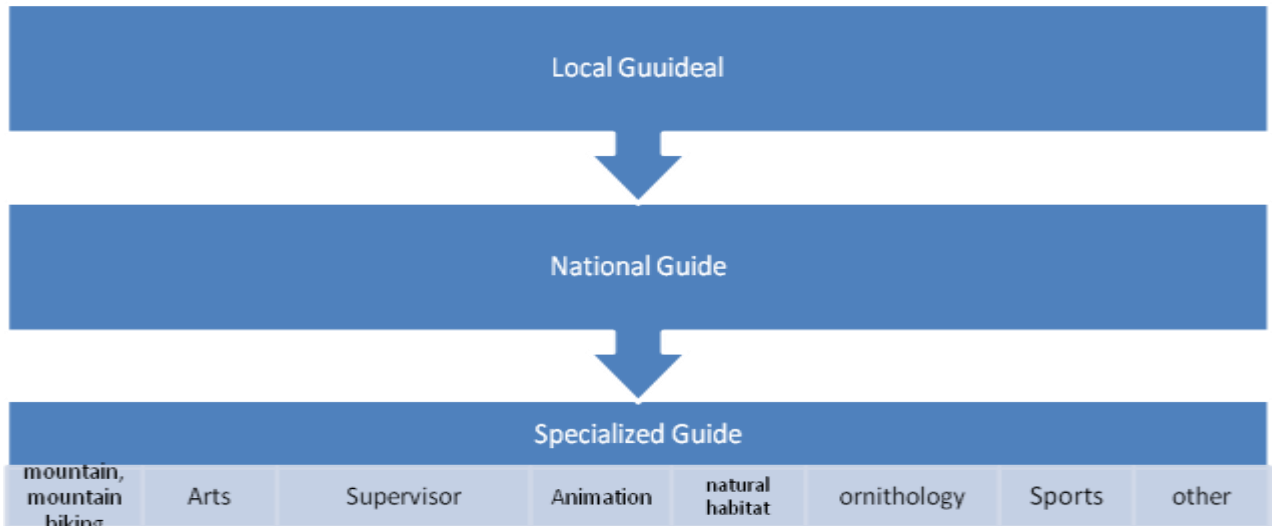
From the analysis of this definition we observe that the tourist guide is a person who guides the tourist in knowing a destination. This is a competent person who knows the language of the tourist and can serve it qualitatively by helping him to discover that destination. Besides, this definition puts emphasis on the need to qualify this tourist guide, i.e. to have a document that would attest this qualification. It should be noted that as tourist guides there must serve those persons who are competent, who have certain capacities and who have been certified by the competent persons.

If we are to analyze the method of attesting the tourist guides, then we need to review the existing rules of attestation and use of the tourist guides in Romania. According to these norms in Romania there are the following categories of tourist guides, shown schematically in Figure 1. From the analysis of the Figure 1. it can be noticed that according to these norms there are 3 categories of tourist guides: local, national and specialized guides (Government of the Republic of Moldova, 2003).

*The local guide* - is concerned with serving tourists, managing, informing, advising them on a given territory - there is an issue regarding this item as it is not known the territories belonging to these categories, i.e. it is not known whether a guide from the Northern Zone of Moldova will be able to provide the tourist services on the touristic route which also includes some tourist destinations in other areas.

*The national guide* - is the person who helps to conceptualize, inform, advise tourists in a particular country, that is, knows all the destinations, the touristic objectives, the tourist routes in that country.

*The specialized guide* - is the person who advises, helps the tourist in knowing some specific tourist objectives, such as: mountain, art, animation, natural habitat, sports, others. The knowledge that this category of guides possess, strictly corresponds to this category of classification to which he/she belongs (Government of the Republic of Moldova, 2003).



**Figure 1. Classification of tourist guides**

Source: developed by the author on the basis of the Norms regarding the conditions and criteria for the selection, training, certification and use of tourist guides in Romania

From the analysis of the given norms, we can mention that as a guide can activate any individual who holds a certificate of tourism.

Tourist guides' professional training can take place in:

- higher education institutions;
- within the grownup vocational training system (Government of the Republic of Moldova, 2003).

Consequently, we can observe that tourist guides can be trained either in Romanian higher education institutions or in some existing training systems of tourist guides.

According to the conforming methodological norms, the attestation of the tourist guide is the document issued by the Ministry of Transport, Construction and Tourism, which confirms the professional capacity of the qualified individuals in the tourist guide profession to work in one of the categories of tourist guides, defined in the present methodological norms" (Government of the Republic of Moldova, 2003).

According to these methodological norms, we observe that the tourist guide activity can only be done and performed if the individual holds this attestation confirming his/her skills and training for one of the guides listed above.

Tourist guides can be employed within the travel agencies that organize different touristic tours, national or international touristic programs and are hired as travel guides.

The person in possession of the tourist guide attestation can work on his/her own without being employed by a travel agent.

According to the methodological norms "the travel guide badge is issued by the Ministry of Transport, Construction and Tourism through the National Authority for Tourism" (Government of the Republic of Moldova, 2003).

According to the norms given in some cases the travel guide attestation can be withdrawn.

Therefore, if it is found that more than 5 complaints have been registered which, as a result of verification by the control officers of the Ministry of Transport, Constructions and Tourism are found to be well grounded, the measures of withdrawal of the tourist guide attestation can be undertaken (Government of the Republic of Moldova, 2003).

In order to select suitable persons for professional qualification courses for the profession of a *local tourist guide*, the applicant must meet the following requirements, shown schematically in Table 1.

**Table 1. Mandatory requirements to be certified as a travel guide in Romania**

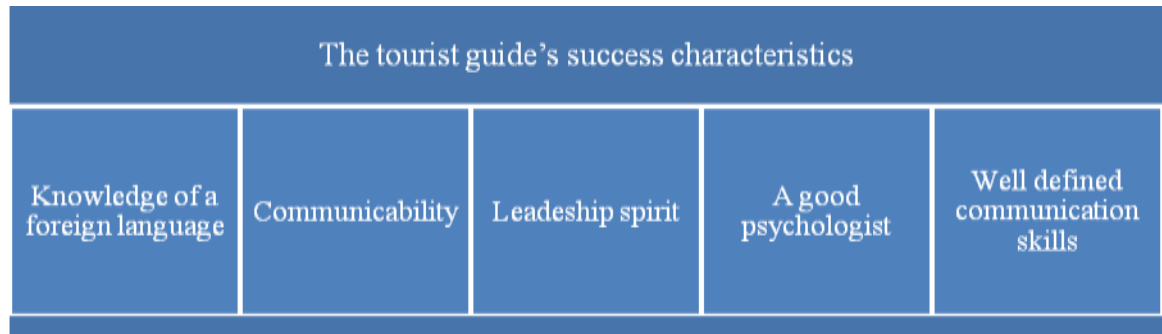
Requirements for local tourist guides	Requirements for national and specialized tourist guides
<ol style="list-style-type: none"> <li>1. to have the minimum age of 18 years old and the maximum age of 65 years old;</li> <li>2. to have at least Bacalaureate high school education;</li> <li>3. have not been convicted (fact proved by the criminal record certificate);</li> <li>4. to be medically fit for the tourist guide profession (clinically and mentally healthy, without physical impairments, speech or hearing impairment);</li> <li>5. to have reasonable knowledge of at least one foreign language of international circulation, proven by a certificate of knowledge of a foreign language, for Romanian individuals and a certificate of knowledge of the Romanian language, for foreign natural persons;</li> <li>6. to have knowledge of general culture/ awareness proven by a verification test.</li> </ol>	<ol style="list-style-type: none"> <li>1. to have the professional qualification for the tourist guide profession;</li> <li>2. to have at least Bacalaureate high school education;</li> <li>3. to have the minimum age of 18 years old and the maximum age of 62 years old for the specialized tourist guide and 65 years old for the national tourist guide;</li> <li>4. have not been convicted (fact proved by the criminal record certificate);</li> <li>5. to be medically fit for the tourist guide profession (clinically and mentally healthy, without physical impairments, speech or hearing impairment);</li> <li>6. for the category of specialized tourist guide they must possess thorough theoretical and practical knowledge specific to the category of specialized chosen tourist guide position;</li> <li>7. to have reasonable knowledge of at least one foreign language of international circulation, proven by a certificate of knowledge of a foreign language;</li> <li>8. to have knowledge of general culture/ awareness proven by a verification test..</li> </ol>

*Source:* developed by the author on the basis of the Norms regarding the conditions and criteria for the selection, training, certification and use of tourist guides in Romania

According to the statistical data from Romania, there are 3790 certified tourist guides, which have passed all certifications and have been certified as tourist guides and bear tourist badges (TravelBlog, 2018). Only 10% of them practice this profession. Most of them have a work experience of no more than half a year (TravelBlog, 2018).

In the opinion of several guides working in this field, the tourist guide must have several qualities that ensure his/her success in this profession, such as: communicability, punctuality, knowledge and skills in the field of leadership (Acasa.Ro, 2018). In addition to these qualities, a good tourist guide must also be a good psychologist, that is to have the opportunity to intrude the tourist's expectations, to convince him/her, wherever the need arises (Ghid Local, 2017).

The tourist guide's success characteristics are schematically shown in the Figure 2.



**Figure 2. The tourist guide's success characteristics**

Source: adapted by the author based on several tourist guides' opinions

According to the latest statistical data published in Romania there are 10 associations of guides that offer new information, among which we highlight:

- National Association of Guides in Romania;
- „Banat-Crișana” Association of Guides;
- Association of professional guides from the Danube Delta (National Bureau of Statistics of the Republic of Moldova, 2018).

Thanks to these associations, guides meet, discuss, make decisions on issues that arise during their activity.

In Moldova, there are about 40 tourist guides, who know the routes to the national tourist attractions and are employed by tour operators and travel agencies of the country (Nedelea, A., 2003).

Besides these, there are some 324 local guides who are employed by 108 museums and practice, on request, extra-museum excursions to some attractions specific to the tourist area. Thus, within 30 km from any tourist destination in Moldova, a local guide can be employed (Nedelea, A., 2003).

The guides work on the basis of individualized tourist routes, where 200 objectives are to be visited in Chisinau and in the republic. The topics of the trails are, as a rule, knowledge of the native land or biographies of some personalities. Some landmarks with tourist potential (wineries, monasteries, scientific reservations) have local guides hired to inform visitors, who are trained and attend special courses or are self-taught. They are only available for excursions concerning their own attractions and can be hired by any group of visitors, following a pre-coordinated request (Ghid Local, 2017).

In order to identify the success components, the role and importance of tourist guides in the dynamism of tourist flows, we decided that it would be useful to carry out a research that will help us to see how optimal and timely are the services provided by the tour guides.

The *aim of the research* is to identify the success characteristics, the role, the importance of tourist guides in the development of tourism.

The *specific objectives of the research*, which will help to achieve the general goal of the research are:

- identifying the main features that characterize a professional tourist guide;
- analysis of respondents' opinion on the importance of tourist guides in providing tourists support;
- analysis of the role of tourist guides in the intensification of tourist flows;
- identifying suggestions for Moldovan tourist guides.

*The Research Tool*

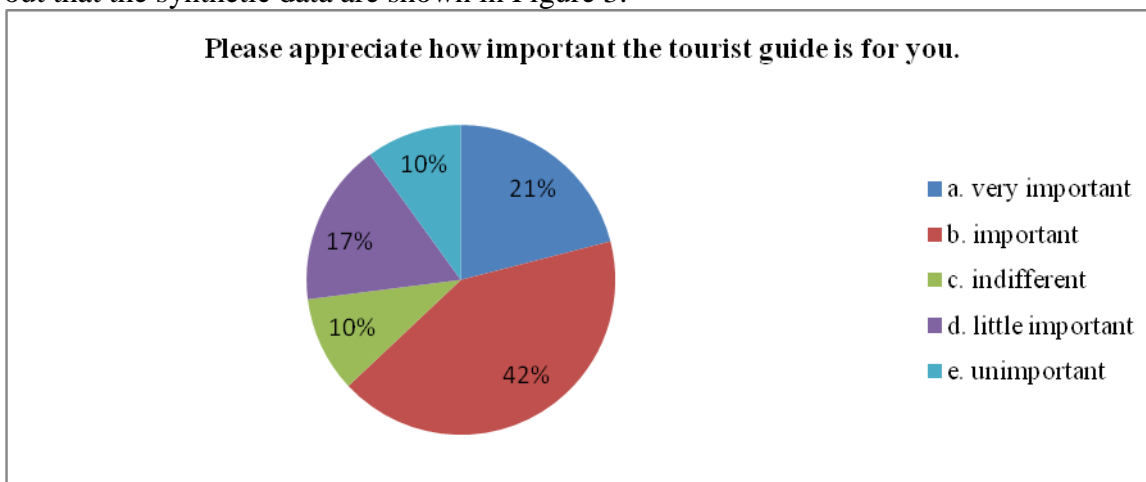
The questionnaire is the research tool used in this investigation.

*The Population and the sample*

The subjects of the research are the tourists who return from the holidays from Bulgaria with the buses of transport companies. These subjects were selected to be able to find out their views on the work of the tourist guide from the bus and his/her relevance, the help that was provided by the tourist guide for travellers.

*Presentation of the results*

In this context, by analysing the first question of the questionnaire, we must point out that the synthetic data are shown in Figure 3.

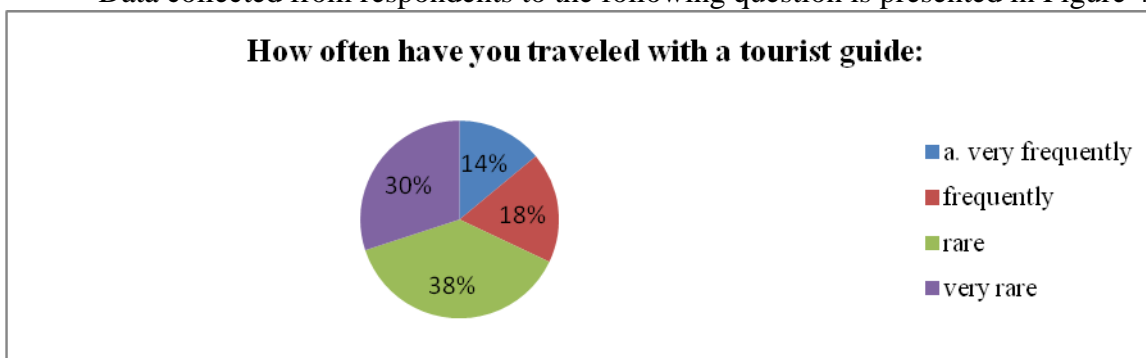


**Figure 3. Analysis of respondents' answers**

Source: Elaborated based on analysis of survey data

From the data presented in Figure 3, it is observed that most of the survey respondents 42% believe that the tourist guide is important for their life, and 21% noted that the guide is very important, for 17% the tourist guide is a little important, and 10% of the interviewed tourists are indifferent or the tourist guide is not important for their lives. From the analysis of the data obtained for this question, we can see that most of them have a positive attitude and are aware of a positive influence of tourism on their life.

Data collected from respondents to the following question is presented in Figure 4.



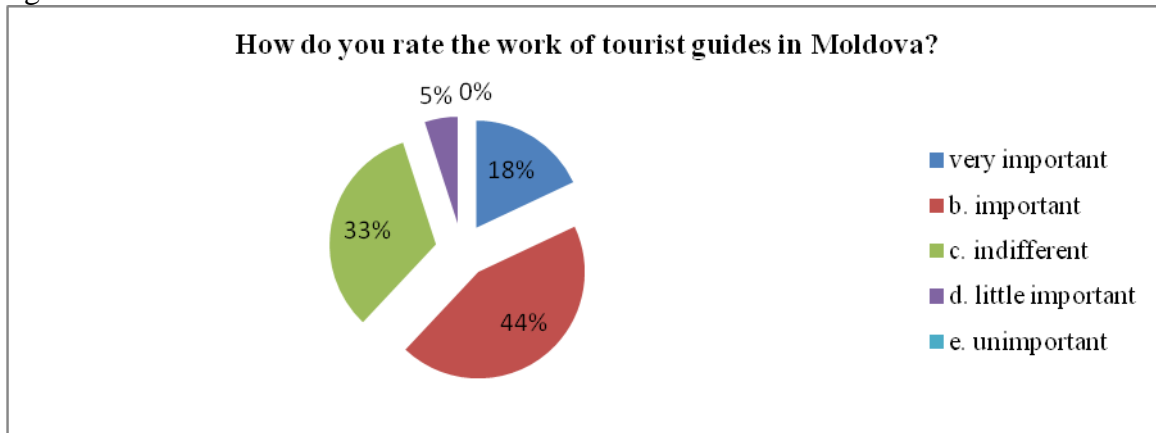
**Figure 4. Analysis of respondents' answers**

Source: Elaborated based on analysis of survey data

From the data presented in Figure 4. it can be noticed that the tourists participating in the study resort to the services of a different tourist guide, 38% of the respondents noted that they rarely travelled with a tourist guide, 30% noted that they rarely travelled with a tourist guide, 18% noted that they often travel with a tourist guide and only 14% of the survey respondents noted that they often travelled with a tourist guide. This shows that the Moldovan population is not ready to use the travel guides services because, besides a

supplementary budget, the tourist guide also requires free time, availability and motivation, which not all the tourists have.

The data collected from the respondents to the survey next question are presented in Figure 5.

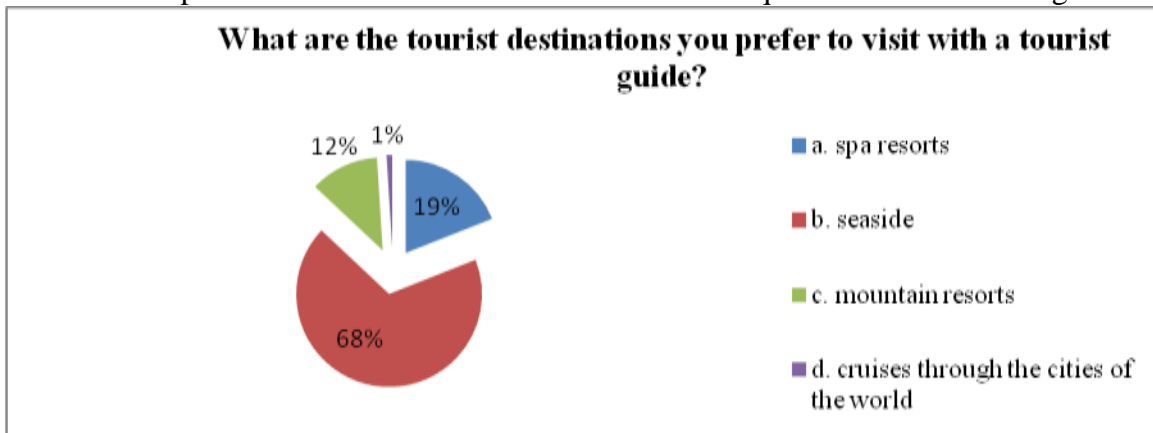


**Figure 5. Analysis of respondents' answers**

Source: Elaborated based on analysis of survey data

The analysis of the data collected to this question we can observe that the majority of the survey respondents 44% think that Moldovan tourist guides are important, while 33% of respondents are indifferent to the work of the tourist guides in Moldova and 18% of respondents have noted the fact that the work of tourist guides in Moldova is very important and 5% of respondents consider the work of tour guides of little importance.

The representation of the data collected in the next question is shown in Figure 6.

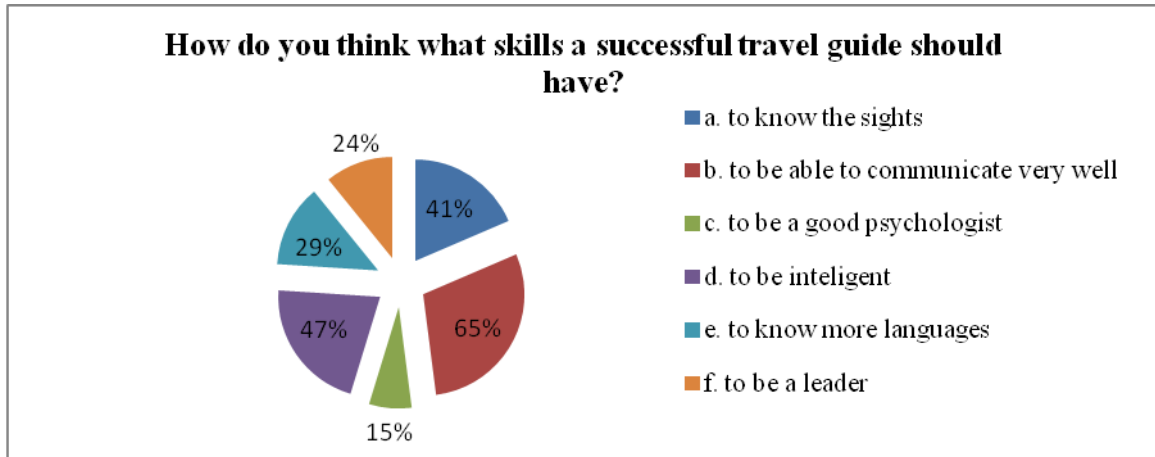


**Figure 6. Analysis of respondents' answers**

Source: Elaborated based on analysis of survey data

From the analysis of the data presented in Figure 6 it can be noticed that the tourists who have been surveyed prefer to go to rest with a tourist guide in such destinations as the seashore, which is noted by 68% of the respondents, the spa resorts that scored 19% of the respondents, and 12 % noted that they prefer mountain resorts, while only 1% said they preferred cruises through the cities of the world. This indicates that Moldovan tourists prefer the sea as a way of rest and relaxation along with a tourist guide.

The analysis and presentation of the results collected in the next question are shown in the figure 7.

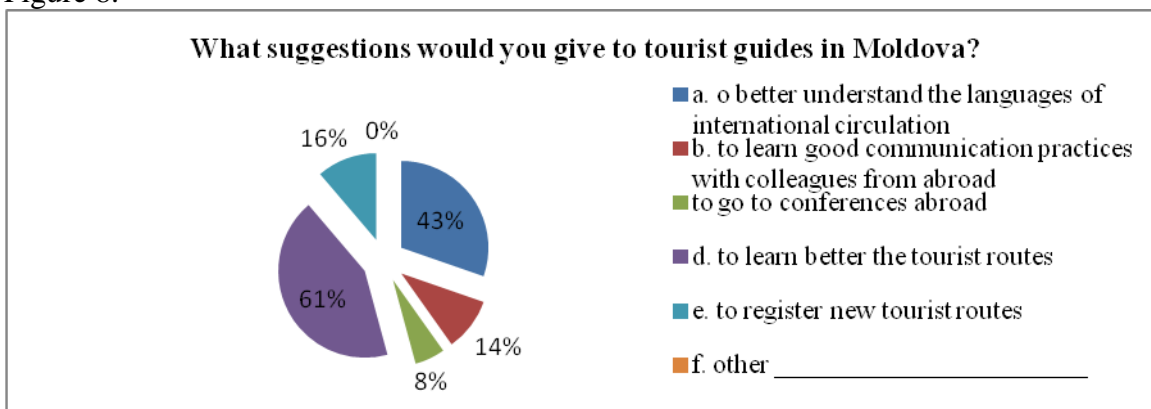


**Figure 7. Analysis of respondents' answers**

Source: Developed by the author based on data processing

From the analysis of Figure 7, it can be seen that the majority of the respondents 65% think that a main success characteristic of a good tourist guide is to be able to communicate very well, 47% of the respondents noted that a good guide should be intelligent, and 41% of the respondents noted that a good guide must know well the tourist objectives/ destinations, and 29% of all survey respondents think that the tourist guides need to know more languages. Moreover, only 15% of the respondents think that a good tourist guide must be a good psychologist.

A summary of the data collected to the next question of the survey is presented in Figure 8.



**Figure 8. Analysis of respondents' answers**

Source: Elaborated based on analysis of survey data

From the analysis of the centralized data to the thirteenth question of the questionnaire it is observed that 61% of the survey respondents believe that Moldovan tourist guides need to learn better Moldovan tourist routes, and 43% said that it would be good that Moldovan tourist guides better understand the languages of international circulation. In addition to these suggestions, there were other proposals from respondents of the survey, as 16% of respondents noted that the tourist guides must record the tourist routes, and 14% noted that it would be good if Moldovan tourist guides learn from good practices from other foreign colleagues. In addition to this, a suggestion was made to go to conferences abroad.



### 3. Conclusions

After presenting the results of the research carried out, it can be noticed that the tourist guides play an important role in the tourists' life. In addition to this, the present research has made it possible the identification and analysis of the characteristics that define a successful tourist guide. Thus, it has to be mentioned that this research was useful for reaching the goal of the research and the objectives assumed. If we go back to the research goal of "identifying the successful features, the role of tourist guides in the development of tourism", then we have to mention that it was achieved because the given research revealed the features, the role and the importance of the tourist guides.

If we are to analyse the first objective of the research "identifying the main features that characterize a professional tourist guide" then it should be noted that this objective was achieved because the questions that were included in the questionnaire and addressed to the respondents highlighted the most important features of tourist guides that ensure their success in the 21<sup>st</sup> century.

If we go back to the second objective of the research, "the analysis of the respondents' opinion regarding the importance of tourist guides in providing tourist support", this objective was reached because the respondents' answers to the questions of the survey revealed the role of the tourist guide and his/her importance for tourists.

Analysing the third objective of the research "analysis of the role of tourist guides in the intensification of tourist flows", we can mention that this objective was achieved because of the questions that were included in the questionnaire and the answers received from the surveyed respondents.

Returning to the fourth objective of the research "identifying the suggestions for Moldovan tourist guides", this objective was achieved because after conducting this research, some suggestions for Moldovan tourist guides were identified and highlighted in order to improve and develop their work.

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## ILLICIT FINANCIAL FLOWS AND CORRUPTION - THE ACTUAL MAJOR PROBLEM

**Associate Professor Ph.D. Ivan LUCHIAN**

International Institute of Management IMI-NOVA, Republic of Moldova

E-mail: luchian\_ivan@mail.ru

**Researcher Victoria IORDACHI**

National Institute of Economic Researches, Republic of Moldova

E-mail: timush\_v@yahoo.co.uk

**Abstract:** *Illicit financial flows represent a form of capital circulation at local and international level, forming the circulation of financial assets of dubious origin. Their generators are various multinational corporations, corrupt officials, tax evaders, criminal entrepreneurs, etc. Illicit financial flows have diverse forms, including capital flight, money laundering, informal flows and classified financial entities such as tax havens, coming from different areas - shadow economy, tax evasion, and corruption. Conducted studies have shown a strong bilateral link between illicit financial flows and corruption. Corruption generates illicit financial flows and contributes to legalization of illicit money by different money laundering schemes at local and international level. Studies also demonstrated the importance as a catalyst of the quasi-corruption phenomenon. Both corruption and illicit financial flows have a negative impact on economic development, especially in developing countries. With a high level of poverty, countries annually illegally lose financial resources that could help solve their internal problems. As an eloquent example, this article relates the case of the Republic of Moldova. Endemic corruption of systemic character has a destructive economic, financial and social influence in Moldova, favouring the illegal money exodus.*

**Keywords:** *illicit financial flows, capital circulation, capital flight, tax evasion, corruption, bank system.*

**JEL Classification:** *F21, F32.*

### 1. Introduction

Illicit financial flows have a negative impact on the economy, especially in developing countries, as they reduce tax revenues to finance public services that could have been invested in growth-driven reforms and social investment projects. Illicit financial flows also reduce foreign exchange reserves, thus inhibiting economic growth and the ability of nations to invest in infrastructure and business.

Another destructive impact that could be mentioned is that these flows impede the normal promotion of monetary and foreign exchange policy as they constantly influence the demand and supply of national and foreign currency on the domestic market, increasing inflation and destabilizing the exchange rate, as well as the currency reserves of the country. And in case of their amplification, illicit financial flows are transformed into financial crisis' factors for small economies.

In addition, as beneficiaries of illicit financial flows become richer, they can exert greater influence on policies in the countries in which they operate. This can reduce the ability of governments to adopt transformation policies. Illicit financial revenues reduce tax collection, cancel investments, undermine trade, aggravate poverty and increase income gaps.

### 2. The necessity of studying the problem

According to experts from the Global Financial Integrity, the estimated volume of illicit flows in 2014 ranged from 2 to 3,5 trillion USD (GFI, 2017). The total volume of illicit outflows of money from developing countries was estimated at 620 billion USD in 2014, while the illegal inflows from developing into developing countries reached more than 2,5 trillion USD (Spanjers and Salomon, 2017).

The combined volume of illicit financial flows from 2005 to 2014 amounted to 14,1% -24,0% of the total amount of trade in developing countries for that period. The annual growth rates of these flows were between 8,5% and 10,1% over the period (GFI, 2017).

At the same time, in 2014, outflows oscillated from 620 to 970 billion USD, while the inflows – from 1,4 to 2,5 trillion USD (GFI, 2017).

***The problems of illicit financial flows are amplified by the corruption phenomenon, which statistically can be argued by the following data:***

- According to the calculations made by Tax Justice Network, in 1998-2013, shadow economy representatives together with corrupt officials appropriated and washed about 25 trillion USD. This amount, on which the global financial oligarchy is parasitizing, registers about 50% of the global GDP.

- According to the World Bank calculations, corruption evades from 10% to 30% of the money, which is allocated to finance large investment projects around the world. The study conducted in 127 countries has shown that every seventh operation has become the object of money-laundering schemes. Generally, bribery, abuse of service mandates, theft, and clientelism annually lead to a loss of 3,1 trillion USD, which represents 5,1% of global GDP (Le Bushe, 2016) .

- UN studies show that the global economy's losses due to corruption amounted to 2,6 trillion USD. At the same time, IMF specialists have estimated the total amount of bribes paid in 2015 in a volume of 1,5 - 2 trillion USD, which accounts for around 2% of global GDP.

- In the developing world, the annual amount of bribes received ranges from 20 to 40 billion USD, which represents about 15-30% of the World Bank's official development assistance (OECD, 2014).

- About 15% of global GDP circulates annually through public contracts between the Government and the private sector, and according to international statistics, corruption costs would represent around 20% to 25% of the procurement budget.

- Corruption along with economic crime is becoming an increasingly powerful means of redistributing property and capital, including those of criminal and shadow origin. Economic losses caused by corruption amount between 5% and 50% of some countries' GDP. For example, in Russia these losses amount about 20 billion USD per year. Russia's law enforcement bodies say that criminal structures in some branches (oil, gas, rare metals) spend up to 50% of their profits for bribing civil servants.

All these mentioned facts determine the importance of studying the phenomenon of synergy between illicit financial flows and corruption.

### **3. Essence of illicit financial flows**

***Illicit financial flows are illegal movements of money or capital from one country to another. GFI classifies this movement as an illicit flow when the funds are illegally earned, transferred, and/or utilized*** (GFI, 2017). These flows may involve some gains through legitimate means, such as the profits of a legitimate business, but the money is transferred abroad without being subject to taxation. Illicit outflows are generally provoked by deficiencies in governance, political instability and corruption.

Reed and Fontana (2011) differentiate the following cross-border illicit flows:

- *Informal flows.* Not all informal flows are illicit. Many cross-border flows are transferred in form of legitimate remittances sent home by workers from abroad via unofficial bank systems. Such systems are frequently used due to their simplicity in operating, difficulties faced by people in opening bank accounts or

because the beneficiaries of these flows do not have bank accounts (McCusker, 2005).

➤ *Capital flight.* The term "capital flight" is often used as a synonym for illicit flows. However, capital flight is generally understood as fundraising abroad to ensure a better return or to protect revenues often in response to an unfavourable event or climate in the country of origin. The transfer of funds may be legal or illegal (Kant, 2002). The first, for example, occurs where an investment fund transfers assets from domestic government bonds to safer government bonds in another country, the capital flight will be recorded in the registries of the transferring entity, and the related payments investment can be returned to the country of origin. The illegal withdrawal of capital tends not to be registered and usually comes from illegal activities - illicit flows.

➤ *Money laundering* is a process of disguising the source of income derived from crime to make it appear legal. Money laundering is a specific legal concept that only includes the income of a set of criminal offenses that are defined by the laws of a particular country. Money from other offenses cannot be considered as the object of money laundering in that country, although these funds could be illegal in essence. This is important from a practical point of view because the money laundering regimes suffer from the fact that the range of offenses that can be based on money laundering varies from one country to another and does not always include corruption and tax evasion. Otherwise, the fight against illicit flows and money laundering might tend to encourage over-reliance on anti-money laundering to combat illicit flows.

➤ *Illicit financial flows related to offshore jurisdictions*, which mean legal jurisdictions that ensure the secrecy of entities that do not actually operate in their own space (Murphy, 2009). The secrecy is ensured by a series of regulations for entities that do not normally physically reside in the jurisdiction itself. These include laws that allow a low level of transparency in the establishment and accounting of corporate entities, the creation of trusts whose real beneficiaries remain anonymous, zero or low tax rates and minimal exchange of tax information with other tax jurisdictions, banking secrecy and barriers to trade information in criminal matters. Reduced or zero tax rates are not the only attraction of such locations, especially for the laundering of corruption revenues. Often the obscurity of property associated with these jurisdictions is the most appealing feature for their clientele. In this context, the notion of *quasi-corruption* is used - an activity to create conditions and contribute to the increase of the economic efficiency of the traditional corruption activity. The basic peculiarity of quasi-corruption is the catalysis of crisis processes within economic systems. Also, an important feature of quasi-corruption is the complexity of its discovery by traditional methods, as it is not related to direct and immediate cash flow relationships, although ultimately it generates illicit cash flows in the financial process redistribution within the criminal world.

The researcher Peter Reuter (2017) has distinguished groups of people who usually are engaged in activities, which generate illicit financial flows:

(1) *Multinational corporations.* Studies have shown a direct relation between corrupt behaviour, lobbying and abusive transfer pricing behaviour and the activity of multinational corporations in developing countries in lower tax jurisdictions.

(2) *Corrupt officials.* They can get bribes through various activities, such as the charging of rights that should be freely available, improper assignment of contracts, extortion for failure to apply appropriate criminal sanctions. Some authors assume that

only high-ranking corrupt officials receive illicit income that is sufficiently important to merit the transfer of funds abroad.

(3) *Tax evaders*. Activities that generate financial flows are legal. Illegality is exclusive to hiding them for tax purposes. Tax evaders may be individuals or private companies.

(4) *Criminal entrepreneurs*. Drug traffickers, smugglers and illegal entrepreneurs on the market can generate large incomes. There is a reasonable question if they generate financial outflows from developing countries as important as illegal inflows because most of their revenue is generated in high-priced markets.

#### **4. The ratio between illicit financial flows and corruption**

Illicit financial flows constitute an important part of *the illicit (shadow) finances*, which represent the totality of economic relations related to the formation, distribution and redistribution of money between different economic subjects, which are not reflected in the official statistics, are not controlled by the Government, are hidden and geared towards meeting the economic interests of some groups of economic subjects or politicians.

##### ***Shadow finances comprise:***

◆ *Grey finances* based on legal transactions, but with some illicit forms in their performing (for example tax evasion, hiding undeclared revenues, barter);

◆ *Extra-legal finances*, which are not covered by legal rules, not reflected in official statistics and proven from activity that is not accounted in reports and contracts. On the other hand, this may be the activity that violates the rights of other economic agents and is not regulated by legislation - financial pyramids, the lobbying of certain economic agents, the concealment of important economic information (for example, limiting the number of participants within public acquisitions and so on);

◆ *Fictitious finances*, for example, related to mistakes about state order, public procurement, and the reflection of non-existent activity in financial reports;

◆ *Criminal finances* related to financial results of activity that is prohibited by legislation.

Between illicit financial flows and corruption a bilateral connection is attested. On the one hand, corruption activities generate illicit financial flows. On the other hand, corruption occurs at the stage of legalizing illegally obtained means. Bribing, trafficking, and misappropriation may compromise the functioning of anti-money laundering schemes.

Corruption is related to money laundering in one of the following ways:

• *As a source of income (for example, in the form of bribes) that constitute illicit funds to be washed*. There is a great deal of evidence about the extent of embezzlement of public resources in developing countries. A common denominator of these cases is how illicit proceeds of corruption have been channelled into bank accounts in foreign countries, usually jurisdictions with a high level of banking secrecy, and in all cases large sums of money have been recovered after having left power. Fighting illicit flows clearly has potential in addressing corruption at this level.

• *As means of facilitating illicit funds' creation, through the corruption of tax administrations, so that they ignore tax evasion or other financial obligations*. The most obvious example is where a tax administration official receives a bribe to make either a "favorable" interpretation of tax regulations that lowers the tax burden on a person / company or fails to recognize direct tax evasion.

• *As means of allowing an illicit flow as such through the corruption of institutions with anti-money laundering obligations*, for example, where the anti-money laundering entities collaborate with clients in failing to fulfil these obligations (for example, a bank officer does not notify suspicious transactions to competent authorities because he receives

bribes from persons involved in activities that generate illicit funds or where financial investigation units are prevented from fulfilling their role and are compromised by politicians (for example, they are not independent sufficient legal powers or resources), implying that the political system itself suffers from a systemic problem of spreading corruption.

An important issue is the detachment of illicit financial flows generated by legal tax evasion activities, through which the taxpayer circumvent the law by resorting to an unforeseen contribution in the law and thus the activity being tolerated or even unobserved. This form of evasion is possible when the law is incomplete or inadvertent. It occurs when a certain part of the income or wealth of some persons or social categories is evaded from taxation due to the way in which tax legislation sets the establishment of the taxable object. Taxpayers find certain means and by exploiting the legal shortcomings they "legally" circumvent the tax provisions, wholly or partially avoiding the payment of taxes, precisely because of this insufficiency of legislation.

In some countries, like the Republic of Moldova, the possibilities of legal tax evasion are deliberately created in the interest of certain individuals or corporate groups, either as a result of political corruption or because of the desire of tax administration representatives to provide legal management of the tax burden against corrupt remuneration. Fiscal amnesties are also attributed to this category if they are carried out as a result of the political order, and they are capable of substantially damaging tax discipline among taxpayers. In their expectation, taxpayers no longer pay taxes, but use state money for their personal purposes, and the public finance system loses the capacity to obtain them.

## 6. The problem of illicit financial flows and corruption in Moldova

Between 2004 and 2013, the volume of illicit capital flows in our country registered 9,1 billion USD, according to the study "Illicit Financial Flows in Developing Countries: 2004-2013", conducted by the Global Financial Integrity (GFI) research and consultancy in the United States. In 2014, GFI estimated 1,1 billion USD as the total volume of illicit financial outflows from the Republic of Moldova (GFI, 2017; Spanjers and Salomon, 2017).

Thus, according to the rating of Global Financial Integrity (2015), Republic of Moldova ranked 77th among 149 countries in terms of the volume of illegal flows withdrawn from national economy.

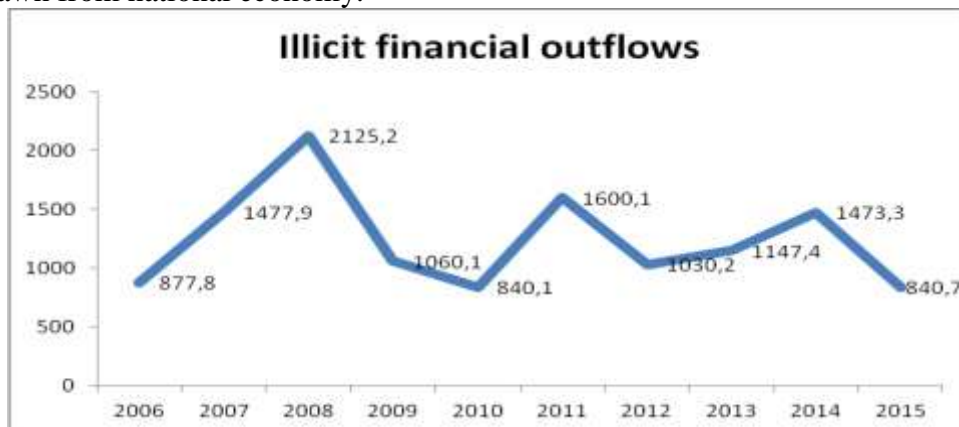


Figure no. 1. The volume of illicit financial outflows from the Rep. Moldova, in million USD (current prices)

Source: calculated by authors in base of data from [www.nbm.org](http://www.nbm.org)

According to data from the National Balance of Payments of Moldova, the largest cross-border outflows containing shadow components and which are affecting the country's macroeconomic indicators are generated by the following items: Net exports of services; remuneration of employees; investments from revenues; secondary revenues; net acquisition from financial assets. Data on the total volume of illicit financial outflows are given in Figure no. 1.

In the Republic of Moldova the phenomenon of capital flight can be produced both legally and illegally. ***Within the official export of capital, government receives a certain income, and reinvestment of profits also occurs. But within an illegal outflow of capital, the country does not receive any income.*** Alongside with the illegal export of capital from Moldova, there is a counter-movement (illegal inflow of capital) from other countries: for the purpose of penetrating into industries with a rapid turnover of capital and enterprises where it is most easy to avoid paying taxes; money laundering and their use within the privatization of the public sector of the economy; access to cheap sources of labour (Iordachi, Petrova and Clichici, 2017).

There are two important sources of illicit financial flows in the Republic of Moldova: the shadow economy and corruption.

In the Republic of Moldova, the share of the shadow economy in GDP in 2000 (34.6%) decreased in 2007 (20.6%), then in 2008 - 2011 it was almost at the same level - about 22%. In 2013, it stopped at 23.1%. In the first half of 2014 the share of the shadow economy in GDP increased till 24.6%. Traditionally, in the shadow segment the first place is held by agriculture - 60% (it is to mention that previous years it reached 76% and even 84%), the second position is represented by hotels and restaurants - 42% and the third place - trade - 30%.

The shadow economy generates large amounts of cash payments. Thus, in 2009 the volume of cash was 6,5 billion Lei, which practically tripled - to 18 billion Lei. Currently, it has been reduced to more than 15 billion Lei, in connection with the events on the money market (the National Bank of Moldova tightened monetary policy), but it is still high.

In the Republic of Moldova tax evasion is also an important problem. Thus, tax evasion accounts for 33% of GDP, which is equivalent to 40 billion Lei or over 2 billion Euro. And the smuggling of goods through Transnistria, which is considered the black hole of the Moldovan economy, leaves the budget without estimated revenues of over 1 billion Lei. It is, to a certain extent, related to the existence of corruption, which also generates significant illicit financial flows.

The investigation conducted by Transparency International - Moldova has shown that in 2014 the total amount of bribes paid exceeded 1.27 billion Lei, which is or more than 1.1% of GDP. Households paid bribes in the amount of 899 million Lei, and the representatives of the business community - 387 million Lei. Thus, the annual losses to the Republic of Moldova from corruption in 2016 amounted to between 8% and 13% of GDP or about 11.8-17.7 billion Lei.

The direct losses of the public finance system (or the respective annual income of the corrupt individuals) in 2016 constituted 1.1% - 2% of GDP or 1,5 – 2,7 billion Lei. Thus, the direct losses due to corruption constituted 3.1% - 5.6% of the National Public Budget.

Considering the fact that the acquisitions' value in Moldova reached nearly 7,6 billion Lei in 2016, the estimated corruption costs in public acquisitions reached 1,5 billion Lei.

According to a statement made by the former head of the National Anticorruption Center, Viorel Chetaru, made in the Parliament of Moldova in December 2015, during 2015, the total volume of the bribes reached 860 million Lei (in 2014 - about 891 million



Lei). However, according to some experts, this sum includes only real static amounts that have been detected, so the real volume is much higher. Thus, according to the approximate calculations, the annual volume of corruption expressed in Lei would reach at least 10 percent of GDP, being more pronounced in the last 3 years. The volume of corruption, based on the experts' estimates during 2009-2016 reached about 28-30 billion Lei.

During 2009-2015 there was an amplification of the phenomenon of quasi-corruption within the legislative and regulatory bodies of the Republic of Moldova, manifested through *the degradation of the banking supervision system, including the approval and the amendment of some legislative acts by the central authorities of the Republic of Moldova, which has resulted in the attraction of the banking system to international money laundering schemes.*

In 2013 information in mass media sources was disseminated on the involvement of Moldova-Agroindbank in money laundering schemes. Only in the first half of 2012 Moldova-Agroindbank carried out money laundering operations in the amount of about 100 million Lei, being penalized only by 100 thousand lei.

During 2012-2014 the domestic bank system was a transit zone of financial flows from the CIS countries towards the rest of the countries, most towards the EU. Also, during the mentioned period inflows from CIS countries were 35 times higher than outflows to this region.

In 2013, inflows to the banking system of the Republic of Moldova amounted to 65.5 billion USD, being in parity with the outflows, while in 2015 decreasing by 10% and in 2016 these flows reduced till 30.4 billion USD.

*The passive attitude of the central authorities, the existence of administrative uncertainties in the application of anti-money laundering legislation, and corruption in the judicial sphere have allowed the Moldovan banking system to be transformed into a money-laundering machine.*

In this context, international money laundering schemes have been remarked, with the common name "Laundromat", with the participation of Moldindconbank, where through the clients' accounts nearly 8 billion USD were transferred. Also, in 2016 it was found that the controlling stake of this bank was owned by a certain group of dubious shareholders who were acting as a whole (RISE Moldova, 2017).

Generally, the *Laundromat* provided a total amount of 21 billion USD from Russia, which was washed by phantom companies and legalized by Judicial Judgments in the Republic of Moldova. All these schemes were performed during 2011-2014, being involved 732 banks from 96 countries and 5000 companies, which received money. It is also to mention that during the mentioned period the efficiency of supervision authorities' activity essentially decreased, thus allowing the banks' capturing by the dubious investors.

In 2011, the first information about the attempt to take over a 28% stake from Moldova-Agroindbank and its transfer to off-shore companies, following a fake, arbitrary dispute in Russia, appeared. Also, off-shore companies tried to force 78% of Universalbank shares and 5% from Victoriabank.

In 2012, a raider attack took place over the Banca de Economii a Moldovei (BEM), after which 18.5% of shares were transferred to other owners. During September 2012 and September 2013, forced and accelerated decapitalisation of BEM took place, directed by certain decision-making centres, aiming to determine the state to surrender control over BEM. In September 2013, the state illegally surrendered the majority package free of charge, through a scheme that was imposed outside the country. This resulted in the BEM's involving in the regional laundry room of financial resources, that have been embezzled by budget funds in Russia. In 2014, a stronger core of the scheme took place, with the handing over of a significant package of shares to influential groups in the

Russian Federation (partly made by ceding the first 25% of BEM shares from VEB Kapital).

After that, the equivalent of one billion Dollars was stolen through dubious currency schemes and transactions conducted at BEM, Unibank and the Social Bank. This was possible since in June 2014, in the absence of special supervision established by the National Bank of Moldova at BEM, the aggressive attraction of bank deposits from the population with the highest interest rates offered in the banking system and the subsequent request of emergency credits from the NBM. At the same time, in July and September 2014, the banking and financial legislation was amended, and by granting the Government guarantee, legal premises for emergency lending by the NBM to commercial banks in difficulty were created. Subsequently, in November 2014, in a secret meeting, the government decided to allocate 9,6 billion Lei from the NBM to BEM, the Social Bank and Unibank. According to banking experts, this decision contravenes legislation, as no authority has been set up to declare crisis situations and the crisis has not been formally announced.

On September 26th, 2016, by taking responsibility, the Government of the Republic of Moldova decided to convert the debt created as a result of bank fraud into state debt, which had the following consequences:

- Tripling the domestic state debt from 7.2 billion Lei at the beginning of 2016 to over 22 billion Lei by the end of 2016;
- Budgetary costs of extinction and service of the 13.34 billion Lei in a total amount of 25 billion Lei over the next 25 years.

We have recently witnessed legal measures to penalize participants in money laundering schemes. At the same time, however, it must be recognized that *the process of recovering stolen assets is very difficult, and the central authorities obviously delay the penalization of all persons who are responsible as a result of bureaucratic-administrative measures*. On the other hand, it is to mention the legislative efforts that have been made during 2015-2017 regarding the de-offshoring of the banking sector.

## 7. Conclusions and recommendations

➤ The most damaging effects of illicit flows related to corruption cannot be captured solely in numerical or financial terms. An appropriate analysis of the phenomenon of cross-border capital movement, including shadow components, in national statistical practice should not be seen only as a methodological or technical issue, it should be a key factor in improving the quality of the macroeconomic and forecasting analysis in improving the efficiency of regulating the capital movement.

➤ Corruption related to illicit financial flows can cause political and social instability, even damage, through undermining state institutions - banks, other financial centres, the police, and the judicial system and in such a way creating further impediments to investigate these flows and combat the phenomenon. In time, fiscal institutions also contribute to corruption by maintaining the power of corrupt political and economic elites.

➤ Without significant anti-corruption measures on national levels, the Republic of Moldova will continually expose itself to the risks of corruption and illicit financial flows. It is necessary to create efficient Financial Intelligence Centres and anti-corruption bodies to combat the corruption phenomenon and limit illicit financial flows. Other measures that would be appropriate to be implemented in Moldova are:

- ⇒ Training staff in the relevant public sector authorities to promote the technical skills needed for investigation capacity to tackle economic crimes.
- ⇒ Supporting institutions and business community to build political commitment.

- ⇒ Conducting risk assessments to identify the largest source of illicit financial flows to be able to stop or reduce funds that fuel it.
- ⇒ Strengthening the anti-money laundering mechanisms and institutions to prevent illicit flows from leaving their financial systems in the first place.
- ⇒ Improving the information sharing with other jurisdictions and institutions to encourage and support the Government's efforts of investigating corruption and managing returned assets.

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# IMPLEMENTATION OF THE COMMON CONSOLIDATED CORPORATE TAX BASE– ITS IMPACT ON THE EU MEMBER STATES

**Scientific Researcher, Ph.D. Silvia-Elena ISACHI**  
"Victor Slăvescu" Financial and Monetary Research Center,  
Romanian Academy, Romania  
E-mail: silvia.isachi@gmail.com

**Abstract:** *The Common Consolidated Corporate Tax Base for the companies aims to harmonize the taxation base for the companies within the European Union, which will re-launch the single market and support the accomplishment of the Europe 2020 Strategy. An important objective of the Common Consolidated Corporate Tax Base is to increase the correctness of the fiscal system by approaching some cause of tax avoidance by the multinational companies. The added value of the Common Consolidated Corporate Tax Base consists in a higher mobility of capitals within the European Union by decreasing the costs of ensuring the conformity and the cross-border fiscal obstacles. The Common Consolidated Corporate Tax Base will make the European Union more attractive for investments and business, because the investors are no longer required to analyse the dispositions of several fiscal systems when investing in the European Union, which will decrease the compliance costs and the administrative costs as well. At the same time, the Common Consolidated Corporate Tax Base improves the transparency about the real situation of levying the companies from the member states and establishes a more fair fiscal competition within the EU, which increases EU competitiveness worldwide.*

**Keywords:** *Common Consolidated Corporate Tax Base, fiscal system, tax base, profit tax.*

**JEL classification:** *H26, H32.*

## 1. Introduction

The *Common Consolidated Corporate Tax Base (CCCTB)* is a political proposal of the European Commission, which aims to harmonize the tax base for the companies within the EU. This also includes the consolidation and assignment of the fiscal base of the groups of societies.

The *Common Corporate Tax Base (CCTB)* aims to harmonize the tax base for the companies within the EU but doesn't include the fiscal consolidation element of the CCCTB.

The theoretical elements which form the common consolidated corporate tax base are as follows:

- *Tax base* – amount of a company profit to be taxed. The tax base is calculated as follows: incomes of the company minus the amounts due to tax exemptions and deductions, such as wages and depreciation. Each member state has different rules to calculate the tax base. A single tax base for the EU means that the companies will have to observe just one set of rules when making the calculations.

- *Consolidated* – consolidation means adding all the profits and losses of a company/group of companies from different member states, to make a net profit/loss for all the activities within the EU. The result will be used to set the final tax base for the company or group.

- *Common* – means a single set of rules to apply throughout the EU.

CCCTB is a unique set of rules which the companies operating in the EU may use to calculate the taxable profits. Thus, a company or group of companies will have to observe just one system of calculating the taxable income within the EU, not different systems of rules from the different member states where they operate. Furthermore, according to CCCTB, the societies operating in several EU member states will have to submit just one fiscal statement for all their activities throughout the EU.

The common consolidated corporate tax base allows the companies or groups of companies to consolidate their profits and losses within the EU, thus taking into consideration their cross-border activities. A single, consolidated fiscal statement is to be used, and the member states where the company operates will tax part of this consolidated base, according to a specific formula with three factors of equal value (assets, workforce and sales). The operations will be done through the fiscal authorities from the mother EU member state of the company (via the system of single offices).

The proposed EU directive set clear rules on: the way in which the companies can decide to use the CCCTB; how to submit the fiscal statements; the harmonization of the different forms and coordination of the audits. The fiscal statement for all the activities within the EU will have to be submitted to the fiscal administration from the mother EU member state of the company, and that member state will have to coordinate all the proper inspections and take all the necessary actions following the submission of the statement.

## **2. Theoretical aspects regarding the common consolidated corporate tax base**

Within the context of globalization, production factors mobility can generate pressures on the governments to reduce fiscality, so that their countries remain attractive. Under these circumstances, the divergences between the EU member states can intensify, increasing the controversies about the limits of the national sovereignty in matters of direct fiscality, corporate taxation particularly. It is thus stringent to achieve fiscal coordination within the EU, but one must not oversee that the social preferences of each country requires independency in creating the national fiscal policy.

The globalization of the world economy, the progress achieved in trade liberalization and in the expansion of the flows of capital made it easier the mobility of goods, services, workforce and capitals across the national borders. In consequence, the taxpayers have multiple possibilities to avoid high taxation in a country by moving the source of taxation in countries with lower taxation levels, so that the opportunities of economic growth move from one country to another.

If the capital is mobile and the taxation level differs from one country to another, the multinational companies can use a full set of strategies for fiscal optimization (transfer of the profits to areas with lower taxation, establishment of financial departments in fiscal paradises to finance the investments by credit lines within the group). Such tax avoidance strategies generate losses of revenue to the countries with high taxation levels and disadvantage the SMEs involved in competition on the same market.

The company operate now designs aiming to join the higher mobility of the capital with the increasingly frequent cross-border transactions between associated companies. Therefore, the concepts defined for fiscal purposes, such as place of residence, usually used to answer the needs of rather closed economies, prove improper most times, to respond the challenges of trading on an integrated market. Therefore, the cohabitation of heterogeneous fiscal norms which change frequently is an obstacle for the companies competing on the international market. Furthermore, the national fiscal systems are increasingly vulnerable to the tax evasion mechanisms. The transfer of revenues and the treaty shopping are facilitated within the context of a high mobility of the production factors.

Within this context, the companies with cross-border operations in the EU still encounter obstacles such as:

- *Additional cost to conform to the legislation*, because of the necessity to observe the various national fiscal systems and the rules in matter of transfer prices;
- *Double taxation*, which appears when the same income is taxed by comparable taxes in two or more states;

- *Over-taxation*, which appears when cross-border activities create taxation duties which would not have appeared within the strictly national context (for instance, the associated companies from different member states or their headquarters don't have the right to repatriate the losses, while the consolidation of losses of the companies established in a single member state reduces the taxable profit and the fiscal burden).

Currently, the existence of different taxation systems in the different EU member states create possibilities for aggressive fiscal planning, affecting the moral condition of the taxpayers and the fiscal equity. This generates high compliance costs and hampers investments. Most national fiscal systems are favourable to financing by indebteding to the detriment of financing by own capitals, which increases the level of the debt and affect the resilience of the economy. Furthermore, compared to other large economies, the EU companies don't invest sufficiently in research/development.

These problems are determined by the internationalization of the companies and the increasing mobility of the profits. The taxation base is decided at the national level, which encourages the EU states to protect the taxation base unilaterally, and to draw mobile profits. The unilateral measures cannot solve the essential problems since they increase the complexity, preventing even more the evolution of the single market and adding obstacles to the investments and economic growth.

The existence of complex ownership relations between the companies' resident in the EU and those residents outside the EU requires clarification of their status. There are several sensitive combinations whose treatment must be differentiated:

- *Several community companies controlled by an extra-community entity*. In this situation, it is advisable to apply the system; otherwise CCCTB enforcement might be avoided by the EU companies by simply moving the controlling entity outside the EU;

- *A community mother society with a subsidiary in a third country, this subsidiary controlling, in turn, a community base company*. In this situation, the community entities should be submitted to CCCTB if the proportion of ownership is large enough to be defined as legal property, but the consolidation of tax base while excluding the intermediary entity might raise technical difficulties.

These corporations might choose levying according to the CCCTB. This option can be achieved by notifying the competent authorities at least three months before the beginning of the fiscal year. This option will be valid for five years and will be renewed automatically for three-year periods unless official notification is received from the corporations; consolidation will be done compulsory for the incomes and expenditures of all the members of a group of companies.

The introduction of a large and complex set rules and provisions which to ease the cross-border trade and the removal of fiscal obstacles (over-taxation or no compensation for the losses) on the domestic market is a difficult task because of the requirement for unanimity for the fiscal legislative proposals. CCCTB proposal is constructed as an optional properly prepared approach (studies, meetings of the group of experts, public consultations) during a period of several years.

### **3. Main objectives of CCCTB system**

CCCTB will contribute to the re-launch of the single market and to the accomplishment of the Europe 2020 strategy. CCCTM objective is to cut the administrative costs and to remove the fiscal obstacles on the domestic market. CCCTB is a fiscal policy measure which simplifies the fiscal norms, cuts the compliance costs and removed the fiscal obstacles for the companies working cross-border.

a) The most important objective of the CCCTB is to enhance the correctness of the fiscal system, by approaching some of the main causes of tax avoidance by the

multinational companies. The specific objectives supporting this general objective are: significant decrease of the possibilities for cross-border fiscal planning; establishment of more equitable conditions for the national and multinational companies; make sure that the companies pay an equitable share of the fiscal burden; consolidate the general moral condition of the taxpayers, which is seriously undermined, currently, by a strong perception that the international actors are largely ducking taxation.

*b) Improving the business environment* by removing the obstacles to taxation on the single market. This objective is important in order to maintain or even increase EU company's competitiveness and is one of the priorities of the European Commission which stresses on job consolidation, economic growth and higher investments and the single market. The specific objectives supporting this goal are: simplify very much the very complex international taxation system, to reduce the compliance costs and the administrative burden, eliminate the double taxation within the EU and remove the existing discriminations and restrictions.

Following the conclusions of the financial crisis, there are two more objectives that should lead to the reform of the tax system within the EU:

*c) Provide a profit taxation approach*, which doesn't denaturises the investments and the financing decisions;

*d) Create incentive to invest in the EU*, among which supporting research, development and innovation in order to protect and increase the current level of welfare.

There is a compromise between the general objectives. Decreasing the costs for the companies and stimulation of investments through more attractive allocations and deductions might be, sometimes, hard to conciliate with ensuring an actual tax by decreasing the possibilities of tax planning. Furthermore, this might also have an impact on tax collection. Therefore, the two general objectives will have to be balanced. The objective of stimulating the growth and the investments should be in agreement with the objective of increasing the correctness of the fiscal system, and it should not lead to more opportunities of fiscal planning.

**Table 1. Impact of tax planning on effective average tax rates**

%	Mean	Min	Max	Average EU 28 percentage reduction
<b>Effective average tax rate domestic case</b>	21.1	9	38.3	n/a
<b>Effective average tax rate after cross-border tax planning via</b>				
<b>Hybrid financing</b>	13.7	4.3	26.6	-36.3%
<b>Intellectual property box (patent box)</b>	-1.6	-3.7	1.8	-108.3%
<b>Financing via offshore treaty</b>	15.9	6.4	28.6	-25.0%

Source: ZEW(2015, 2016c) and own computations

The experience with some measures taken at the national level, to approach the prejudices about the debt and to promote research and development, show the necessity of a specific project to control the abuses on condition that the design framework and control of abuses get the right attention. The reforms in these areas would actually provide the opportunity of approaching tax evasion channels. For instance, approaching the debt prejudice might eliminate the opportunities for the groups operating abroad to transfer the profit through the debt instrument.



#### 4. Impact of the proposal of Directive on the CCCTB

The effects which the proposal should have on the targeted beneficiaries are: give the companies the possibility to use a common tax system within the EU (common, consolidated tax base to determine the profit); introduce a single office-based approach for the fiscal statements and tax calculation; allow cross-border compensation for the losses; decrease the compliance obligations regarding the transfer prices; reduce double-taxation or over-taxation; reduce the opportunities of abusive or un intended fiscal planning by the parallel application of several levying systems within the EU.

The experts analysed four main scenarios of policy compared to the inaction or status-quo scenario:

- *An optional common corporate tax base (optional CCTB)*: the companies resident in the EU (and headquarters in the EU) may calculate the tax base according to a unique set of common rules within the EU, instead of using one of the national tax systems. The „separate accounting” (setting the prices for every single transaction according to the principle of „full competition”) will still be sued for intra-group transactions, as this system would not involve the consolidation of the fiscal results (*option 1*).

- *A mandatory common corporate tax base (mandatory CCTB)*: all the companies resident in the EU (and headquarters in the EU) should calculate the tax base according to a unique set of common rules within the EU, instead of using one of the national tax systems. The new rules would replace the existing national taxation systems. In the absence of consolidation, the distribution of the profit within the intra-group transactions will still be done according to the principle of „separate accounting” (*option 2*).

- *An optional common consolidated corporate tax base (optional CCCTB)*: an alternative to the existing national taxation systems and use of the „separate accounting” to distribute the incomes of the associated companies would be a set of common rules to set a consolidated tax base for the EU. Therefore, the fiscal results of each group member (companies’ resident in the EU or with headquarters within the EU) would be aggregated to form a consolidated tax base, and redistributed according to a present mechanism based on a formula. Within this scenario, the companies’ resident in the EU or with headquarters within the EU, owned by companies with headquarters outside the EU, might use the CCCTB, on condition they meet the eligibility criteria to form a group and that all the group members decide to use the common rules (*option 3*).

- *A mandatory common consolidated corporate tax base (mandatory CCCTB)*: The companies’ resident in the EU or with headquarters within the EU, owned by companies with headquarters outside the EU should use the CCCTB rules to the extent they meet the eligibility criteria to form a group (*option 4*).

The economic results of the impact analysis show that removing the tax barriers would allow the companies to make solid economic decisions. The options regarding the optional or mandatory CCCTB would lead to higher prosperity. The optional CCCTB is preferable for several reasons. The main two reasons verified when the impact is evaluated are: the estimated impact on workforce employment is more favourable; it avoids imposing all the companies within the EU (irrespective whether they operate in one or several member states) to change the method of calculating the tax base.

The analysed reforms are potentially associated to important long-term dynamic effects among which reducing the incertitude and (real and perceived) costs for the companies operating under several jurisdictions. This will increase the cross-border investments within the EU, both due to the expansion of the European and foreign multinationals, and to new investments in other EU member states made by strictly national companies. The removal of the additional compliance costs associated to the obligation to observe various fiscal norms within the EU and to operate under several fiscal

administrations (“single office” principle) will improve the capacity of the companies to expand abroad. This perspective should be particularly advantageous for the SMEs, which are affected by the high compliance costs.

Although the analysis shows that the impact of introducing the CCCTB on the global fiscal revenues depends on the political options of each member state, it is important that the EU member states pay increased attention to the income effects, particularly within the context of the difficult budgetary situation confronting many member states. The new rules on the common tax base will lead to a broader average EU base than it currently is. If there are economic losses which to be compensated cross-border, then consolidation within the CCCTB aims to compress the common tax base.

Actually, the impact on the revenues of the EU member states will ultimately depend on the options of national policy regarding the mix of fiscal instruments or taxation rates. It is difficult to estimate the exact impact on each EU member state. The directive has a clause to analyse the effect of this impact after five years. The introduction of a consolidated common tax base for the tax on profit within the EU cannot be done by unilateral (national) or bilateral (cross-border) measures and agreements between the member states.

The added value of the CCCTB resides in a higher mobility of the capitals within the EU by decreasing the compliance costs and the cross-border fiscal obstacles. At the same time, CCCTB ensures that the activities of the multinational companies within the EU do not avoid a fair level of taxation. A common approach for a common corporate tax base within the EU contributes to restoring the relation between taxation and creation of value.

The evaluation of the different options lead to a preferred option: mandatory CCCTB for the large companies, accompanied by a “deduction for growth and investments” and by a deduction for research and development. The deduction for growth and investments is a deduction for the financing costs by indebteding and by own capital, within specific limits, to avoid the abuses and fiscal planning. The deduction for research and development aims to maintain at least the existing fiscal incentives for research and development.

The implementation of the preferred solution is expected to increase the equitable character of the fiscal systems and to create conditions for equitable competition by the efficient removal of the incentives favouring the aggressive fiscal planning within the EU. Thus, it will be easier to make sure that the companies pay equitable taxes, and the moral condition of the taxpayers will improve. Furthermore, the cross-border fiscal obstacles would be effectively removed within the EU. The alterations which affect the financing decisions are reduced via the deduction for growth and investments, which levels the financing through indebteding with the financing by own capital. The fiscal incentives for research and development will not only be maintained, but consolidated and optimised.

The costs involved by the proposal regarding the national fiscal revenues depend on the manner in which the EU member states adjust their taxation levels to the new tax base, on the value of the deduction for growth and investments and on the incentives for research and development. The compliance costs and the administrative costs of the preferred option are mostly related to the transition from the existing tax systems to CCCTB. These costs only occur once, though.

For the big companies affected by the mandatory element, the common tax base will be compulsory. This is a major change for the companies and creates more equitable conditions for competition within the EU. For the other companies, the use of CCCTB will be optional. Therefore, for these companies there is no immediate impact if they continue to use the national system. If the companies decide to apply the CCCTB, they consider that

the system provides benefits, such as lower conformity costs and higher efficiency. Therefore, the impact is positive.

There are two direct effects on the revenues from taxation. First, CCCTB changes the rules for calculating the tax base, comparing to the national systems, reducing it for most EU member states. Second, the tax base of a multinational group is assigned to EU member states according to a formula which measures the economic activity on the basis of the workforce, social capital and sales. It is difficult to foresee exactly which will be the final changes, as the impact on sales also depends on the way in which the EU member states will adjust the taxation rates in response to the new taxation base, and on the behavioural response of the companies.

The parallel use of national taxation systems and of the CCCTB will increase the burden of the fiscal administrations, which will have to manage two taxes, even though they are similar, but the administration of the documentation related to the transfer prices will be much lower.

CCCTB will allow the EU to become more attractive for investments. The investors will not have to analyse and evaluate the differences and provisions of several fiscal systems when investing in the EU, which will decrease the costs of compliance and the administrative costs. The tax base accompanied by the incentives for research and development and a deduction for growth and investments will also enhance EU competitiveness because the investments will be more profitable and the economy will be more resilient.

CCCTB will be optional, which means that the companies which consider they might benefit from this harmonized system will choose to use the CCCTB, while other companies may continue using the national systems. This is a reasonable approach, as the companies not intending to expand beyond the national borders, therefore operating within a single system, will not have to switch, uselessly, to the new fiscal system. A mandatory CCCTB would infringe the principle of subsidiarity, because it would mean that the measures introduced in the EU would cover, besides the activities undertaken at the European level, other, exclusively national, activities too.

The companies outside the EU, with branches or subsidiaries in a member state, will have the choice to use the CCCTB for their activities on EU territory; on condition they meet the same eligibility criteria as the EU companies.

The EU member states will continue to take decisions regarding their particular tax rates, including the companies using the CCCTB (since the CCCTB system covers only the tax base, not the tax rate). An EU member state might choose to apply a different tax rate for the CCCTB system if its national tax base system is extremely different and if it wants to maintain the tax rate (for instance, the real level of the tax paid after applying the rate, tax base and various deductions).

Another possibility is that the EU member states bring close enough their tax bases, relying on the common tax base, to avoid the coexistence of two different tax rates. Each EU member state will be free to decide the best approach for its national particularities.

The problem which generated most discussions refers to the formula of allocation, between the entitled member states, of the consolidated revenue determined through the decided tax base. It is necessary that this formula is transparent and simple, that it doesn't entail excessive compliance and administrative costs, that it reduces the possibility of the corporations to move the allocation factors from one location to another and that it doesn't create distortions within the business environment within the EU.

CCCTB will provide predictable norms, a framework for fair and equitable competition, lower costs and less bureaucracy. Thus, the EU will become a more attractive market for investments and business. The re-launch of CCCTB will also support the

research and development, main vectors of the economic growth. The companies will be entitled to a substantial deduction regarding the costs for research and development, whose beneficiaries will be mainly the newly-established companies and the innovating companies which choose to participate in the new system.

It is important to highlight that no general conclusions are to be drawn on the final effect of the CCCTB on the revenues or on the budget situation of the various member states, because these will depend ultimately on the national policy options towards the mix of fiscal instruments or on the taxation rates.

The introduction of provisions regarding the common tax base not related to the cross-border consolidation of the losses might result, for most EU-based companies, a higher tax base than the current one. The size of this increase seems to depend mainly on the applied rules of depreciation. Anyhow, the common tax base would narrow the rather large current gap between the tax bases within the EU member states.

The CCCTB scenario also sets the manner in which the global tax base can be distributed among the EU member states where multinational companies operate, which requires defining *ad hoc* mechanisms of allocation. The use of financial accounts information as indicator for the taxable profits of the multinational groups, shows that the formula which includes the costs related to employees, assets and sales function of the destination, equally weighted, would lead to broadening the bases mainly in Central and Eastern Europe and in Germany, Spain, France, Greece and Italy. The results of the study show that the effect of changing the weight of the allocation factors on the relative allocation of the tax base between these countries would have decreased.

Overall, the joint effect of the new provisions on the tax base, but which are not related to consolidation (which tend to enlarge the tax base) and the introduction of the immediate cross-border consolidation of the losses (which tend to shrink the tax base) produced by CCCTB scenarios tends to preserve rather constant the aggregated fiscal bases compared to the current ones (for the particular companies).

The model developed to simulate the modification of the fiscal policies of the EU member states was expanded and improved to enable evaluating the impact. It is estimated that the removal of the cross-border fiscal obstacles will materialize in a lower number of irregularities in assigning the capital because, on the one hand, there will be a higher possibility to substitute the national investments with cross-border investments and, on the other hand, the overall EU attractiveness will increase for the multinational investors. The increased allocation efficiency should materialize in a higher productivity and in job creation, which also results from the scale economies that can be exploited on a larger market.

In order to optimize the benefits of a single set of norms in matter of profit tax throughout the EU which to set consolidated the tax base of the groups, the groups should be able to deal with a single fiscal administration (“main fiscal authority”). In principle, the main fiscal authority should have the headquarters in the member state in which the mother company of the group (“main contributor”) resides for fiscal purposes. Within this context, it is essential to set common procedural norms for the administration of the system.

## 5. Conclusions

Tax evasion leads to a poor congruence between the jurisdiction in which the value is created and that in which the profits of the corporations are taxed. This contributes to an unfair distribution of the fiscal burden, next to the trend of the national governments to respond by levying less mobile fiscal bases, an additional benefit for the multinational companies.

The SMEs are confronted abroad with high costs for investments and growth because of the differences between the national fiscal systems. There are no conditions for a fair competition, because the SMEs cannot lower their fiscal burdens by fiscal planning which leads to alterations of the domestic market and which raise problems of correctness.

The current fiscal systems offer incentives to the EU member states to eventually engage in harmful fiscal competition in order to draw very mobile fiscal bases. As consequence of this fiscal competition, some member states will lose the tax bases, while other will gain from adopting advantageous fiscal dispositions to draw mobile fiscal bases.

Currently, the companies have to observe the different systems of calculating the taxable profit and must submit fiscal statements to the fiscal authorities from each EU member state where they operate. This situation creates high compliance costs, administrative burdens and complex readjustments. The complicate system of price transfer, currently in use for the intra-group transactions, is particularly costly and burdening for the companies operating within the EU and can generate disputes between the administrations of the different EU member states, leading to the double taxation of the companies.

CCCTB doesn't concern the taxation rate, and it is not intended to harmonize the taxation rates levied by the EU member states upon the companies. The member states will continue to decide on their own corporate taxation rates, being a sovereign right. When they don't cause distortions, the differences in the taxation rates maintain some level of fiscal competition within the domestic market. In exchange, CCCTB improves the transparency concerning the real situation of corporate taxation within the EU member states and upholds a more correct fiscal competition within the EU. CCCTB system is much more efficient in increasing EU competitiveness worldwide than any other measure regarding tax rates uniformization.

The recent orientations towards a common European corporate taxation policy aim to prevent the adverse effects of the fiscal competition, particularly of the "migrating" national taxation bases, by moving the corporate headquarters in countries with more friendly fiscal regimes.

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## ABOUT COMMON CONSOLIDATED CORPORATE TAX BASE AND ITS POSSIBLE EFFECTS ON EU MEMBER STATES

**Scientific Researcher Ph.D. Nicoleta MIHĂILĂ**

”Victor Slăvescu” Financial and Monetary Research Center,  
Romanian Academy, Romania  
E-mail: nikmihaila@yahoo.com

***Abstract:** The current lack of coordination among EU Member States regarding the tax system creates difficulties for companies operating within the European Union, as they face 28 different income tax bases, determining significant costs to ensure administrative compliance, with negative effect on European competitiveness. Therefore, a new approach related to the taxation of companies in EU is necessary to achieve the objective of more equitable and efficient taxation in European countries and to effectively combat tax evasion, namely the introduction of a Common Consolidated Corporate Tax Base (CCCTB). In our paper we present the basic notion of common consolidated corporate tax base and present some of its effects in the EU countries, including Romania. In our approach, we use a descriptive methodology, using informational sources from the national and international literature.*

***Keywords:** companies, common consolidated corporate tax base, corporate tax, EU countries.*

***Jel Classification:** H25.*

### 1. Introduction

In the form presented in 2011, the CCCTB project had two objectives: firstly, to set a single set of rules for calculating corporate tax that can be used by companies operating within the EU and companies should comply with this system within the European Union to calculate their taxable income. The second objective was to organize the allocation of income taxes thus calculated between Member States; groups within the CCCTB system should submit consolidated tax declarations for their entire EU activity only once. Consolidated taxable profits of the group will be divided between individual companies through a simple formula, allowing each Member State to tax the profits of companies in its State at their national tax rate.

### 2. Common Consolidated Corporate Tax Base (CCCTB) – concept, advantages and disadvantages

CCCTB represents a single set of rules that companies operating in the European Union could use to calculate their taxable profits. In other words, a company or a group of companies will only have to comply with a single system for calculating taxable income at EU level and not systems with different rules in each of the Member States in which they operate.

In addition, according to CCCTB system, active enterprises operating in several Member States of the European Union will be able to submit a single tax return for all their activities across the EU.

The CCCTB is, in fact, an additional tax regulation with common rules for all Member States. One of its objectives is to eliminate tax planning, in particular compensation for losses, due to separate accounting, debt financing and intergroup transactions.

The CCCTB is considered to have advantages but will also have weaknesses. Among the advantages can be mentioned:

- ✓ alleviating complexity and reducing compliance costs for companies with cross-border activity which will have to apply a single set of rules and the possibility of offsetting losses incurred in one Member State with profits made in another due to consolidation;
- ✓ efficiency in the fight against the profits transfer and abusive tax practices;



- ✓ eliminating disparities between national tax systems;
- ✓ use the preferential regimes for the transfer of profits;
- ✓ removal of the transfer price manipulation etc.

The negative aspects that come with the CCCTB include:

- ✓ increasing the complexity of employees tasks in the government fiscal service, as the introduction of the CCCTB involves a new system, in addition to the current 28 national systems existing in the European Union;
- ✓ fiscal control will cause difficulties because the tax authorities of the Member States must cooperate and coordinate their activities very well;
- ✓ the implementation of the CCCTB does not exclude the possibility of increased tax competition because, in order to attract foreign investment, national authorities will continue to use the reduction of the tax rate as a fiscal facility.

The consolidated corporate tax base requires the establishment of the common tax base, to which is added a distribution formula, which involves a sharing mechanism that should present some features:

- to be as simple as possible for both taxpayers and tax administrations;
- to lead to a fair and equitable distribution of tax bases between the various entities involved;
- not to produce undesirable effects in terms of tax competition.

This formula includes three factors with an equal weight: labor (which in turn will include, in equal weight, payroll and number of employees), assets (all tangible assets, but not intangible and financial assets); and sales by destination.

The calculations for the allocation of the taxable base will be made annually. A positive consolidated tax base (net profit) will be allocated immediately and a negative consolidated tax base (net loss) will be offset in the future at the group level with the profit obtained. If a firm leaves a group of companies that opted for consolidation of the tax base or when a firm joins a group that has opted to consolidate the tax base, consolidation and distribution of the tax base will be made for the fraction of the tax period in which that company was a member of the group.

In general terms, the distribution formula is as follows:

$$\text{Share A} = \left[ \frac{1}{3} \times \frac{\text{Sales}^A}{\text{Sales}^{\text{Group}}} + \frac{1}{3} \left( \frac{1}{2} \times \frac{\text{Payroll}^A}{\text{Payroll}^{\text{Group}}} + \frac{1}{2} \times \frac{\text{Employees}^A}{\text{Employees}^{\text{Group}}} \right) + \frac{1}{3} \times \frac{\text{Assets}^A}{\text{Assets}^{\text{Group}}} \right] \times \text{CTB} \quad (1)$$

The equation above shows a system according to which the distributed tax base would be located in different Member States.

In case one or more factors are not applicable taken into consideration the nature of the firm's activity, all the other relevant factors should be weighed proportionally again within the formula in order to maintain an equal absolute weight of each applicable factor.

We have the following example: a multinational company is comprised of Company A and Company B. Company A resides and sells its production in Romania, and Company B resides and sells its production in Slovenia. Information on sales, salaries, employees and assets for both countries is provided in the table below (Table 1). The corporate tax rate for Slovenia in 2016 is 17% and for Romania is 16%.

**Table no. 1. Exemple about the allocation formula**

Company	Sales	Payroll and employees	Assets	Taxable income
Company A (Romania)	60	60	60	50
Company B (Slovenia)	80	40	40	60
total	140	100	100	

Sources: own calculations

► When applying the tax rate in each of the two countries, we have:

$$T(A) = 50 * 0,16 = 8$$

$$T(B) = 60 * 0,17 = 10,2$$

$$T \text{ total} = T(A) + T(B) = 18,2$$

► Given the application of the apportionment formula, we have the following situation:

$$T(A) = 0,16 * (50 + 60) * (1/3 * 60/140 + 1/3 * 60/100 + 1/3 * 60/100) = 0,16 * 110 * 0,54 = 9,5$$

$$T(B) = 0,17 * (50 + 60) * (1/3 * 80/140 + 1/3 * 40/100 + 1/3 * 40/100) = 0,17 * 110 * 0,45 = 7,92$$

$$T \text{ total} = 9,5 + 7,92 = 17,42$$

According to this example, Member States with a higher rate of income tax have a higher total tax burden, and vice versa. This is one of the factors that affects negatively the decision of multinational companies to locate their firms in these countries.

By comparing companies in Romania (profit tax is 16%) and Slovenia (corporate tax is 17%), it can be concluded that it is more difficult for multinational companies to do business in Slovenia because their tax burden is higher. A lower tax burden allows companies to earn more. And by applying the apportionment formula, it is noted that the tax burden falls from 18.2% (before applying the formula) to 17.42% (after application).

The allocation of the formula would significantly change the overall tax burden for the groups of companies. It can also provide incentives for increased tax competition. Increased tax competition under the proposed CCCTB may encourage Member States to further reduce the corporate tax rates.

The effects of applying the formula would result in:

- strengthening and distributing the corporate income tax base will generate tax revenue losses for small states using fiscal incentives, as the tax bases attracted in these countries are high in relation to the real economic activity which are taking place on their territory (measured by assets, turnover and salary fund);
- offsetting losses with earnings generated in cross-border activities will result in a significant reduction in the overall tax base. For example, the Ernst & Young's (2012) analysis, for 1,844 parent companies in Germany and 5,827 foreign subsidiaries, the reduction in the total tax base was estimated at 20%.

### 3. Potential Effects of CCCTB Implementation in EU Countries

In the specialized literature, studies were elaborated which aimed at the economic and budgetary impact of introducing the CCCTB into the European Union.

An empirical study conducted by Ernst & Young (2012), which assesses the effects of CCCTB find that it would have negligible impact on welfare (0.02% of GDP). Earnings from lower compliance costs and the elimination of transfer prices would be offset by new tax distortions, in particular due to the allocation formula.

As a result, the EU benefits to a small extent from the common consolidation corporate tax base.

**Table no. 2. Comparison of the empirical studies results**

Study	Objectiv	Results
Devereux & Loretz	Changes in tax revenues  Statistical analysis of the financial data	- a 2.4% decrease in EU revenues under the optional CCCTB - increase by 2% of EU revenues under compulsory CCCTB - Significant differences in the modification of Member State revenues.
Fuest, Hemmelgarn & Ramb	Changes in tax base  Statistical analysis of the financial and fiscal data	- a 22% decrease in German multinationals tax base - Significant differences in the modification of Member State revenues.
Van der Horst, Bettendorf & Rojas-Romagosa	Welfare change  Behavioral analysis	- insignificant changes in economic welfare (0.02% of GDP) due to mandatory CCCTB - the new distortions caused by the CCCTB exceed those determined by the transfer prices - CCCTB would increase competitiveness - Significant differences between Member States regarding changes in company taxes, capital and welfare
Ernst & Young	Static analysis of tax base modification using the financial data  Dynamic analysis of economic impact	- a 0.2% decrease in EU revenue under the optional CCCTB - a 0.6% increase in EU revenue under the mandatory CCCTB - a 0.2% decrease in GDP due to mandatory CCCTB - Decline of 0,1% of GDP due to optional CCCTB - Differences between Member States in terms of changes in income, GDP, FDI and employment.

*Source:* Ernst & Young, 2012. Study on the Economic and Budgetary Impact of the Introduction of a Common Consolidated Corporate Tax Base in the European Union

Thus, the CCCTB would not produce too many effects in the global economy. There are targeted issues concerning the redistribution of the tax base between Member States and the impact that the new system will have on business decisions in terms of increasing real investment or employment among Member States. The effects of a CCCTB depend on the number of participating Member States and on the number of companies opting for this system.

Empirical studies elaborated till present have suggested that a CCCTB would create significant winners and losers, assuming there will be no changes in corporate tax rates in the Member States in terms of corporate income tax. The net impact on a Member

State's income tax and the tax liabilities of certain groups of taxpayers would be caused by three major differences between the current corporate tax systems and the CCCTB:

- firstly, the CCCTB can change the definition of the tax base - an example would be a change in the calculation of depreciation;
- secondly, the CCCTB would result in a reduced tax base for many taxpayers, allowing for full compensation of cross-border losses among group members,
- thirdly, the CCCTB would redistribute the tax base resulted in the Member States on the basis of the distribution of economic activity measures ("factors"). This may differ substantially from the distribution of current law based on the use of separate accounting and determining the location of income.

Some Member States are expected to have significantly higher corporate tax revenues, while other Member States would lose significant income from corporate tax. Those Member States that would lose significant income from corporate tax are less likely to be willing to participate in a CCCTB scheme.

If they participate, they will face various difficulties, as they will have to make some choices: reducing public spending, increasing corporate tax rates or increasing household taxes.

Fewer participating Member States would reduce the potential positive effects of a CCCTB. Also, estimated earnings effects for some countries are determined by a few elements, including:

- the specific factors included in the allocation formula;
- whether the system is optional or obligatory;
- the specific Member States participating in the CCCTB;
- the sample of companies included in the analysis.

According to Ernst & Young calculations (2012), the workforce changes in the context of the mandatory CCCTB, ranging from a 1.6% decrease in Luxembourg to a 0.6% increase in France. GDP declines in Bulgaria and Luxembourg by 3% and in France by 1.1%. The changes are even higher for FDI, ranging from a decrease of 11.7% in Bulgaria, to an increase of little over 5% in France.

In the optional CCCTB context, changes in employment vary from a decrease of 1.4% in Luxembourg to a 0.2% increase in France. GDP varies from -2.7% in Luxembourg to 0.4% in France; changes in FDI vary from -3.2% in Romania to 1.4% in France.

Spain and France benefit from an increase in the number of jobs in the optional and mandatory CCCTB scenarios. In other words, their economies are expanding as a result of reducing effective corporate tax rates on new investment.

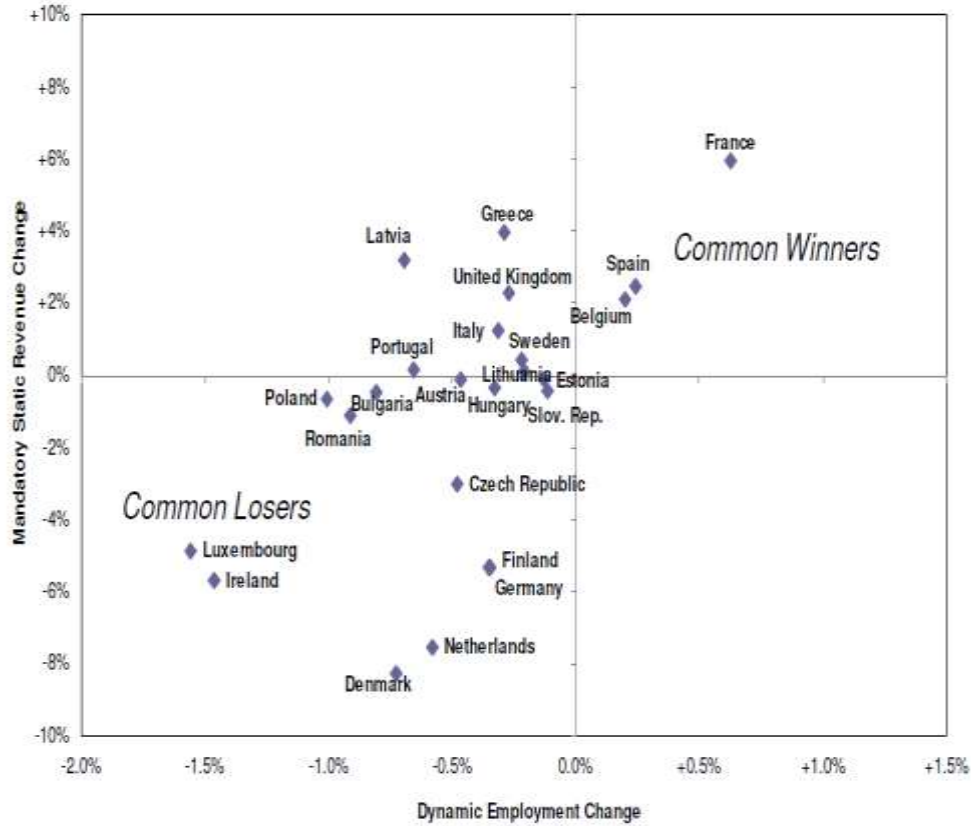
Figure 1 shows the winning and losing states due to the CCCTB implementation. The chart classifies Member States according to the variations in estimated corporate tax revenue on the vertical axis and the dynamic changes in employment along the horizontal axis.

Member States in the "Common Loss" quarter, including Germany, Ireland, Denmark and the Netherlands, are Member States that lose both in terms of corporate income and employment under the Compulsory CCCTB of Member States. We note that Romania is also included in this category. Groups operating in these countries tend to face higher

In addition, because they lose income from corporation tax, these Member States either need to reduce transfers to households or increase profit tax rates to balance their budgets, existing an additional negative impact on their savings.

Countries in the "Common Winners" quadrant - France, Spain and Belgium - benefit both from higher incomes and reduced effective tax rates for new investments. Smaller tax rates generate more investment and jobs in these countries.

Due to the increased income collection from corporate tax, these countries can either increase household transfers or reduce corporate income taxes. Both effects operate in the same direction to increase economic activity.



**Figure no. 1. Winners and losers resulting from CCCTB application**

Source: Ernst & Young, 2012. Study on the Economic and Budgetary Impact of the Introduction of a Common Consolidated Corporate Tax Base in the European Union.

An optional CCCTB would require Member States to administer two different systems of profit taxation: the current national system and the CCCTB. This would not reduce administrative or compliance costs.

While there may be some savings ("savings") determined by application of the CCCTB, however can be generated additional administrative costs to governments, costs that may include:

- the costs of functioning two distinct corporate income tax regimes at the same time;
- the requirement to interact to a greater extent with other tax authorities (including linguistic difficulties);
- tax audits may now require a cross-border element. For example, an income tax audit in Germany may require a "visit" at the French group's headquarters to ensure that labor and ownership factors are correctly calculated.

The following table shows the effects on the Member States' tax bases characterized by five levels of change: significant reduction, modest reduction, no significant change, modest growth and significant growth.

**Table no. 3. The degree of change in the corporate income tax base due to the implementation of the CCCTB for 27 Member States**

Country	Significant decrease	modest decrease	No significant change	Modest growth	Significant growth
Austria				•	
Belgium					•
Bulgaria		•			
Czech Republic		•			
Denmarca			•		
Estonia			•		
Finland		•			
France					•
Germany			•		
Greece			•		
Hungary			•		
Ireland		•			
Italy			•		
Latvia				•	
Lithuania				•	
Luxembourg				•	
Netherlands			•		
Poland		•			
Portugal		•			
Romania				•	
Slovakia				•	
Spain			•		
Sweden					•
UK			•		

Source: Ernst & Young, 2012. Study on the Economic and Budgetary Impact of the Introduction of a Common Consolidated Corporate Tax Base in the European Union

Therefore, three Member States are expected to register a significant increase (more than 5%) in their tax base due to a shift to the common tax base, six Member States would have modest growth, nine Member States would not have a significant change in the tax base (below 1%), while six Member States would have a modest decline in their tax base.

In the course of the analysis, the significant changes in the tax bases of the EU Member States were generated by:

- governmental rules for foreign controlled companies;
- limitation of losses and lack of internal fiscal consolidation;
- restrictive thin capitalization rules;
- tax depreciation;
- favorable tax regimes.

#### **4. Implementation of the CCCTB system in Romania**

Regarding the implementation of the CCCTB system, Romania will be able to choose to implement it as an individual tax base or as a tax base, which is an alternative to the existing one. In addition, the replacement of the tax base with the CCCTB would cause transitory problems regarding the transition from the existing tax base to the CCCTB for both Romanian entities and entities that "operate" between the two systems.

The probability of Romania's implementation of the CCCTB as an individual tax base is very limited, more realistic being that it exists alongside the national tax base.

On the other hand, for the Romanian taxpayers who can benefit from the new provisions, the adoption and then implementation of the Directive will be a simplification of the way of calculating and declaring the taxable profit and the profit tax. Also, the possibility of tax consolidation in Romania and offsetting taxable profits obtained in a country with tax losses from another country will be a significant gain for companies that will benefit from the provisions of the Directive.

As negative effects can be mentioned: the lowering of the level of collecting the profit tax (at least in the first years of application) and the fact that under the new conditions the 16% flat tax rate will no longer be a benefit of Romania compared to other Member States.

To this it is added the fear shared by many Member States of losing some of their independence in establishing their own fiscal policies and strategies and also to losing some of the tax advantages already acquired in relation to other Member States. For these reasons, the adoption of the new Directive within a relatively short time frame seems problematic.

In order to determine how the Romanian companies will be affected by this Directive, we should first compare the level of taxation in Romania with that in the other Member States. Since this Directive is eminently focused on direct taxes, we look at the standard corporate tax rate for companies - and 16% of Romania is among the countries with the lowest level of direct taxation in the EU.

However, it would be right to make a comparison of the effective tax rate, but due to the innumerable features of local tax systems, such a comparison is not possible.

We believe that these CCCTB rules will make more difficult to establish the corporate tax obligations and will increase the complexity of tax controls, at least until a directive on the common tax base at EU level is adopted, an initiative aimed at standardizing the rules for calculating the tax base.

It is also necessary, with regard to the CCCTB allocation formula, that Romania should be very careful about the details of its calculation, the impact that the formula will have on both the budget and the attractiveness of our country for investors. Clear, uniform rules for all could help to increase transparency and ease the administrative burden and strengthen good practice.

Any changes in tax regulations in different countries are borne by the final consumer in a given country, all changes mean costs. By consolidating, double taxation is eliminated, and trading costs are incurred at the end.

Therefore, we consider necessary to reduce bureaucracy, improve the relations between taxpayers and the national tax authority (ANAF), the predictability of the fiscal framework.

## **5. Conclusions**

Both the OECD and the European Commission are taking measures to ensure that taxes are paid in the countries where profits are made. Basically, the intention is that groups of companies to use as little profits for tax purposes when moving to jurisdictions where activity is low or nonexistent, instead taxes are low or zero.

By applying CCCTB, it is expected: to allow cross-border loss; reducing double taxation or over-taxation; to reduce opportunities for inappropriate or unintended tax planning for companies, by applying in parallel the corporate tax system in the EU; to introduce an unique approach for declarations and tax assessments; to offer companies the option of applying a common EU tax system; reduction of compliance obligations with

transfer prices. The CCCTB has the potential to considerably improve the EU business environment.

However, the implementation of the CCCTB at the level of EU countries, according to the studies developed in this context, will not have the expected impact (or will affect in little extent the economies of the countries applying it) and would create winners and losers. It is also expected three Member States to register a significant increase (more than 5%) of their tax base as a result of the shift to the common tax base, six Member States would have a modest increase (including Romania), nine Member States would not have a significant change in the tax base (below 1%), while six Member States would have a modest decrease in their tax base.

As for Romania, we believe that CCCTB implementation may cause the loss of competitive advantage in the race to attract foreign investment, which always prefers low-tax legislation. However, the Directive will only apply to multinational companies with operations in several European countries. The CCCTB would impose only a unitary method of calculating the taxable profit (total) and a key for allocating it between different states (which should normally not create large differences in taxes compared to the current situation). It is possible, however, to affect Romania's own tax policies by imposing by the Commission a minimum rate of corporate tax (informally, now it is 10%).

The unification of the European tax base, accompanied by a change in the corporate tax rate, is not such a strong inconvenient for Romania. It is important for our country to ensure a favorable business climate, meaning legislative, fiscal, political stability, skilled labor, effective bureaucracy.

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## TRENDS IN THE CONCEPT OF THE FINANCIAL MARKET IN THE CURRENT CONTEXT OF GLOBALIZATION

**Scientific Researcher, Ph.D. Otilia MANTA**

”Victor Slăvescu” Financial and Monetary Research Center,  
Romanian Academy, Romania

E-mail: otília.manta@icfm.ro; otília.manta@rgic.ro

**Abstract:** *The international economic, financial, social, cultural, informational flows of history have gradually led to the disappearance of trade barriers, or rather to the harmonization of trade policies and the erosion of national borders, creating the road to the homogenization of the globalized integrated space where identity and sovereignty the national acquire other meanings and interpretations. The definition of globalization has been presented as internationalization, liberalization, universalization and globalisation. Conceptual globalism on these lines did not provide analytical added value and was not visible by any means (Scholte, 2002). Bhagwati (2004) provided a definition of globalization based on the economic dimension of globalization, which included the integration of the global economy through trade, FDI, portfolio capital movements and the bank. There are definitions that go beyond economic, financial and economic boundaries, technological (Glotech) (Manta O., 2017), know-how, and extend to other areas of human activity and cover extensive interconnection networks. Interaction between spatially connected networks can usually take place through the flow of goods and services, finance, information, ideas and people. These may be environment-related. These networks can also be extended to include these networks at local, regional, national and global level. Distance, a continuous variable, counts most in the spatial context. In addition, to be spatially qualified as global, the network of relationships must be multi-country and multi-continental. Simple at national and regional level, links and interdependencies cannot be considered as part of the process of globalization.*

**Key words:** *finance, globalization, sustainability.*

**JEL Classification:** *F17, G23, O16.*

### 1. Introduction

The purpose of the research is to identify the financing needs resulting from the national budget (revenue and expenditure budgeting objectives), the analysis of demand and supply of money, the analysis of non-governmental credit to economic agents, the evolution of interest rates in the banking system (demand and supply of funds) the impact of the state aid on the financing of the national economy and its analysis by sectors of activity, the analysis of the evolution of the indebtedness of the economic agents at national and sectorial level, the impact of foreign investments on the Romanian financial market and the analysis of trends in modification of the financing structure of economic agents, analysis of the dimension of financial intermediation and non-conventional financing, the cross-cutting dimension of digital financial technologies, financial policy instruments to ensure the harmonization of the evolution the financial market at the national level with the global trends, as well as the sustainable development objectives of Romania.

*In order to achieve the proposed goal, the following objectives were set:*

- 1) Analysis of global financial market trends; the financial market in Romania in relation to the development strategy at national level and by sectors of activity;
- 2) Analysis of the functioning and organization of processes at the level of the financial market for the economic environment in Romania;
- 3) Identify the impact of the process of training and using micro-financial resources on how to finance businesses;

*Methodology of scientific research*

In order to underpin the research methodology, the classical observation and examination instruments, research methods based on the basic principles of scientific research, namely: "competence, objectivity, truth, methodical, demonstration, correlation,

evaluation of results, utility and psychomoral "(Ristea and Franc, 2013). It will use procedures based on factual analysis, intensive documentation at the level of domestic and international literature, using the databases and the scientific material existing in the endowment of the libraries of specific institutes in Romania and internationally.

The *methodology of the research paper* will have as direct instruments the collection of data and information from the literature and from the existing practice in public and private institutions, but especially scientific articles published on specialized research networks (ResearchGate, Academia.edu, etc.), articles published in different journals, relevant books in the field of reference, legislation, analyses and studies, official documents of various tax bodies, tax documents and interactive database of the National Bank of Romania, other relevant sources identified at the libraries: CCFM, Academia Romanian, INCE, IEN, BNR, National Library, INS, etc. Moreover, in the methodology we will analyse the documents using the comparative, analytical, descriptive method, no participative and participatory observation, and the use of a set of informational sources, the collection of financial data in the established databases. Also, the paper will be based on annual reports, publications, consolidated statistical data provided by the National Bank of Romania, the European Central Bank (ECB), the International Settlement Bank (BRI), the European Commission, OECD, published annually, data to be processed in order to be able to provide a general and analytical picture of the most important changes taking place in the European Union as a whole, but also globally - considered representative for the understanding of the phenomena studied, and especially in Romania.

*Information support for research* will be provided by monographs, books, scientific papers, materials of scientific conferences, the balance sheets of SMEs in 2008-2017, as well as other materials, which are presented in scientific papers and publications on the official pages of national and international research institutes, international financial institutions (research centres) etc.

## 2. Current state of knowledge

In the paper we proposed to approach the subject according to its various interpretations, the typology of globalization phenomenon, as well as the primary means of its realization:

- financial market acquisitions and mergers, strategic alliances and joint ventures;
- the causes that led to their occurrence, both of macroeconomic and microeconomic nature;
- the effects on the national and world financial system;
- the impact of the phenomenon of globalization on the financial market in Romania, in a European and global context.

The paper attempts to capture these aspects economically, without neglecting other visions, when appropriate. Moreover, the work will capture aspects of international practice based on the views of the great scientific personalities of our century who have approached the phenomenon of globalization of financial markets as well as personal experience in the financial field at international level.

Among the remarkable personalities of the moment who have approached and tackle the phenomenon of globalization, I mention Joseph E. Stiglitz with the works: *Globalization Mechanisms* (2008): "In 2000, more than 150 Heads of State and Prime Ministers met in New York, at the Millennium Summit, committed to halving global poverty by 2015. Building on the author's experience as an official of the Clinton administration and the World Bank, the *Globalization Mechanisms* analyse the main obstacles to a fair globalization: the burden of national debt, the degradation the environment, the limits of liberalization, etc. The 10 chapters try to find solutions to these

issues and provide a plan to restructure the global financial system. (George Soros), *Globalization: Hopes and Disillusionments* (2003), *Globalization and its New Discontents*, Aug. 5, 2016, *The Globalization of Our Discontent* Dec. 5, 2017 "Globalization, which should have benefited both developed countries and developing countries, is now criticized almost everywhere, as demonstrated by the political reaction in Europe and the US in recent years. The challenge is to minimize the risk that the reaction will intensify and that begins by understanding - and avoiding - mistakes of the past."

*Similar concepts*

*Paul Kennedy*: The planet is cut off today by a huge dividing line: a part of it is the young societies that are rapidly growing, lacking in resources, underdeveloped and sub-educated, and on the other are wealthy but old people with technological inventiveness, but dying demographically.

*Henry Kendall*: Laureate of the Nobel Prize "If we do not stabilize the people by justice, humanity and mercy, nature will do it for us."

*Zygmund Brauman*: capital liberalization has the effect of depopulation, the destruction of local economies, and the exclusion of millions of people unable to absorb a global economy.

The premise of the polarization of opinions on globalization - the concept of a global village defined by the author Florina Bran in the work "Globalization: manifestations and reactions" - "Six people would have the entire wealth of the community, 20 people would have poor living conditions, 70 people would be illiterate, 50 people would be undernourished, 30 would have a white race, one would die, two children would be born and only one would have the chance of a higher education."

*Globalization of the economy = open economy*

The liberalization of international capital flows gradually leads to the disappearance of trade barriers and the erosion of national boundaries, a path towards the homogenization of the globalized economic space, where national sovereignty becomes a general notion or acquires other meanings.

The definition of globalization has been presented as internationalization, liberalization, universalization and occidentalization. Conceptual globalism on these lines did not provide analytical added value and was not visible by any means (Scholte, 2002).

Bhagwati (2004) provided a definition of globalization based on the economic dimension of globalization, which included the integration of the global economy through trade, FDI, portfolio capital movements and the bank.

There are definitions that go beyond economic, financial and economic boundaries, technological, know-how, and extend to other areas of human activity and cover extensive interconnection networks. Spatial expansion is a necessary state of contemporary globalization, although universality is not.

Interaction between spatially connected networks can usually take place through the flow of goods and services, finance, information, ideas and people. These may be environment-related. These networks can also be extended to include these networks at regional and international level. Distance, a continuous variable, counts most in the spatial context. In addition, to be spatially qualified as global, the network of relationships must be multi-country and multi-continental. Simple at national and regional level, links and interdependencies cannot be considered as part of the process of globalization.

*Similar concepts and conceptual differences*

The over-territorial links between countries and people had another common implication of globalism. In the 1970s and 1980s, the phenomenon of increasing inter-economic interdependence was called "economic and financial interdependence", "global interdependence" or simply "interdependence" in academic research.

The concept and related term in this period was "internationalization," which cannot be equated with globalization, as it only involves an increase in interaction and interdependence among populations in different countries. This is an old process and has happened many times. Compared to globalization or globalism, "interdependence" and "internationalization" were partial and limited as concepts.

Interdependence means a single bond between two economies or countries. The Japanese-American economic and strategic relationship after the war was interdependence, not globalism. The agreement on closer economic relations between Australia and New Zealand is another example of economic and trade cooperation and therefore interdependence, not globalism. Of course, such interdependencies are part of, and contribute to, contemporary globalism.

*Ann Krueger* (2000) has defined economic globalization as simply as possible. "A phenomenon where economic agents in any part of the world are more affected by events in other parts of the world than before."

Another definition of economic globalization or globalism can be the integration and harmonization of economies and countries. This image of global markets that develops and integrates into a seamless network was conceived by two well-known globalization authorities, namely Greider (1997) and Friedman (1999), whose views on globalization are totally divergent. Undoubtedly, this vision of global economic integration is far from the current reality (Manta O., 2017).

Over the last three decades, economic life in many countries is linked to the world economy. There are many interpretations of globalization in Romania, which make the integration of the global economy still partial and limited. This is the conclusion of a wide range of empirical studies, too numerous to be quoted here, there are many barriers that create barriers to achieving the objectives of cross-border flows of goods and services.

The concept of globalization at present needs to be matched with sustainable / sustainable development trends at local, regional, national and global level.

*The dimension of the globalization process:*

- The history of globalization begins with the great migratory flows, with the discovery of new continents and territories, with the formation of empires. This is compounded by the progress of the industrialization era;
- On an economic level, the intensification of inter-state trade relations based on stable institutions authorized to exchange goods with other states prior to the trade liberalization period, also called "the first era of globalization," which has Pax Britannia specific, gold as an economic standard in world trade (1850-1880);
- Increasing trade flows are currently based on information support that unprecedentedly enhances links between people, businesses, regions, and states. It guides the entire virtual economic environment to information exchange (including financial) on a global "network economy".

*Economic, social, financial, informational, cultural, scientific, technical, etc.* represent the *multidimensionality of globalism* - the distinction between the economic and non-economic dimensions of globalization, has attracted much popular and scientific attention. While these are equally important, non-economic forms of globalization are older than economic ones ( Manta, 2018).

Before going into different dimensions of globalism, it must be said that their designation often tends to be somewhat arbitrary.

Mobility of knowledge, scientific knowledge, and economic and financial concepts, of techniques, include socio-economic globalism, as well as their spread to other branches of knowledge. The movement of scientific ideas and the transfer of technology are also an important part of economic globalization.

The long distance movement of ideas, images and information encompasses socio-cultural globalization. The diffusion of religion also falls into this category of globalism. The socio-cultures following the leader try to replicate their social and moral institutions and practices. This phenomenon is described by the sociologist as an expression of "isomorphism". Global society reacts with other types of globalization (Manta, 2017).

In general, there is a relationship between socio-cultural globalism, on the one hand, and global economic and military, on the other. An important role in this regard is that the former follows the latter two.

*The principles of the globalization concept*

The International Monetary Fund defines globalization as "the growing economic interdependence of countries in the world by increasing the volume and variety of cross-border transactions of goods and services and international capital flows as well as by faster and wider dissemination of technology." But the central element of globalization is that it is driven by companies in the continuous search for market shares and profits. Companies are at the centre of globalization. "

The main *principles of globalization* defined by Marvin Zonis in "A New Decade for Business: twenty four Principles of Globalization":

1. *The principle of "increased exposure to political risk"* - companies that extend beyond national borders increase their uncertainties. Uncertainties are the greatest potential consequences and are those generated by government actions. Government actions can be targeted specifically to a particular company and its operations within the country. But more often, companies face immense political risks because of the general government policies of the countries in which they operate. Amendments to labour laws, tax structures, profit repayment regulations, currency conversion rules and import and export regulations can be devastating, as well as poor public policies. Governments that poorly manage their public finances can compromise their currencies, inflate inflation and stimulate political turmoil and instability. Companies must establish processes that enable them to identify, assess, monitor and manage political risk more effectively.

2. *The principle of "increased exposure to natural disasters"* - in the work of Marvin Zonis, IPE vol., Inc. 4 IPE, volume 7, issue 6, March 20, 2000 6, no. October 19, 11, 1999 "Political volatility is driven by rising costs of natural disasters," the world's major tectonic plates are to a large extent below emerging markets. Larger earthquakes and volcanic eruptions are mostly emerging markets. But, worse, governments have built the least developed infrastructure in emerging markets. When floods and storms or typhoons and hurricanes hit, power supplies and telecoms systems in emerging markets are not the easiest and are most slowly restored. Being a global successful company means removing / restoring buildings and installations in countries at risk as well as building "prototypes / cut-outs" to allow a global company to continue to function successfully even though some components business are absent from a particular country.

3. *The "Multinational Companies Growth" Principle* - considering a larger community of standards and business across national borders, improved profits and market share can be achieved through mergers and acquisitions faster than through construction operations in different countries. New horizontal mergers are likely to occur, combining companies with similar basic skills.

4. *The principle of "identifying new forms of competition and cooperation"* - firms entering foreign markets will be subject to new forms of competition. Other companies operating on these markets may be unknown and may cause serious problems. The main packaging companies, for example, have found that there are counterfeits in China. Companies also need to strengthen their knowledge of the market if they plan to make successful mergers or acquisitions. But companies will also cooperate with other

companies in new ways, becoming mutually interdependent, even if they can compete simultaneously.

5. *The "new cultural sensitivities" principle* - moving around the world means improving efficiency and profitability by harnessing the best talents available around the world. Companies now designate a superior management, regardless of the countries they come from. To do this most efficiently, however, it means that companies have to give up the cultural prejudices and sensitivities that naturally occur in their home countries. A new global culture emerges within the company itself, a culture that directors in the original host countries find difficult to adopt.

6. *The principle of "shared virtual space"* - as companies expand their geographical operations, managers are increasingly responsible for staff in different countries. Managers are challenged to establish meaningful interpersonal relationships with their staff, often coming from a completely different culture. Worse, managers need to establish relationships with people they are not in daily contact face to face. The phone, e-mail, teleconferences and, of course, the increase in air travel represents the new bases for establishing meaningful interpersonal relationships. This is a massive challenge for most parties in relation to "management staff".

7. *The "best practices" principle* - acting as a single firm with a global, supranational culture, excuses justifying the preservation of national practices disappears. Globalization means operating everywhere as a single firm and setting up all the best practices all over the world. This puts some pressure on firms to learn about global best practices, through consulting firms focused on generating competitive information, or through firms, trying to find out what best practices are through studying their competitors.

8. *The "alliances" principle* - globalization allows many new types of alliances. Shell, for example, has established alliances by developing exchange programs with Asian chemical companies.

9. *The "finance" principle* - globalization reduces the priority of any company on its home country. As a result, the capital of a global firm is allocated on the basis of the expected risk-adjusted returns. Competition for the company's overall budget is intensified and better turnover-related risk calculations need to be made to guarantee a capital allocation. The established operations and the location of the head office in a truly global company do not provide any advantage in increasing competition for capital.

10. *The "globalization of suppliers" principle* - a company's decision to globalize across its supply chain and affecting all service firms. Global firms often look for suppliers and services to companies that can provide goods or services globally. When Shell made a commitment to globalize more fully, for example, he consolidated advertising with J. Walter Thompson. As a result, Ogilvy & Mather lost Shell's account to Houston. The rest of his business in Houston was not enough to justify his Houston office, which Ogilvy shut down. Unmistakably, globalization feeds on itself and leads to globalization in a process of mutual consolidation.

11. *The principle of "winners and losers in globalization"* - while globalization will provide immense aggregate benefits to both producers and consumers, it will not provide these benefits equally. Globalization will produce very large winners; but it will also produce big losers. Ross Perot was right. The challenge for every country in the age of globalization is not to resist this process, but to educate its workforce, stimulate its educational institutions, facilitate the establishment of new businesses and create flexibility in the labour market. In this way, new jobs will be created in new industries and service enterprises that will offer higher wages and more satisfactory work in better working conditions.

12. *The "return to globalization" principle* - the transition to globalization for countries will not be easy or smooth. Inevitably, a response will be generated against globalization that will organize and press the state to resist, if not reject, globalization. States that give up will be lost in the long run. They can manage to keep their savings structure. Consequently, these countries will be poorer.

### 3. Conclusions

In order to understand the phenomenon of globalization as a whole, we need to understand the most important tools of globalization such as: the formation of bilateral agreements between countries and multilateral at regional level; protectionism: taxes, subsidies, quota setting, various rules, etc. ; labour migration "brain theft"; strengthening and improving education.

From the "arsenal" of instruments on the field of action of globalization are highlighted the following: currency, stock exchange, alliances, International Monetary Fund, lobby, national interest, country rating, geopolitics and geo-economics in the globalization equation.

Increasingly in the field of research, new theories are emerging about the relationship between competitiveness, job creation and sustainability. This is also confirmed in the Global Economic Forum's Global Competitiveness Report 2017-2018, a report that appears at a time when the global economy is under great challenges and "has begun to show signs of recovery and yet the factors decision makers and business leaders are concerned about prospects for future economic growth. Governments, businesses and individuals face a high level of uncertainty as technological and geopolitical forces reshape the economic and political order that has sustained international relations and economic policy over the past 25 years. At the same time, the perception that current economic approaches do not serve people and societies well enough is gaining ground, triggering appeals to new models of human economic progress. "Moreover, in sectors such as the agro-food industry, the phenomenon of increased competitiveness is growing, economies such as the national economy being subject to competitiveness mechanisms with a direct impact on the external balance of payments (Manta, 2017).

In many advanced economies, the big challenges are due to the increasing inequalities between resource-poor and the impacts of technological change and climate change on the economy, "the complex impact of globalization - including those related to trade in goods, services and data, and the movement of people and capital. In emerging economies, the sharp decline in poverty and an increase in the middle class have fuelled higher aspirations and demands for better public goods; these requirements are now facing a slower growth and a tightening of government budgets". Globalism, in the view of Marin Dinu, expresses a stage in the evolution of interdependencies in which an actor of international life has a preponderant role in the management of the planet's resources (economic, cultural, military, scientific, political, etc.). The order resulting from the adversity principle produced polarization (economic, ideological), closed political systems (states bordered by geographical, economic, ideological, racial boundaries) or cooperation undermined by national sovereignty (by the divergent interests of states). The state in which we find ourselves is where one (a state) controls the whole (globe), manages discretionary global powers, exercises unilateralism of decisions, and favours levelling diversity (including cultural). It is obviously an architectural formula of life and the international regime reached by peaceful ways (Dinu, 2008).



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## DIGITAL RESOURCE AND ITS IMPORTANCE IN THE EDUCATIONAL PROCESS

**Ph.D. Student Cristina-Elena ION (STROE)**

”Valahia” University of Târgoviște, Romania

E-mail: cris\_stroe33@yahoo.com

**Ph.D. Student Georgiana-Tatiana BONDAC**

”Valahia” University of Târgoviște, Romania

E-mail: georgianabondac@yahoo.com

**Ph.D. Student Ramona-Oana HAMBURDĂ (BAUER)**

”Valahia” University of Târgoviște, Romania

E-mail: oana\_bauer@yahoo.com

**Abstract:** *The development of information technology has made people get the necessary data. It also allows a depth knowledge as a result of accessing the Internet. Increasing access to online information and related sources has led to the development of digital resources, by default, of educational applications. Technologies are constantly improving, which can have a high impact on people's satisfaction with digital resources. In-depth studies are needed to continuously monitor changes in people's perceptions of these. This article focuses on digital resources in the educational process. The hypothesis that underpins this article is that digital resources are very important in the educational process (for both teachers and pupils).*

**Key words:** *digital resources, education, educational process, teachers.*

**JEL Classification:** *I20.*

### 1. Digital resource

Electronic resources, on-line content and virtual learning spaces provide the latest and most diverse information. They serve as a motivating factor for students, it offers them the ability to transmit, acquire or download, process and disseminate information about an important subject.

Digital information resources offer great opportunities for beneficiaries. One of these is that they are often faster than the reading of specialized magazines (Fabunmi, Paris and Fabunmi, 2006).

Users of electronic resources must acquire the skills needed to exploit digital information (Tzoc and Millard, 2011). The advantages of using digital resources in the educational process are (Ranaldi, 2010):

- increasing access to all areas of the curriculum for children and young people;
- increasing confidence and results;
- reducing the training time for teaching and supporting staff.

Schools can allow teachers and students the freedom to explore digital technologies. Effective classroom digital resources are the result of an efficient software and device selection (Beetham and Sharpe, 2007).

### 2. Teachers' perception of the digital resource used at the class level

#### 2.1. Methodology of research

*Research objectives*

Two central objectives were formulated:

O1: Highlight Google's frequency of use for education.

O2: Observing the role of educational applications at pre-university level.

*Research assumptions*

H1: The most important role of digital educational resources is to improve the collaboration between teacher and student.

H2: Mostly, research teachers have said that Google's Education apps are useful to students and teachers.

The present research includes 100 teachers teaching in pre-university education. This is a field research, and the instrument behind it was the questionnaire consisting of 8 questions to identify the usefulness of digital resources.

**2.2. Interpretation of results**

1. Do you use digital resources in the process of teaching - learning?

This dichotomous question seeks to identify the use of digital resources.

**Table 1. Using Education Applications**

<b>Response</b>	<b>Percentage</b>
Yes	100
No	

*Source: elaborated by the author*

All teachers participating in the research use digital resources.

2. How much do you use these resources?

The second question is nominal and aims at highlighting the frequency of use of digital resources.

**Table 2. Frequency of use of digital resources**

<b>response</b>	<b>Percentage</b>
daily	10
week	50
Every two months	30
Once a month	10
Every six months	
Once a year	

*Source: elaborated by the author*

3. What do you think is their most important role?

This is a nominal question and has the role of shaping the role of resources.

**Table 3. Role of Resources**

<b>response</b>	<b>Percentage</b>
better collaboration between teacher and student	<b>50</b>
feedback obtained from students 10	<b>10</b>
students work in teams	<b>10</b>
students work in teams	<b>10</b>
improves teaching, learning	<b>30</b>

*Source: elaborated by the author*

A percentage of 50% of the participants chose the idea of a better collaboration between the teachers and students.

4. Do you use digital resources in the form of education applications?

**Table 4. Use of educational applications**

response	Percentage
<b>Yes</b>	<b>100</b>
<b>No</b>	

*Source: elaborated by the author*

All respondents use classroom educational applications as digital resources.

5. Which of the following applications are used in your school unit as a digital resource?

**Table 5. The application used**

response	Percentaje
<b>G suite for education</b>	-
<b>Classroom</b>	<b>100</b>
<b>ADMA</b>	-
<b>Others</b>	-

*Source: elaborated by the author*

The Classroom app is used by all respondents (100%).

6. What is the digital instrument you use frequently?

**Table 6. Digital Instrument**

Response	Percentaje
<b>Gmail</b>	<b>20</b>
<b>Gogle calendar</b>	<b>20</b>
<b>google plus</b>	<b>10</b>
<b>forms</b>	<b>40</b>
spreadsheets	<b>10</b>

*Source: elaborated by the author*

The Most Used Digital Answering Machine - Forms (40%), and at the opposite of the Spreadsheets and Google Plus.

7. What do you think is the most important benefit of Google Education apps:

**Table 7. Application Benefit**

response	Percentaje
achieving an education step by step	<b>70</b>
availability on any device	<b>20</b>
developing digital skills	<b>10</b>
tools designed to involve teamwork	

*Source: elaborated by the author*

A percentage of 70% of respondents claimed that the benefit of the application is to achieve a step-by-step education.

8. Give your opinion on the following statement: Education applications are useful for students and teachers.

**Table 8. Affirmation**

<b>response</b>	<b>Percentaje</b>
Total agreement	<b>70</b>
<b>Agreement</b>	<b>20</b>
indifference	<b>10</b>
Disagreement	
<b>Total disagreement</b>	

*Source: elaborated by the author*

In response to this, respondents in a high percentage (70%) expressed their total agreement.

For this question, Likert's Scale was used. The score of the criterion =  $(2 * 70 + 1 * 20 + 0 * 10) / 100$ , a score of 1.6 meaning that the respondents as a whole agree with the aforementioned statement.

Half of respondents use these resources weekly, 30% every two weeks, 10% daily and 10% once a month.

### **3. Conclusions**

Google Education apps, as well as digital resources, make the learning process more attractive to students. Through them an effective teaching-learning activity is achieved.

The participating teachers are open to the new (digital applications and tools) and have accepted without resistance. Their main role is to bring the recipient of the educational process closer to their provider. Most respondents who use Google Education apps perceive them as useful to all parties involved.

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# THEORETICAL EVALUATIONS ON THE LEGISLATIVE FRAMEWORK OF FISCAL GOVERNANCE IN THE EUROPEAN UNION

Scientific Researcher III, Ph.D. Ionel LEONIDA

“Victor Slăvescu” Centre for Financial and Monetary Research,  
Romanian Academy, Bucharest, Romania  
E-mail: leonidaionel@yahoo.com

**Abstract:** *The fiscal governance process aims at synchronizing the consolidation of fiscal positions and supporting the medium and long-term structural reforms of the adhering member countries through monitoring, evaluation and incidence of fiscal processes on the economic environment at each stage of its design, ex-ante implementation / execution and ex-post results, thus having the potential to identify slippages from the objectives and their adjustment during the current fiscal exercise or in the next fiscal exercise. To achieve its goal, this process is based on rules, regulations and procedures that provide the framework for national government planning, implementation and guidance of fiscal policy. In the present paper, we deal with the theoretical fiscal governance from the theoretical point of view, the legislative evolution and the effectiveness of this process, through the successive reforms it has undergone.*

**Key words:** *fiscal governance, fiscal discipline, fiscal framework, budgetary policy.*

**JEL Classification:** *H11, H6, K34.*

## 1. Introduction

Fiscal governance is the process of monitoring national fiscal policies to achieve and maintain quantitative and qualitative coordination on the basis of rules, regulations and procedures that pre-emptly influence the way fiscal policy is designed, implemented and guided by national governments. This process, built on the foundations of fiscal coordination, implemented through the Stability and Growth Pact (SGP) and the Maastricht Treaty (MT), has been consolidated around the objective of fiscal discipline, bringing the perception of the existence of the fiscal policy of deficits justified by a more careful mid-term assessment of a country's economic position, depending on a number of relevant factors such as the quality of budget expenditure, the cost of structural reforms and external economic shocks.

The initial monitoring procedures of the SGP to ensure compliance with fiscal rules and regulations were largely based on the announcement of the budgetary targets and their coordination at European level, without the existence of a national delegated entity monitoring the compliance with fiscal regulations, which which has diminished interest in fiscal rules and perpetuated their non-compliance. Signals of deviations from the fiscal targets were late, and decisions on deviation had to be put to the political vote. Thus, the lack of individual country monitoring led to alternative approaches to the application of fiscal rules and to the achievement of multi-annual national targets, with frequent difficulties in formulating appropriate decisions for all member countries and fragmentation in their transmission and application.

The successive reforms of the SGP aimed, in short, at eliminating these deficiencies by: implementing monitoring institutions at national level; the personalized / flexible approach; strengthening of preventive and coercive anchors.

## 2. The structural dimension of fiscal governance

Fiscal governance is, according to the European Commission (EC), "the institutional part of fiscal policy because it includes the set of rules and procedures for determining how budgets are prepared, realized and monitored", which includes, in its

structure, all the elements through which limits the trend of expansion of budget deficits and expenditures generated by the behavior of decision-makers.

The structure of the fiscal governance process is made up of four components that correspond to the implementation stages of the governance process, namely: setting targets; monitoring and evaluating results; orientation and budgetary procedures.

**Numerous fiscal rules** set government deficit and debt targets within the limits of the Treaty or within the limits of exceptional adjustments to provisions and promote, in particular, their compliance with and the adoption of a multiannual budgetary planning horizon with respect to medium-term budgetary objectives.

**Independent fiscal institutions** are an important dimension of the process of implementing fiscal governance, independent of national budgetary authorities, with the objective of monitoring, preventing and limiting the risks associated with fiscal policy through relatively different country-to-country actions, but addresses common issues in providing: independent analyzes of promoted fiscal policies; independent forecasts on the fiscal policy path and relevant indicators; evaluations and recommendations on legislative initiatives in the fiscal-budgetary field; recommendations on the multi-annual fiscal-budgetary strategy.

**Medium-term budgetary frameworks** are the extent to which fiscal mechanisms are in place to enable fiscal authorities to broaden the fiscal policy horizon beyond the annual budgetary timetable under the following conditions:

- The annual budget remains the key stage in taking important budgetary policy decisions, but some fiscal-budgetary measures have budgetary implications that go beyond the regular annual budget cycle;
- The medium-term budgetary objectives included in such a budgetary framework do not incorporate binding targets but are weaker commitments that can help ensure fiscal discipline by assessing the impact of current fiscal policies on the budget deficit in the coming years and by providing points of a benchmark against which budgetary developments can be evaluated over time;
- A properly framed budget framework must reflect the impact of previous budgetary commitments and the future costs of new fiscal policy measures.

**The budgetary procedures** are the last dimension of fiscal governance that provides a strong link with other dimensions of fiscal governance, as budgetary procedures are used in the preparation, approval and execution of the budget.

The four dimensions of fiscal governance presented correspond to specific objectives, converging with the achievement of the goal, namely:

- Achieving sound budgetary positions by removing the tendency to adopt unsustainable fiscal policies that lead to increased deficits and public debt;
- Reducing the pro-cyclicality of implemented fiscal policies;
- Improving the efficiency of public spending and increasing fiscal policy transparency;
- Consolidation budgetary procedures and increase their autonomy in limiting their dependence on political influences and decisions.

Starting from this dimension of fiscal governance, we will continue to present the legislative evolution of the European fiscal framework, with the presentation of the functional aspects and weaknesses of the fiscal framework, the issues covered by its successive revisions.

### 3. Legislative evolution of fiscal governance in the European Union

Fiscal regulations on fiscal policy coordination at European Union (EU) level have emerged with the emergence of the euro area, with explicit criteria for public finances

being introduced. The European fiscal framework, which provides regulatory support for fiscal governance, consists of:

- **The Maastricht Treaty** (1992) - sets out rules for the Economic and Monetary Union (EMU) and limits for the main fiscal-budgetary indicators - deficit and public debt;
- **The Stability and Growth Pact** - adopted in 1997, in force since 1999, aims to ensure sound public finances by supporting the implementation of the provisions of the MT by implementing preventive and coercive elements to achieve and maintain fiscal criteria. The original SGP was reformed into two stages, namely:
  - The 2005 SGP reform aimed at introducing the structural budget deficit indicator, which is intended to provide an additional anchor for the maintenance of the conventional budget deficit excluding some temporary economic cycle influences and certain flexibility in the medium-term objective (MTO) to extraordinary economic and financial events. These changes have made the SGP more adaptable to country-specific characteristics and have been a prerequisite for improving the fulfillment of fiscal criteria;
  - The 2011 SGP reform (generated by the effects of the financial and economic crisis on fiscal and budgetary indicators) targeted the implementation of a six pack package aimed at strengthening macroeconomic governance and budgetary surveillance in the EU by:
    - The launch of the European Semester (ES), which synchronises the multi-stage surveillance processes of the budgetary and economic policies in the member states, ex-ante drafting and approving them;
    - To pay more attention to the public debt ratio and the excessive deficit procedure may be triggered if this criterion is violated;
    - The structural balance requirement converging with the MTO is streamlined and supplemented with explicit quantitative criteria for the dynamics of government spending and the reduction of public debt for situations where it exceeds 60% of GDP.
- **The Treaty on Stability, Coordination and Governance within the Economic and Monetary Union** (TSCG) - The fiscal compact - adopted in march 2012, which came into force in january 2013, has as its core the Fiscal Compact - a mechanism for strengthening, supervising and coordinating policies (all EU member states except the Czech Republic and the United Kingdom) in order to strengthen fiscal discipline.

Overall, the successive revisions of the European fiscal legislative framework have pursued several objectives, namely:

- *Provide stronger economic bases for the fiscal framework* – fiscal regulations have often focused on fiscal actions and less on tax outcomes, the latter being affected by economic conditions beyond rigorous control by government authorities (crises, cyclical fluctuations). In this context, the methodology for assessing fiscal outcomes, in this case indicators, has been improved by introducing elements to eliminate the effects of the economic conditions mentioned;
- *Increasing the public debt indicator* - compared to the initial SGP version, which focused more on the budget deficit, without sufficiently capturing public debt dynamics in the deficit target - in the current version, the public debt indicator is seen as an important source of vulnerability, being assigned prerogatives in establishing the level of structural deficit and in triggering the excessive deficit procedure;
- *Strengthening mechanisms for implementing the fiscal framework* by: transposing rules of the European fiscal framework into national law and better integrating European budgetary surveillance with national budgetary calendars, which ensures better incorporation of Commission recommendations into national budgets and

policies; the early introduction of sanctions in the event of budgetary slippages, outside the conditions of exclusivity, and a level that eliminates the non-credibility and counterproductivity characteristics of the previous system of sanctions; the creation of independent fiscal institutions which are entrusted with monitoring national fiscal frameworks / regulations in line with the European fiscal framework;

- *Implementation of more flexible fiscal regulations* - previous experience has shown that rigid carcass regulations, which do not provide for procedures applicable in exceptional economic circumstances, are frequently contested and suspended. To mitigate this risk, a certain flexibility of the fiscal framework has been brought about by expanding the scope and by allowing for deviations from the objectives, given that structural reforms involving short-term budgetary costs and multiplying effects are adopted long;
- *Some clarifications of fiscal provisions / regulations* - fiscal regulations characterized by ambiguity are difficult to implement (this was a major critique of the initial public debt criterion, which did not provide a measure / threshold for assessing sufficient debt mitigation).

The reinforced architecture of EU fiscal governance reflects the reaction of European institutions with budgetary and economic responsibilities to the limited effectiveness of macroeconomic, financial and fiscal policies promoted in member countries from a sustainability perspective.

The structure of fiscal governance seeks to emphasize the individual responsibility of each member country and the establishment of effective institutions to eliminate the effects of macroeconomic imbalances and their spread within the EU. Stopping the challenges that may arise from the promotion of conjunctural macroeconomic policies is to be pursued in several stages, notably through fiscal-budgetary mechanisms, through the introduction of the ES and the implementation of six legislative changes.

An overview of the EU fiscal governance framework, including the additions and legislative changes presented, is further developed. There was a structure based on three main pillars:

- **The fiscal framework** - has legal support in the SGP and in the national fiscal frameworks and targets the results in part in the six economic governance measures addressing the results of the economic governance implemented by the SE, namely the budget deficit and the public debt. The main element of the SGP is the strengthening of coercive mechanisms;
- **The macroeconomic framework** - the coercive phase's novelty aims both to punish the excessive deficit situation and to overcome the allowed level of public debt, paying more attention to the previously ignored indicator - the public debt - in an attempt to make it operational;
- **The coordination policy** - aims at an enhanced synchronization of fiscal-budgetary policies with economic policies through the ES. Coordination takes place in a number of stages of the fiscal and budgetary policies of the member states ex-ante for their elaboration and approval in agreement with macroeconomic frameworks.

As it has been noted, the SGP failed to impose the observance of the fiscal discipline in order to achieve sustainable fiscal and budgetary positions neither in stable economic times before the crisis nor in the period of its manifestation, with violations of the deficit criterion, corrected unevenly, revenue management and budget expenditures were achieved without pursuing the promotion of fiscal consolidation, and the public debt criterion was largely ignored. Preventive and coercive procedures, in the case of non-compliance with the deficit and public debt criteria, did not have automatic mechanisms, and therefore the political decision left room for discretion and political reciprocity, which

led to the non-application of any financial penalty for breach of these criteria. For this reason, the SGP's preventive and coercive components have been reformed. The preventive component has been matched by the introduction of the MTO, through which member states commit themselves to achieving and maintaining a budget objective specific to each of them, such as the structural deficit close to balance or surplus. The purpose of the MTO is triple: to maintain a safety margin with respect to the 3% of the GDP reference value; ensuring continued and relatively speed progress in setting and guiding fiscal-budgetary policies on sober trajectories and prudent public debt levels; allowing for fiscal-budgetary maneuver margins with availability, especially for public investment needs.

The commitments of the SGP member countries are monitored by the EC on the basis of the stability and convergence programs submitted annually by them, but also on the basis of fiscal-budget execution. The new approach to the preventive arm emphasizes its purpose, namely to address fiscal policies that have jeopardized their sustainability by triggering the excessive deficit procedure (EDP) and a public debt level that exceeds 60% of GDP. Based on the reports presented and the ex-post fiscal-budgetary situation, the EC makes preventive recommendations for the implementation of effective measures in a given timeframe. The reformed preventive arm sought to strengthen this procedure by introducing the following elements:

- **The request to a member state to strengthen the adjustment path for stability and convergence programs** - the preventive arm consists of two main procedures: ex-ante evaluation of stability and convergence programs and ex-post evaluation of deviations from fiscal adjustments for countries that have not yet reached their medium-term objectives. Concerning the first (ex-ante) procedure, the additional possibility for the Council to issue an ex-ante opinion on the adjustment path in line with the stability and convergence programs is introduced. Through this advice, if necessary, the Council may invite a member country to strengthen the fiscal adjustment path. As regards the second (ex-post) procedure, the provisions remain unchanged, but are complemented by the possibility of imposing a financial penalty;
- **The determining public debt consolidation requirements** - when defining MTOs specific to each country, public debt levels are taken into account both in the ex-ante procedure and in the ex-post procedure of the SGP component. In the case of member states that have not yet reached the MTO and have a government debt level above 60% of GDP or a high degree of sustainability risk, an structural deficit of more than 0.5% of GDP is needed / year, which constrains debt consolidation;
- **The introducing a rule on public spending dynamics** - the preventive arm has focused in the past, exclusively on the deficit, the current reform has brought a preventive extension, and a spending rule. The rule, included in both precursors of the preventive arm (ex-ante and ex-post), requires a level of adjusted primary expenditure that should not exceed potential GDP growth over the medium term. The spending rule plays an important role in the preventive component in close correlation with the MTO. Thus, if a Member State has exceeded the MTO, it is allowed a temporary increase in expenditure that would exceed the potential GDP growth over the medium term. If a member country has reached but has not exceeded the MTO, the expenditure level should not exceed GDP growth over the medium term, in order to avoid procyclical fiscal policies. If a member state is still on the medium-term adjustment path (targeted to the MTO), the evolution of expenditure must generate an annual improvement of the structural deficit of 0.5%, effectively promoting fiscal consolidation through expenditure;
- **Explicit definition of significant deviations from the MTO or from the adjustment path towards its achievement** - quantitative criteria (for structural deficit

and for expenditure developments) needed to ensure effective fiscal surveillance within the preventive arm were required to assess compliance both for the ex-ante procedure and the ex-post procedure. In this respect, with regard to the structural deficit, a significant deviation from the adjustment path is considered to be a deviation of at least 0.5% of GDP in one year or an average of at least 0.25% of GDP in two years consecutive. For expenditure, a significant deviation is estimated to have a negative impact on the conventional deficit of at least 0.5% of GDP in one year or 0.5% of cumulative GDP over two consecutive years (without discretionary measures). Nonetheless, failure to comply with one of the above criteria is not sufficient for an assessment indicating significant deviation from the adjustment path, but significant deviation is considered when both criteria are simultaneously violated;

- **The consolidation of the procedure to be followed after the significant deviation from the MTO is detected** - the procedure that is triggered after the significant deviation from the MTO or the adjustment path has been established, brings some elements to reinforce this preventive component: EC may issue a warning directly after diagnosing significant diversion from the MTO; a possible rejection of the recommendation to give a warning to the Council by a qualified majority gives the EC the possibility of renewing the recommendation and the Council can decide by a simple majority; the introduction of a financial penalty in the form of an interest-bearing deposit of 0.2% of GDP, which may be proposed by the EC if no action has been taken to break the state of significant misconduct. This sanction is automatically approved, unless the Council rejects the EC recommendation by a qualified majority.

The reformed coercive component has been strengthened by introducing elements to strengthen the excessive deficit procedure (EDP), consisting of:

- **The introducing a quantitative benchmark for public debt relief** - since its inception, the SGP has foreseen the possibility of initiating an excessive deficit procedure based on the public debt criterion. The weak influence of this criterion in triggering the EDP was due to the fact that there was no quantitative criterion for reducing public debt. To establish the debt criterion, a quantitative reference criterion has been introduced whereby Member States whose debt exceeds the reference value or the obligation to reduce government debt (by 1/20 of its stock per year).

The triggering of an EDP is preceded by an EC report on the existence of this situation and the fulfillment of the following criteria: the debt-to-GDP ratio must exceed 60% of GDP; the diminution of public debt over the last three years is not sufficient; the insufficient diminution of public debt can not be explained by the evolution of economic cycles; it is not to be expected that the debt-to-GDP ratio will fall sufficiently in the next year. The quantitative debt reduction criterion will apply after a three-year transition period, specifying the countries in this situation, during which member states must make sufficient progress towards complying with the new rule.

- **The EDP opening procedure is not automatic** - PDE is not automatically opened if a member country is "eligible" under this procedure (either for deficit or debt reasons), but an assessment report is produced at the request of the EC, of "relevant factors", grouped as follows: the evolution of the medium-term economic position; the evolution of the medium-term budgetary position; the evolution of the medium-term public debt position, its dynamics and its sustainability. The role of this report is to eliminate the application of a PDE for possible temporary deviations and also real evaluation, which may aggravate or mitigate the situation with respect to the initial one and, as a consequence, start or avoid starting a PDE.
- **The increasing the pressure of the group by setting up supervisory missions** - the finding of an excessive deficit means starting a procedure, already existing in the SGP,

being easily adjusted in this reform process. The element introduced is that after the first decision on non-implementation of "no effective action" and all subsequent stages of the procedure, the EC can send a surveillance mission to the country in this situation to assess the current economic situation and to identify any risks or difficulties to meet the goal;

- **The activation of previous financial penalties** - compared to the original SGP, the reformed one foresees / allows the application of previous sanctions in the event of non-compliance with Council recommendations or notices. If there is already a deposit with interest constituted during the "stay" of the preventive component or in more particular cases of non-compliance, a situation that provides for the establishment of a non-interest-bearing deposit four months after the reporting of the deficit and public debt indicators, and the actions taken continue to be ineffective for six months, the repeat country can be amended or the existing deposit can be turned into fine. The amount of the fine will contain a fixed component of 0.2% of GDP and a variable component amounting to one tenth of the absolute amount of the difference between the budget deficit of the previous year and its current year's benchmark.

### **3.1. Remedies and weaknesses of the fiscal framework after the reform of the SGP**

The reform of the SGP, in particular, of its two components, brings important elements for strengthening the EU's fiscal governance framework.

The reformed preventive component now offers the possibility of issuing EC opinions on stability and convergence programs that can be set up in early reporting of deviations and avoiding imbalances. Strengthening the public debt criterion and introducing a spending rule when defining a country-specific MTO are positive aspects that integrate risks to sustainability resulting from high levels of indebtedness, and are the conditions under which exceptional revenue does not flow into expenditure but are focused on the process of fiscal consolidation. The operationalization of significant deviations from the MTO or from the adjustment path towards it, based on the structural deficit and expenditure rule, increases the transparency of supervision and can help increase compliance with fiscal rules. While consolidating the applicable procedure in the event of a significant deviation from the MTO or the adjustment path (by: immediate warning, reducing the majority of the decision on the results of the actions taken and introducing a sanction), the group pressure may increase and may reduce the margin political influence. The reformed coercive component has been strengthened by introducing a quantitative benchmark on public debt reduction, which gives the debt criterion a more important role and increases prudence in terms of a possible upward trajectory. Also, the introduction of oversight missions and the application of early financial penalties can help increase the rigidity of the EDP, increase the pressure of the group and reduce the margin of political influence.

The consolidation elements of the SGP, on its two major components, undoubtedly bring improvements to the EU's fiscal governance framework, but at the same time bring and / or maintain some weaknesses. One of these is the excess of exceptional situations that occurs at different procedural stages, which in turn can weaken the reformed SGP framework.

Under the preventive component, we are referring to the newly introduced eviction clause relating to the economic downturn due to an unusual event (in the nature of a strong financial or economic crisis) outside government control with a major financial impact, a clause that has the potential to weaken the procedure. Some weaknesses also appear in the procedure for detecting significant deviation from the MTO or the adjustment

path, meaning that this procedure may be applicable if all the criteria (deficit, expense) are simultaneously violated, which means that the deviation of the structural budget deficit from the MTO is not sufficient to establish the significant deviation if the expenditure criterion is met.

Under the coercive component, there are some mitigating circumstances that need to be taken into account when deciding whether the deficit or debt is excessive. Thus, non-compliance with the deficit or public debt criterion will not necessarily result in the opening of the EDP.

The EU's Enhanced Financial Framework does not yet have a fully automated mechanism for initiating procedures in the event of non-compliance with its rules, with the Council continuing to play an important role in the assessment and decision-making within the SGP (both the finding of a significant deviation from the MTO and the finding and PDE triggering).

The rigorous application of fiscal rules and, implicitly, the overall effectiveness of the EU's fiscal framework largely depend on a single EC institution, which has a determining role in assessing the existence of the excessive deficit, in assessing the results of the measures taken to correct excessive deficit and the reduction or cancellation of financial penalties.

### **3.2. Fiscal Compact - to help the SGP**

The implementation of the Fiscal Compact, through the TSCG, aims to promote fiscal discipline, especially in the Eurozone, but also outside it, as a support for the SGP. Its structure has two main modules, like SGP, each contributing to strengthening / supporting the two components of the SGP - preventive and coercive. The constraints of the fiscal compact refer to:

- The budgetary position must be balanced or in surplus. This rule is considered to be met if the annual structural deficit respects the medium-term budgetary objective with a lower limit of the structural deficit of 0,5% of GDP but may add up to 1% of GDP for countries with a public debt below 60 % of GDP and with low risks to long-term fiscal sustainability;
- Establishing a correction mechanism that would trigger automatically in case of significant deviations from the medium-term objective or from the adjustment strategy;
- The budget rule should be introduced (within one year of the entry into force of the Treaty) by national mandatory and permanent, preferably constitutional or other, provisions ensuring full compliance with the budgetary process national.

The fiscal compact brings some improvements as well as the weaknesses (mentioned above) in the strengthened SGP (2011), which will be presented below, namely:

- From a legal point of view, the Fiscal Compact brings key elements of the SGP, from EU secondary legislation, into an intergovernmental treaty that requires the introduction of these elements in the constitutions of the signatory parties or legal acts with the same force, which is a more anchor firmly in ensuring fiscal discipline and creating a stronger commitment to fiscal rules;
- From an administrative point of view, the Fiscal Compact increases faster convergence with MTO by developing ambitious and binding convergence calendars that go beyond the requirements of the SGP. Compliance with them will lead to entry into the MTO, sustainable fiscal policy orientation and credibility;



- From an institutional point of view, it is strengthened to monitor the effective compliance of the European fiscal framework and national budgetary frameworks by strengthening the role of independent fiscal institutions in the accession countries;
- In terms of coercive measures, the degree of automatism in the application of EDP to euro area countries has increased, making enforcement of the rules more stringent and reducing the margin of political influence in applying sanctions.

#### 4. Conclusions

Overall, the EU's strengthened fiscal framework is more complex, which could have negative consequences in terms of transparency, effective implementation and accountability. The assessment of the progress made in the fiscal governance process is based on the structural deficit and expenditure, and the increase in the complexity of the fiscal framework makes it difficult to methodologically verify all the necessary data.

The setting of quantitative benchmarks for national budgetary frameworks, sanctions for non-compliance, and the existence of an "independent institutional supervisor" do not provide enough to consolidate them, but they depend to a large extent on the political will of countries to enforce fiscal rules strengthened.

Successive reforms of the SGP and the Fiscal Compact have obviously brought improvements to the EU's overall fiscal framework. However, the SGP has been partially improved, further perpetuating weaknesses in exemption situations, automation of procedures and high EC dependency. These issues may further weaken the application of the provisions of the SGP and, overall, affect the effectiveness of the strengthened European fiscal framework.

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# MONEY LAUNDERING - FACTOR OF DESTABILIZATION, CONTAMINATION AND GROWTH OF THE REPUBLIC OF MOLDOVA'S BANKING SECTOR SYSTEMIC RISK

**Ph.D. Student Vadim LOPOTENCO**

The Academy of Economic Studies of Moldova, Republic of Moldova

E-mail: lopotenco.vadim@gmail.com

**Abstract:** *The success of criminal activity is dependent on the possibility to launder the money received by the illegal way through the banking system. The use of banking systems for money laundering leads to the undermining of individual banking institutions and, ultimately, of the entire banking system. At the same time, the increased integration of world banking systems and the removal of barriers to the free movement of capital have increased the ease with which illegal money can be laundered and complicate the money tracking process. At the same time money laundering is a major factor in the contamination of the entire economy: this phenomenon can erode the integrity of a country's banking institutions. Banks, as providers of a wide range of fund and credit transfer services, can be used in all phases of money laundering, placement, stratification and integration. Electronic funds transfer systems allow for rapid transfer of funds between accounts under different names and jurisdictions. In this way, we will analyze the influence of money laundering on the systemic risk and on the stability of the banking system in the Republic of Moldova.*

**Keywords:** *money laundering, banking system, systemic risk, destabilization.*

**JEL Classification:** *G21, E42, E5.*

## 1. Introduction

At the world level, the phrase "money laundering" characterizes the process by which the origin of the crime proceeds is concealed, while the people who commit the crimes concerned avoid legal consequences for their actions. Most often this phenomenon is related to illegal activities, namely financial crimes, corruption, smuggling, drug trafficking or extortion of money. Since at the global level there is no uniform interaction between countries on this account, money laundering is not only a large-scale, but also a dangerous phenomenon. According to data released by the World Bank (2017), only proceeds from corruption exceed \$ 1,000 billion a year (about 2.5% of world GDP) and these funds need to be laundered in a certain way.

To determine the actual extent of money laundering in the world due to the high latency of such crimes, and also because of the difficulty of obtaining reliable data, it is almost impossible. Meanwhile, according to experts of the International Monetary Fund, the total money laundered in the world is in the range of 2-5% of world GDP. This means that annually from 0.9 to 2.4 trillion dollars, received illegally, are introduced in various ways into the global economic turnover of money (Phare, 2002).

Like corruption, money laundering also affects all of us, and sometimes this phenomenon leads to quite serious social and political consequences. This leads to destabilization of the vulnerable countries economy, undermines the integrity of state institutions and destabilizes the financial system. In the end, all this affects the economic growth and economic development of states, and the tandem "corruption - money laundering" is both the cause and the consequence of poverty in many countries. Moreover, if proper measures are not taken, corruption and money laundering can turn into a vicious circle that can hardly be broken. On the one hand, money laundering provides organized criminal groups with the financial means necessary to carry out illegal activities and, thereby, leads to corruption, and on the other hand, corruption in itself "provides" resources, which then have to be "laundered".

In the case of the Republic of Moldova, money laundering has become a topical issue, since in 2014 -2015 the banking system was targeted by large-scale actions of this kind. In the Republic of Moldova, the economy is in a transition period, corruption has

reached a high level, and some aspects of the financial system are deprived of due supervision. Thus, the Republic of Moldova has become a target for some regional or even world groups engaged in money laundering. Everyone had the same starting point, namely, the moment when the banking sector almost completely passed under the control of opaque shareholders pursuing hidden interests. As a result, the loudest cases of money laundering through domestic banks occurred precisely at that time. In 2010-2014, transactions were made through the domestic banking system was about 20 billion USD from the Russian Federation. This has turned the Republic of Moldova into a machine for laundering money of illicit origin and their further transfer to the destination countries. At the same time, the episode The involvement of politically vulnerable persons, high-level corruption, fraudulent financial means, or the use of offshore structures are just the most important elements that allowed the creation and operation of sophisticated money-laundering mechanisms using the domestic banking system

## **2. What is money laundering?**

At present, a single approach to the definition of the concept of money laundering has not been developed in world practice. For the first time, the official interpretation of the term "money laundering" was given in 1984 by the US Presidential Commission on Organized Crime in relation to proceeds from drug trafficking (U.S. Government, 1967). The commission used the following wording: "Money laundering" is a process by which the existence, illegal origin or use of income masqueraded so that they appear to be of legitimate origin is concealed."

According to the model law on money laundering and the financing of terrorism, resulting from the joint work of the United Nations Office on Drugs and Crime (UNODC) and the International Monetary Fund (IMF), money-laundering is defined as the process of concealing or disguising the identity or origin of illegally obtained income so that it seemed that they came from legitimate sources.

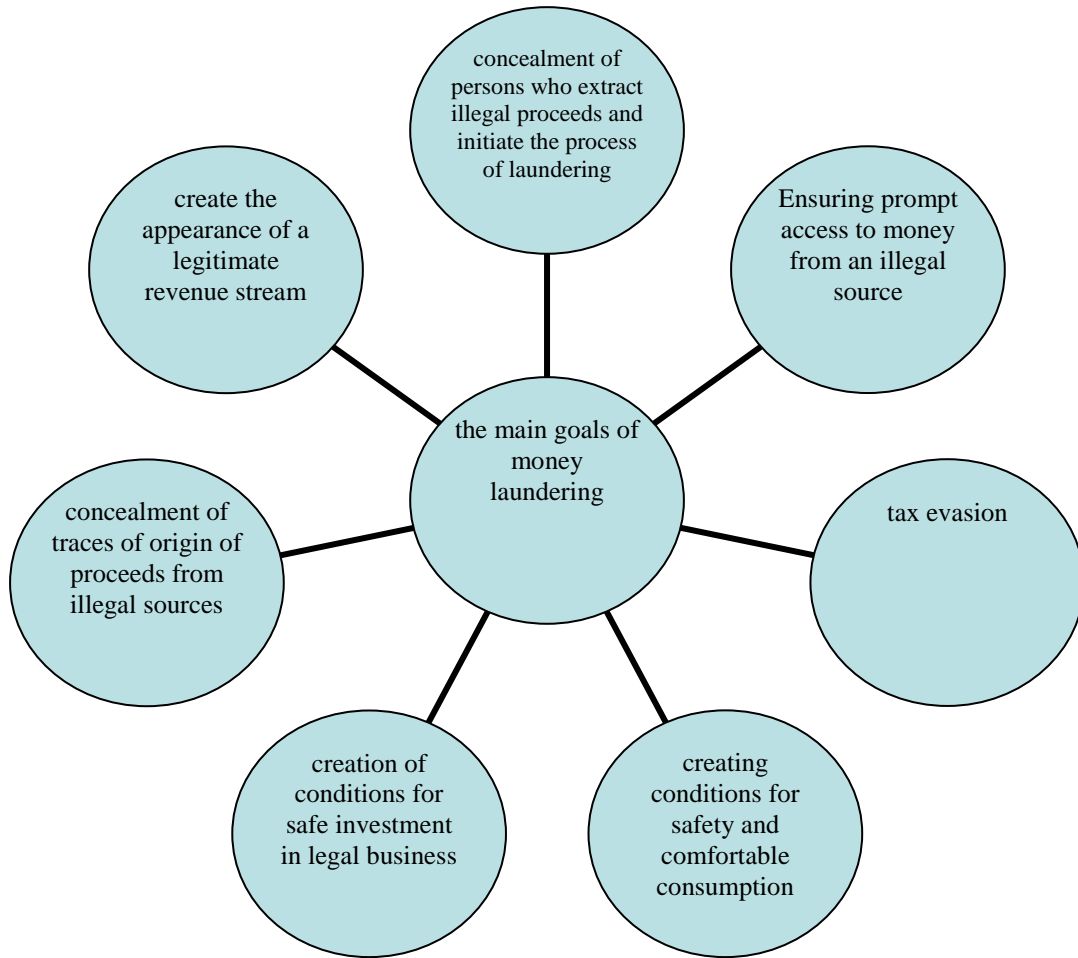
The EU offers the following definition: Money laundering is the de facto financial part of all the crime that generates profit. It is the process by which offenders attempt to hide the origin and real possession of income from their criminal activities (Phare, 2002).

In the Republic of Moldova, money laundering is an offense defined by Law no. 190 from 26.07.2007: Money laundering - actions, established in the Criminal Code at art. 243, aimed at attributing a legal aspect to the source and provenance of illicit income or concealing the origin or membership of such income.

One of the first among the international legal instruments that defined the task of combating money laundering was the UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances adopted in 1988 (United Nations, 1988).

The goal of most crimes is to obtain economic benefits. In general, the situation can be represented as follows (Figure 1).

The basis of the policy of any bank in accordance with the Wolfsberg principles should be the rule that the bank can establish relations only with those clients whose sources of income or financing can reasonably be confirmed of their legal origin. At the same time, the Wolfsberg norms allow that specific mechanisms for countering money laundering of proceeds from crime can be determined at the discretion of the bank.



**Figure 1. The main goals of money laundering**

Source: Created by author

### 3. How money laundering works?

Although methods of money laundering may be different and the level of their sophistication may also be different, however, international practice shows that this process most often occurs in three stages. From the chronological point of view, we are talking about the transfer of funds directly related to the crime, "masking" the route to prevent the pursuit of money, and the provision of money to the beneficiary, the origin of which has already become legal. In international practice, these stages are also referred to as placement, stratification, and integration of financial resources.

Placement - at this stage, the funds are placed from the source of receipt and put into circulation through financial institutions, shops, exchange offices, casinos, etc. This stage is the most dangerous for criminals, since the bodies authorized to exercise supervision and financial organizations are responsible for verifying the origin of money and carefully collecting information about the client.

Stratification - during this stage, a number of transactions are carried out, the purpose of which is to "remove" funds from the source of their origin. Most often this method is used as an electronic transfer from a number of accounts in various banks located throughout the planet, mainly from those related to offshore jurisdictions. Thus, since the authorities of the respective jurisdictions often do not interact with investigative

bodies that specialize in combating criminal activities, the identification and disclosure of money laundering facts is increasingly complicated.

Integration - if first two stages were successfully, then on the third, the funds are included in the legal economic turnover. That is, the funds received illegally are invested in such a way that they seem to be profit from any legal business. Often, for this purpose, they resort to the acquisition of real estate or luxury goods, fictitious loans or represent the implementation of some export-import activities. In addition, as a result of this stage, property or funds that appear to be obtained as a result of legal activity, provide the beneficiary with disposal.

Currently, the legalization (laundering) of criminal proceeds, being an integral part of organized criminal activity, primarily of a transnational nature, represents an increased social danger and requires the implementation of a complex of general state, including special, measures aimed at counteracting this negative phenomenon. It is representatives of transnational organized crime, whose illegal actions are increasingly acquiring an external resemblance to the legitimate activities of transnational corporations, seek to infiltrate banking institutions for:

a. illegal access to redistribution of financial resources of shareholders and depositors of banks;

b. creation of a secure, well-disguised system of laundering "dirty" money, which is not accessible to the measures taken at the international and national levels for special social and legal control;

c. use of the statutory activity of banks in conducting various transactions both inside the country and abroad, covering illegal financial transactions, primarily related to conversion, cashing out cash and withdrawing capital, as a rule, in the most "safe" offshore jurisdictions;

d. investing already "laundered" resources in the financial and banking sector, which is one of the most liquid on the world market, thus acquiring legal, so-called incremental revenues;

e. gaining prestigious position in the society, additional so-called status dividends, which are effectively used to access new sources of super profits, establish strong corruption links for illegally covering up their illegal activities. As a result of hidden coalescence of transnational organized crime and banking institutions, illegal competition is developing, in fact, the "disintegration" of financial and banking institutions that can undermine public confidence in them and cause serious long-term negative consequences for the financial and credit system, before its deformation.



**Figure 2. Money laundering in the spheres of economy**

Source: Johnston, Chai and Schumacher, 2000.

This is especially important in the context of the present threat of the second wave of the world financial and economic crisis.

At the same time, it should be noted that effective development and implementation of schemes for laundering criminal proceeds is significantly hampered without active or passive involvement of the top management of the bank. This kind of problem is most fully reflected by the example of the infamous American The Bank of New York (BoNY). Since 1999, the world's leading mass media have been actively discussing the issue of how to develop and implement a "beautiful" scheme for laundering criminal proceeds, which the Wall Street Journal estimated used "up to 80% Russian importers", the senior vice-president of BONY and the vice president of the London branch of this bank were involved. It is noteworthy that the vice president of the London branch, L. Edwards, even delivered a report on the fight against money laundering to the clients of The Bank of New York from Scandinavia, Russia and Eastern Europe.

#### **4. Money laundering as a factor that destabilizes the economy, leads to an impoverishment of the population and fuels corruption**

Money laundering can take place in various forms. They depend on the type and level of the crime, as a result of which funds were received. The most common are the forms resulting from the receipt of bribes / bribes, extortion of money, conflicts of interest and theft of public or private funds. In the case of the Republic of Moldova, an eloquent example of money laundering is the theft of funds from the banking sector, which resulted in the collapse of three banks - Banca de Economii, Banca Socială and Unibank, and the subsequent need to use huge sums of public money to eliminate the consequences of what happened.

The main activity of banks is to mediate the circulation of money in the economy - from the owners of savings to investors. At the same time, banks do not use their own money in their activities, but money drawn from the population and from firms, which confirms the public nature of banking institutions and the fact that they are of public interest<sup>4</sup>. Prior to committing the notorious thefts, the lion's share of money in the three banks concerned was private (money raised from the population and from firms) and public funds that belonged to various state institutions (money for the payment of pensions and wages, funds for medical insurance, ). As a result of corrupt acts and malicious acts of some managers, these funds were stolen by means of creditor activity and were provided to certain firms. To hide the traces of money and their beneficiaries, a large-scale money laundering process was launched. Thus, the funds were transferred to a number of foreign firms and transferred to offshore jurisdictions. At the same time, to continue the lending process, some funds still returned to the three notorious banks - to repay old loans - and then again issued through new loans. All this mechanism, which was confirmed by the investigation of "Kroll", was applied until those three banks had exhausted all the resources that did not belong to them. To prevent losses of depositors and other banks, the National Bank of Moldova (NBM), with the participation of the government, covered the shortage at the expense of public funds. Thus, money that could be used for repair and construction of roads, for the needs of schools and hospitals, for other state investments, that is, public property, went to cover the stolen funds.

It can be noted that embezzlement in the banking sector and the further process of money laundering have affected the economic environment and, consequently, the citizens of the country, at least several times. At the first stage, public funds were used to save depositors of the three notorious banks. Then, confidence in the national currency, financial system and economic prospects of the country was seriously undermined by the arbitrariness of a number of bank managers and the use of money by depositors for illegal purposes. Ultimately, the money stolen can return to the country again in the form of anticompetitive investments that could disrupt the investment climate, or in the form of

funds that will continue to support corruption and illegal activities. The theoretical presentation of the advantages of money laundering in comparison with the "clean" economic system is set forth in Table 1.

**Table 1. Consequences of money laundering compared with the benefits of a "clean" economic system**

Effect	The economy, which has suffered from money laundering	Economy not affected by money laundering
Economical	- anticompetitive practice - the deterioration of the investment climate - theft of public property	- loyal competition - attractive investment climate - sustainable economy
Social	- intensive corruption - migration	- workplaces - quality public services
Political	- bribery of deputies - seizure of state institutions	- effective management - responsible public administration

Source: Created by author

To protect its economic system, the state needs an appropriate institutional and legislative framework aimed at preventing money laundering and combating this phenomenon. Even when the first Criminal Code was adopted, it included specific norms on combating money laundering. Subsequently, the legislation in this area was gradually upgraded - from the Law on the Detection of Incomes Obtained as a Result of Grave Crimes, adopted in 1993, to the latest Law on the Prevention of Money Laundering and Combating it, developed in 2016. Although certain norms change, the main goal remains the same - prevention and combating money laundering to protect the legitimate rights and interests of individuals and legal entities, as well as the state. To achieve this goal, a number of reporting entities are identified that are most susceptible to this phenomenon and are required to apply measures to identify individuals and legal entities, as well as the actual beneficiary, to notify the specialized body about the existence of suspicions about money laundering. Among the reporting entities, the most important are the financial institutions - both banking and non-banking, exchange offices, real estate agents, state notaries etc.

It is necessary to consider the relationship between the vulnerabilities of financial institutions and households to the risk of money laundering.

The first direction is the transfer of vulnerability to the risk of money laundering from financial institutions to households:

1) direct involvement of money laundered from households legally raised from households, that is, households become indirect unwilling participants in the money laundering process. For example, the scheme outlined in the report of the EAG Working Group on typologies "Risks of using non-bank financial institutions in schemes for laundering proceeds from crime" is the scheme for unlawfully seizing the funds of depositors of the credit union under the "financial pyramid scheme";

2) the indirect involvement of money illegally raised from households in money laundering.

The second direction is the transfer of vulnerability to the risk of money laundering from households to financial institutions:



1) For example, fraudulent schemes are known on the securities market, such as: the laundering of money by an individual (household) by acquiring an open joint-stock shell company, money laundering by an individual (household) obtained as a result of tax evasion, with electronic transfer of securities or the acquisition of shares in another country, money laundering by an individual (household) obtained as a result of insider trading, using Internet-based trading accounts, and others;

2) In the sector of non-banking financial institutions, the following fraudulent schemes organized by individuals have been identified: the organization of a fictitious pawnshop by an individual (household) to cash out money, the collusion of an unscrupulous natural client with a pawnshop about distorting the appraised value of a thing for cashing out cash means and others;

3) In the banking sector, fraudulent schemes are known, such as: the organization of pseudo-entrepreneurial structures for the purpose of money laundering by means of withdrawing and crediting funds to bank accounts, organizing the cashing of criminally acquired funds abroad, illegal banking activities.

Thus, the directions and forms of the interrelationships of financial institutions and households to the risk of money laundering are determined on the basis of their qualitative characteristics. Thus, the transfer of vulnerability to the risk of money laundering from financial institutions to households can be due to the involvement of household funds in illegal financial transactions, as well as the spreading to households of the negative consequences of the realization of the risk of money laundering. In turn, the transfer of vulnerability to the risk of money laundering from households to financial institutions (commercial banks) can occur both by involving the financial institution in money laundering (both through collusion with the staff of the institution and without their participation), and by creating separate financial institutions, which imitate financial and economic activities, but are primarily engaged in the laundering of criminal proceeds.

The impact on the systemic risk in the financial market of the vulnerabilities of financial institutions and households to the risk of money laundering and their interrelations can be characterized by the following: financial institutions (commercial banks) accumulate vulnerabilities to the risk of money laundering, both inherent in them directly and transferred from households, and the formation of corresponding threats to these vulnerabilities is triggered by the mechanism for realizing the risk of money laundering.

## **5. Conclusions and recommendations**

The results of recent years prove that the Republic of Moldova was a favorable territory for cross-border groups involved in money laundering. Due to the increased corruption at the highest level, the available legislative deficiencies and the interference of political forces in the work of the supervisory authorities, the domestic financial system has become vulnerable to the risk of theft and money laundering. Even after reforming the national framework in the field of banking supervision and preventing and combating money laundering, the temptation to use the domestic financial system as a platform for the legalization and transit of funds of dubious origin remains quite high. For example, in 2016, the SPBD received about 600,000 forms from the reporting entities, which indicated that, following the results of the assessment, the transactions were found to be questionable. As a result, 236 cases were sent to the prosecutors (the prosecutor's office and the NPPM), 19 to the Main State Tax Inspectorate, 22 to the financial market regulators (NBM and the NCFM), and 38 to some law enforcement agencies. The largest share falls on the banking sector, that is, 11 domestic banking institutions accounted for about 99.6% of the total received forms.

The fight against money laundering should include other measures related to the economic policy of the state. Thus, along with the exclusion of institutional and legal deficiencies that are typical for this sphere, such measures as de-orphotization of the economy, the introduction of international standards of transparency or a thorough check of investments of dubious origin should also be on the agenda of the powers that be. In addition, taking into account that the banking sector remains the most vulnerable component of the increasingly sophisticated money-laundering mechanisms, the NBM at the sector level should adopt a consistent policy aimed at preventing, identifying and managing the risks that accompany this phenomenon. This applies to non-bank financial institutions, which are increasingly represented in domestic financial turnover and are most susceptible to theft and criminal activity. In this sense, international practice suggests a number of measures, and the most important are the following:

a. The definition of a clear procedure for identifying risks and coordination in the internal plan - financial institutions should allocate sufficient resources to promote anti-corruption and anti-money laundering programs. The manager should clearly explain to the team that it is necessary to show complete rejection of such phenomena as corruption and money laundering; • Applying adequate preventive measures to recognize the client, including these ultimate beneficiaries - in the process of interacting with clients, financial institutions should have mechanisms to monitor suspicious transactions and identify potential "red flags". Along with this, customer profiles or any similar tools should be adapted to the specifics of the activities and clients;

b. Identification and special management of relations with politically vulnerable persons - due to the status and political influence of certain individuals, the risk of their involvement in money laundering is much higher. So, in the event that the client identification procedure identifies politically vulnerable persons, financial institutions should take additional reasonable steps to establish the source of funds, and apply actual monitoring of business undertakings over time;

c. Information storage and information exchange with responsible institutions from the relevant field - as reporting entities, financial institutions need to ensure that there are clear and rapid procedures for transferring information to responsible institutions that may relate to money laundering;

d. Simplification of cross-border cooperation - at the international level, states should ensure that there are agreements on the rapid exchange of information on the relations and relationships between financial institutions. In addition, banks must ensure that they properly assess activities that involve residents of jurisdictions that do not implement international standards for transparency and disclosure.

In conclusion, it should be noted that only joint efforts of authorized state bodies, the National Bank, other financial and credit institutions, various subjects of entrepreneurial activity and citizens of the Republic of Belarus will make it possible to develop a strong immunity from a financial credit system of our country to any attempt to launder criminal proceeds.

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## THE DIAGNOSIS OF THE ENTERPRISE VALUE CRISIS AND THE PARTICULARITIES OF ITS MANAGEMENT

**Ph.D. Student Iurie BEȘLIU**

National Institute for Economic Research of the Academy of Sciences of Moldova and  
Ministry of Economy, Republic of Moldova  
E-mail: ibesliu@mail.ru

**Abstract:** *The practice of developed countries demonstrates that value has a number of unique properties that make it the best decision-making criteria for crisis management and, in a broader sense, the best criterion for assessing the success of enterprise management in general. The global economic crisis, the fragility of enterprise value in the current economic context, and the ongoing diversification of value creation sources served as a basis for researching the mechanism of diagnosing the enterprise value crisis. The mechanism is based on the internal factors of the enterprise environment, i.e. the financial factors, and is detached from the macroeconomic environment in which the enterprise operates. According to the author, the diagnosis of the crisis situation aims to establish the moment when the company starts to lose its value, which is a premature signal of the enterprise's crisis. Therefore, the diagnosis of the enterprise's crisis-entry process is carried out in two ways, which are based on enterprise valuation methods and the economic profit indicator. In the research, the author studies the particularities of the value crisis management according to the stage of life cycle. For crisis management, the author examines the enterprise based on three financial dimensions: liquidity, risk and value, and determines the vectors of decisional efforts at different stages of the life cycle.*

**Keywords:** *enterprise value, value-based management, crisis diagnosis, diagnosis of the enterprise value crisis, enterprise value management.*

**JEL Classification:** G32.

### 1. Introduction

The enterprise management process aims at achieving a fundamental goal - maximizing its value. Economic developments in recent years have shown that the value of an enterprise correlates with the existence of a healthy domestic financial environment within the enterprise. Therefore, searching for the most effective methods of organizing financial activity is a serious call for the local business environment.

The global economic crisis, the fragility of the value of the enterprise in the current economic context, and the ongoing diversification of value creation sources served as a basis for researching the mechanism of diagnosing the enterprise value crisis. The mechanism is based on the factors of the company's internal environment, i.e. the financial environment, and is detached from the macroeconomic environment in which the enterprise operates.

The cause of the problems for most of enterprises is not the crisis itself, but the inadequate management decisions previously taken, possibly many years before the crisis.

The practice of developed countries demonstrates that value has a number of unique properties that make it the best decision-making criterion for crisis management and, in a broader sense, the best criterion for assessing the success of enterprise management in general. In a correct use, the value criterion allows for effective decisions that will improve the long-term economic situation of the enterprise.

We believe that recent events have accentuated the value of business-driven enterprise value. Those who assimilated it pretty well, currently have important advantages. In particular, during the crisis, they focused better on the business environment, because they were driven not only by the information provided by the market, but also by the results of their own analysis and the enterprise value modeling.

## 2. Considerations on enterprise value management in a crisis situation

The events of the international financial crisis have shown that the market price for listed companies and the transaction price for private enterprises cannot serve as a benchmark for crisis management decisions. However, the limited ability of the market to determine the internal value of the enterprise does not question the timeliness of the value-based approach. On the contrary, the orientation towards the internal value for existing owners under disproportionate prices is a well-grounded approach to managing the business in times of crisis.

By synthesizing the bibliographic sources in the field (Rappaport, 1986; Evans and Bishop, 2001; Chernozzub, 2010; Damodaran, 2012), the author identified the essence of enterprise value management in a crisis situation characterized by the following:

1. The main indicator of the business situation in times of crisis is the internal value for the existing owner. It is very important to determine the value of the business, regardless of the market and investors' reaction and behavior. As the crisis progresses, we can reevaluate the enterprise to find out the dynamics and analysis of the causes that have generated changes in value;
2. In times of crisis, the use of enterprise value management concepts makes it possible to take decisions that are not obvious. For example, under normal circumstances, loss of market share can be seen as a defeat, and in times of crisis, a conscious reduction in activity can lead to an increase in value;
3. Essential changes in the external environment require us to give weight to value factors. Will be determined the register of value factors and the impact of each factor on the value of the enterprise, after which focus on the most important ones;
4. Modeling possible changes in value factors allows us to assess the risks and verify the company's safety margin;
5. If the company resists the safety test, we can say that its strategic possibilities not only allow to pass the crisis, but also make a leap once the crisis is over. It is necessary to predict the evolution of value factors during the development of the crisis.

In the literature, the issue of enterprise value management in a crisis situation is practically not approached, the possibilities of using the enterprise value in the anti-crisis management, the merger and takeover of enterprises are researched (Evans and Bishop, 2001; Gryaznov et al., 2003), and some sources address the issue from the perspective of management and valuation of insolvent enterprises at different stages of the insolvency process (Chernozzub, 2010).

Anti-crisis management, in the context of enterprise value management, presents the creation of a system of principles and methods for the elaboration and realization of a complex of managerial decisions, aimed at preventing and overcoming the reduction of the value of the enterprise, as well as minimizing the negative consequences on the enterprise.

The primary purpose of enterprise value management in a crisis situation is to recover the financial situation of the enterprise and minimize the reduction of its value, caused by financial crises.

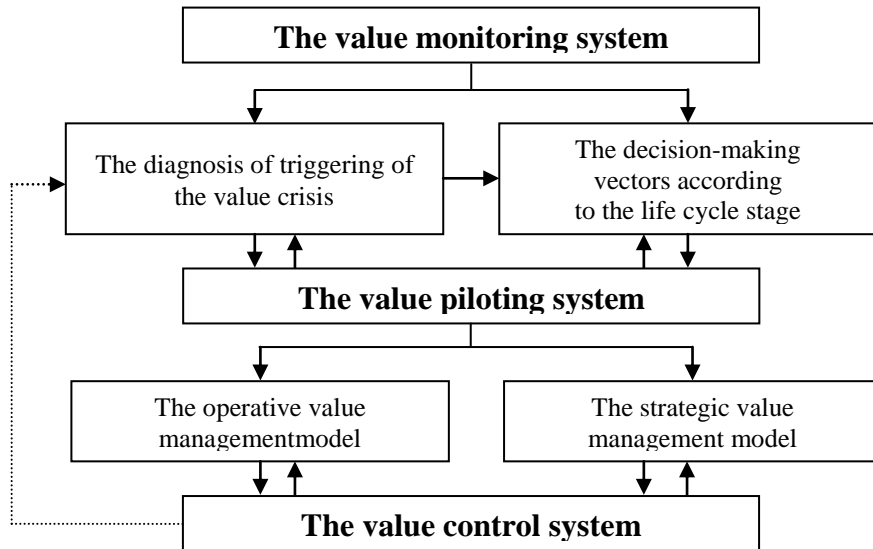
According to the author, in the process of achieving its main purpose, the enterprise value management in a crisis situation has to solve the following basic tasks (Figure 1):

1. Implement a value monitoring system, which will signal the enterprise's management of the value evolution and which will be achieved through:
  - the diagnosis of the triggering of the value crisis;
  - establishing the decision-making vectors according to the life cycle stage.
2. Implementing a value piloting system that will be achieved through:
  - operative value management (short term);

– strategic value management (long-term).

### 3. Implementing the value control system.

Based on the above-mentioned task, we consider that they can be the basis for value management and we recommend the following model of the value management system in crisis situation, Figure 1:



**Figure 1. Enterprise Value Management System in Crisis Situation**

Source: elaborated by the author.

According to the author, the stages of the value management system in crisis situation are current at a certain stage of the enterprise's lifecycle, so only the value monitoring system can be applied at the start-up stage, as at this stage the enterprise faces survival problems and it is premature to talk about the implementation of a value management and control system, but at the growth, maturity and decline stages, all components of the enterprise value management system can be applied.

In the present research we will only deal with the components of the value monitoring system, namely the diagnosis of the enterprise value crisis and the particularities of the value crisis management in relation to the life cycle stage, the other components of the value crisis management system of the enterprise will constitute subject to further research.

### 3. Approaches to the diagnosis of the enterprise value crisis

By solving the problem of managing the enterprise value in overcoming the crisis situation, *first of all* we consider it important to establish a *crisis diagnosis mechanism*, namely the situation in which the enterprise starts to lose its value, which is the premature signal of enterprise crisis.

In order to solve the given problem, we propose to diagnose the process of entering the enterprise in a crisis by two ways, which are based on the use of:

- Instrument of enterprise valuation methods;
- The economic profit criterion.

#### 3.1. Diagnosis of the crisis based on enterprise valuation methods

During the use of *enterprise valuation methods* in diagnosing the crisis situation, our approach is based on the fact that the current (internal) value represents the initial stage,

and at the same time the control point in the anti-crisis management. Namely, the evolution of the fundamental value signals incipient and prematurely the future entry of the enterprise in crisis.

As we know, the modern enterprise evaluation tool is based on 3 methods: the expense, revenue, and comparative (market) method.

We believe that the basis of each valuation method is the fundamental signals of value creation. According to the author, the expense model is the discrete model of the increase in the value of the enterprise, but in general, the value of the enterprise itself is estimated on the basis of the capital size and reflects the current prospects of the enterprise. The basis of the revenue method is the model of continuous value growth, and the value of the enterprise expands through the mechanism of actualizing future cash-flows and reflects a long-term vision of the enterprise's development. The theoretical basis of the comparative method is the general-scientific method of the comparative analysis, and the basic premise of its application is the existence of a developed financial market.

As a result of the systematization of modern enterprise valuation methods and various criteria for value creation, the author of this research has determined the scope of their use in detecting the situation of entering in crisis and destroying the value of the enterprise.

**Table 1. The diagnosis of the crisis situation based on the enterprise valuation methods**

No.	Estimated value based on different methods	Conclusions
1.	$V_p > V_v$ $V_p > V_c$	The enterprise is growing, there is an increased investment demand on the enterprise, the development potential is undervalued, high liquidity of the shares and other securities
2.	$V_p < V_v$ $V_p < V_c$	Enterprise is declining, low investment demand on the enterprise, low liquidity of securities
3.	$V_v < V_c$	Existence of signs of worsening of the financial situation and orientation towards short-term development perspectives
4.	$V_v > V_c$	The existence of signs of improvement of the financial situation and the appearance of the long-term development prospects of the enterprise

Where  $V_p$  - the value of the enterprise obtained on the basis of the comparative (market) method;  $V_v$  - the value of the enterprise obtained on the basis of the revenue method;  $V_c$  - the value of the enterprise obtained on the basis of the expense method.

Source: elaborated by the author.

The analysis of points 1 and 2 of Table 1 determines the appropriate time to sell the business on the basis of a comparison of the enterprise's market value with the fundamental value.

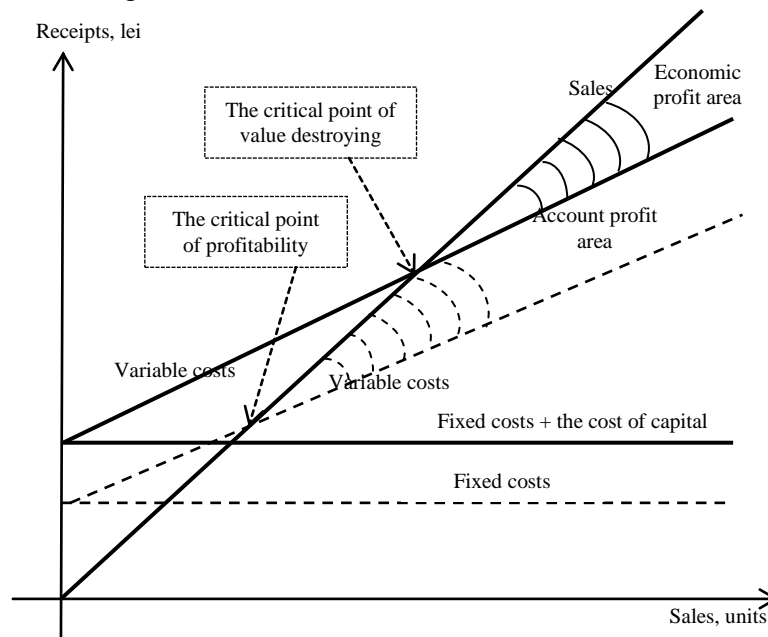
The analysis of points 3 and 4 of Table 1 sets out the prerequisites for addressing the financial crisis of the enterprise based on an indicator - the enterprise value indicator, its dynamics and the ratio between value indicators estimated on the basis of the discrete and continuous growth model formulas.

Based on the obtained results, namely establishing the mechanism of the interdependence between the enterprise's value and the financial state of the enterprise, by which the worsening (improvement) of the financial situation of the enterprise is explained by the change of the value factors of the discrete and continuous growth model, the author solves the problem of creating *the premature diagnostic model of the entry of the enterprise into crisis* and the loss of value in the near future.

### 3.2. Diagnosis of the crisis based on the economic profit criterion

When using *the criterion of economic profit* in diagnosing the crisis situation, our approach is based on the fact that an important step in the financial dimensioning of the process of value destruction within the enterprise is the identification of the critical amounts of the key financial indicators of the enterprise.

In order to solve the existing problem, we consider it important to identify the critical point in the value creation process that would involve a combination of the key financial and strategic characteristics of the enterprise where the change in the investment value would be zero. The zero value of the investment value would allow the delimitation of the critical level of the indicators. Thus, the strategic analysis of the financial model of the enterprise and its basic criterion - economic profit, will allow us to diagnose the crisis of value based on a new model of the profitability threshold analyzing, the particularities of which are formalized in Figure 2.



**Figure 2. The critical point of enterprise value in correlation with the traditional analysis of the critical point of profitability**

Source: elaborated by the author.

The traditional approach to the profitability threshold is based on the assumption of the possibility of applying the special classification of expenditures on the basis of the dynamics criterion and the highlighting of all variable expenditures, regardless of the sphere of their occurrence. Therefore, the task of this approach is to cover the expenses actually incurred by sales receipts. In other words, the main calculation point is zero accounting profit from basic activity. The main coefficient in the traditional analysis of the critical point is the operational leverage, which measures the sensitivity of profit from basic activity to changing earnings.

But the analysis of the critical point of value proposed involves another basis for determining the critical threshold, as it is based, as shown in Figure 2, on other assumptions. In this case not only the obvious (de facto) but also the non-obvious (alternative) expenses are detected. The underlying task is to cover total, obvious and alternative expenses, including expenses with capital. Therefore, another critical point of calculation appears: zero economic profit. Accordingly, new financial ratios are needed,



which would include the impact of capital expenses, which remain permanent and independent of sales volume.

To determine the critical point indicator of value destruction, we will start from the zero economic profit hypothesis. Critical value of return on sales has a considerable impact on the critical point rating. The research of the problem of detecting such a critical size was dealt with by scientist *Alfred Rappoport* in his work "*Creating Shareholder Value. The New Standard for Business Performance*"[5]. According to A. Rappoport, the critical profitability can be calculated both on the increase of expected sales (formula 2) and on the predicted sales (formula 1):

$$TPM_{inc} = \frac{(IFAIR+WCIR) \times WACC}{(1+WACC) \times (1-t)} \quad (1)$$

$$TPM = \frac{OI_{t-1} + TPM_{inc} \times (\Delta S_t)}{S_t + \Delta S_t} \quad (2)$$

where  $TPM_{inc}$  – profitability of annual sales growth;  $TPM$  (threshold profit margin) – critical profitability of total annual sales volume;  $IFAIR$  – incremental fixed assets investment;  $WCIR$  – working capital investment rate;  $S_t$  – sales in year  $t$ ;  $\Delta S_t$  – change of sales volume in year  $t$ ;  $WACC$  – weighted average cost of capital;  $t$  – tax rate;  $OI$  – operating income.

We recommend the use of critical dimensions to analyze the strategic value destruction both at the enterprise level and at the level of the enterprise's functional units.

#### 4. The particularities of the enterprise value crisis management at different stages of the life cycle

An important step in enterprise value management in a crisis situation is *the financial stabilization of the enterprise*. But taking into account that financial crises can be triggered at different stages of the life cycle, we consider important that the financial stabilization process contains as main tools the management of key value impact indicators specific to that life cycle stage.

By manifesting at any stage in the enterprise's lifecycle, the financial crisis hinders the development of the enterprise, substantially increasing the life cycle stage. Characterizing this particularity of the financial crisis, it should be noted that its manifestation at every stage of the life cycle has its own specificity that must be taken into account in the process of financial stabilization of the value of the enterprise in a crisis situation.

The enterprises life cycle for different countries and different industries is diverse, but the life cycle curve for all enterprises is the same. The life cycle curve consists of different stages describing the enterprise's dependence on internal and external factors occurring over a certain period of time. To each stage can be attributed the financial factors that influence the value of the enterprise (Table 2).

**Table 2. Organizational and financial particularities of the enterprise at different stages of the life cycle.**

Stage of life cycle	Financial peculiarities	Organizational features	Dependence on external factors	Dependence on internal factors
<b>Start-up</b>	High share of borrowed funds, high financial risk, low profitability indicators	Gradual entry into the market, intensive marketing, establishing contracts with suppliers and creditors	Strong	Weak
<b>Growth</b>	Optimal financial risk, high production risk, high profitability indicators	Intensive modernization, increased production quality	Neutral	Neutral

<b>Maturity</b>	Optimal overall risk, high returns, reduction of rotation coefficients of current assets	The total employment of all resources, the gradual immobilization of the working capital, the wear and tear of the fixed assets	Weak	Strong
<b>Decline</b>	Total high risk, low returns, rotation and solvency indicators	Poor marketing, loss of trust by suppliers and creditors, resource wear	Strong	Strong

Source: elaborated by the author.

In the process of value crisis management of the enterprise, we propose to examine the enterprise based on three financial dimensions: liquidity, risk and value.

The analysis of the enterprise at different stages of the life cycle through the financial component will allow us to solve two tasks: to detect the changes that are characteristic of each financial dimension and to introduce a new aspect in the issue of the enterprise movement from one stage to another in the life cycle, namely that of value.

*The start-up stage* is characterized by the creation of the enterprise, therefore at this stage the value of the enterprise is highly conditioned by the outside forces, the financial activity being just a beginning. However, from a financial point of view, the value of the enterprise at this stage can be defined by the enterprise's net assets (the value of the invested capital).

Throughout the start-up stage, the cash-flow of the enterprise from the operational and investment activity is negative, respectively to supply the enterprise with financial resources, the enterprise resorts to external financial sources, registering a positive cash-flow from the financial activity. The negative cash-flow of the operational activity is explained by: (1) low efficiency due to low production volumes and the existence of losses; (2) there is still a need for additional investments in the enterprise's working capital to increase the production volume. Typically, the increase in current assets takes place on the investment resources of the founder of the enterprise.

Therefore, we consider that at this stage an unusual situation is formed, for which the existence of the crisis is characteristic. Addressing the crisis in correlation with the objectives of the enterprise, we can see that in a crisis situation, the enterprise develops based on a determined logic, which contains the following phases:

1. *The strategy crisis*, which involves special errors in product portfolio decisions, inappropriate industry and competition misconduct, and mistaken positioning of the enterprise;
2. *The results crisis*, i.e. errors in investment activity and minimum return on invested capital;
3. *The liquidity crisis*, the lack of financial resources for solving the enterprise's tasks.

The development of the crisis based on the above logic is possible at any stage of the life cycle.

If we take into account the particularities of the movement on the life cycle curve, then we can highlight the particularities of the problem of the financial resources sufficiency at different stages. We will then examine the changes in the liquidity dimension as they move to a new stage. Analysis of the changes will allow us to complement the concept of life cycle with financial crises, which are generalized in Table 3.

**Table 3. Liquidity and financial crises at different stages of the life cycle**

The type of crisis	Start-up	Growth	Maturity	Decline
<b>Enterprise liquidity crisis</b>	Permanent negative CF from operational activity	Periodically negative CF from operational activity	It's not a feature	Periodically negative CF from operational activity
<b>The liquidity crisis of the owner's capital</b>	Permanent CF negative for owners	Periodically negative CF for owners	It's not a feature	Periodically negative CF for owners
<b>Financing crisis</b>	The impossibility of attracting borrowed capital and reducing capital expenses	Unbalanced relation between equity and borrowed capital		

Source: elaborated by the author.

Based on Table 3, we see that the following financial crises are characteristic at the start-up stage: the enterprise's liquidity crisis and the liquidity crisis of the owner's capital. The first type of crisis is caused by the disproportion between working capital and the increasing needs of the business. For the owner, the crisis consists in creating a negative cash-flow, and thus reducing the value of the enterprise.

In order to overcome the liquidity crisis, it is necessary to manage the working capital prudently by correlating the growth rate of current assets with the rising debt ratio, reducing the growth rate of some current assets by using their efficiency and optimizing their volumes. The task of management is to bring the enterprise's operational flow to the area of positive dimensions. Therefore, the key process is *to transform the entrepreneurial energy into a constant cash-flow from the operational activity*.

In order to manage the value of the enterprise at the start-up stage, particular attention should be paid to liquidity and financial stability indicators. Since this period is characterized by the start of production and the lack of full use of production capacities, it is not rational to make any conclusions based on profitability or rotation indicators. As a rule, at the start-up stage, the weight of borrowed sources in the enterprise's liability is important, which increases the financial risk, therefore enterprise value management actions will aim to stabilize the financial indicators.

At *the growth stage*, the basic process consists in *turning the cash-flow into market share*. The entire stage is disturbed by *management crises*: the first group of crises leads to the delimitation of the managerial function from the entrepreneurial function, and the second group is focused on the crash of the entrepreneurial and owner roles. In the face of the entrepreneur, there is the dilemma of sharing ownership with new investors, because it is necessary to share control over the enterprise in order to solve the growth objectives. Settlement of growth targets on account of the active attraction of borrowed capital, but not of own capital, is confronted with the credibility of the enterprise and the quality of attracted credit management. Thus, a necessary problem to solve at this stage is *the strategic character of the capital structure*, which is conditioned by:

1. The impact it has on the weighted average cost of capital. The small weight of borrowed capital de facto denotes the non-use of cheaper financial resources than its own capital. Respectively, the enterprise has high capital expenditures;
2. The strategic nature of the capital structure shows that attempting to resolve growth on loans without attracting new investors-owners leads to the emergence of specific effects linked to the considerable weight of borrowed capital in the capital structure. These effects create barriers to enterprise development, that is to say, related to the selfish investment decisions of management that lead to conflicts of interest between the

manager and the owner. Given the large weight of the borrowed capital, the manager will either select high-risk investment projects, or refuse to invest in projects at a similar risk to the one typical of the enterprise. In the first case, the phenomenon of corporate finance has been called the substitution of assets or the change in the risk profile of assets, and in the second it is refused investment or insufficient investment.

At the same time, we tend to mention that with the increase in financial risk, the enterprise's competitive immunity is diminished, by stealing funds in servicing loans, to the detriment of investing in development.

The specificity of financial crises at the growth stage consists of:

- Changing drivers of the enterprise's liquidity crisis, which is linked to rhythms of growth. Thus high growth rates can lead to the formation of a negative cash-flow from operating activity not because of losses but due to enormous investments in working capital.
- The dilemma of the simultaneous financing of the increase in production volume and the acceleration of investments. The task of growth requires solving the issue of investment in working capital, but that of the acceleration - long-term investment in development.

In order to manage the value of the enterprise at the growth stage, rotation and profitability indicators have a particular importance. That higher is the level of these indicators, that greater is the impact on the enterprise value.

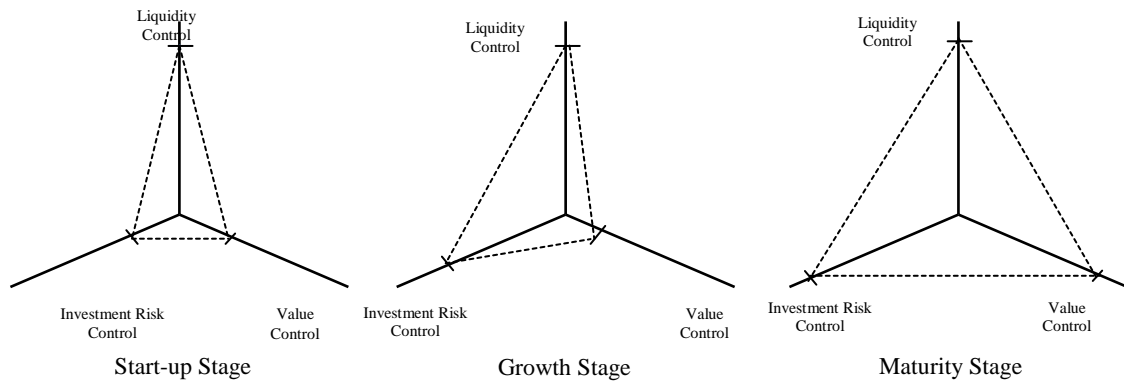
*The maturity stage* occurs as a result of the increased use of all the forces of the enterprise, i.e. it is manifested through the involvement of all resources (labor, land, production capacities, capital, entrepreneurial skills) and the maximum production, which means effective use and distribution of resources. At this stage, the role of internal factors, namely financial ones, in managing enterprise value is maximal, as external conditions are beneficial to a mature enterprise.

At this stage, the enterprise undergoes a new series of crises, and in a normal development it has a scattered capital structure. Financial liquidity crises are not current. Following the definition given by Boston Consulting Group specialists, the enterprise becomes "milking cow". However, the causes for the onset of financial crises are preserved.

In order to manage the value of the enterprise during the maturity stage, particular attention will be paid to the state of the indicators of sales profitability, return on assets and equity, and the duration of rotation, i.e. the financial component of the stability of the enterprise's operation. But if the indicators of financial and production risk are high, then liquidity and solvency indicators will be required to stabilize. The deviation of the financial indicators from the average values per branch in the maturity stage tells us about the financial instability in the operation of the enterprise and if no remedial measures are taken, the enterprise will find itself in a difficult situation.

Among the basic signals certifying the reduction of the financial value of the enterprise in the maturity stage may be, first of all, the physical and moral wear and tear of fixed assets, the renewal of which requires the attraction of additional resources, which leads to the increase of the risk indicators of the enterprise. However, if management will strictly plan its actions and move to a new technic and technologically level, while increasing the volume and quality of goods, then the company will move to a new life cycle in the growth stage, respectively avoiding the period of decline.

Analyzing the possibilities of applying the theory of value management to enterprises in crisis, we formulated and systematized the monitoring vectors of the main financial indicators of enterprises according to the life cycle of the enterprise presented in Figure 3.



**Figure 3. The vectors of decisional efforts at different stages of the life cycle**

Source: elaborated by the author.

For effective enterprise value management at different stages of the life cycle, the evaluation criteria must be individual to each step, as they directly depend on the factors that influence the enterprise at a certain stage of the life cycle. The enterprise evolving over time is subject to changes in the structure of assets and liabilities, competitiveness, fixed assets and other factors. Thus, depending on the life cycle stage, there are a number of priority directions in enterprise value management, which is based on the specificity of problems that correspond to one or another stage.

## 5. Conclusions

We believe, that the methods of diagnosing the enterprise value crisis outlined in this research, represents a proactive approach to crisis management. Timely detection of the crisis enables the enterprise's management to take operational measures to neutralize unwanted phenomena and correct the development vector.

However, a key issue of contemporary financial management science is to develop and propose solutions to the possibility of obtaining long-term benefits from economic crises. In order to resolve the issue, the subject of further research will be *the value piloting system* and *the value control system*.

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## CLUSTER SUPPORT POLICIES AND THEIR FUNDING MECHANISM

**Scientific Researcher Ph.D. Cristina UNGUR**

National Institute for Economic Research of the Academy of Sciences of Moldova and  
Ministry of Economy, Republic of Moldova  
E-mail: cristinaungur@ymail.com

**Abstract:** *Modern regional development trends include the strengthening of the region capacity by reunion in industrial groups called clusters. This research starts from the hypothesis that the implementation of cluster support policies has a contribution to the clusters development and to the promotion of the regional economic growth. The purpose of this study was to analyze policy measures that contribute to the cluster development and to determine the cluster support mechanisms that can be implemented in the European Union associated countries. For the study were used logical reasoning methods, bibliographic research and indirect observation, based on inductive demarche. Research is focused on analyze of supporting and developing policies for cluster programs at the European level but also in other regions of the world. The exploration of the possibilities and mechanisms of cluster financing has led us to the conclusion that the most important task in developing and implementing of a cluster programs is to determine the optimal structure of funding sources. As a result of the study, were determined the directions and the functional mechanisms for encouraging cluster development, including funding mechanisms that can contribute to the regional development.*

**Key words:** *cluster, support policies, funding mechanism.*

**JEL Classification:** *R11, G18.*

### 1. Introduction

In recent years, the ways to develop and boost economic growth have been increasingly focused on creating clusters. Governments around the world consider clusters as drivers of innovation that represents effective policies instruments for entrepreneurial and regional development. International examples demonstrate that successful clusters are a right environment where businesses can develop their competitive advantages and generate prosperity and local economic development.

The benefits of business concentration have been known since Alfred Marshall. Simple knowledge transfer channels, supplier specialization, and workforce concentration are the main elements of superiority seen by Marshall for companies close to each other and operating in related areas. In 1956, Walter Isard founded regional science, recognizing geographic proximity as a two-way advantage. On the one hand, Isard referred to 'localization' that give the privilege of approaching companies in the same industry. On the other hand, the author believes that 'urbanization' is the advantage of being close to companies in other industries (Isard, 1956).

Several decades later, in 1990, Michael Porter introduced the term 'cluster' by addressing competitive advantage theory at industrial and even national level (Porter, 2000). Porter (1990) argued that economic development is based not only on the factors described in classical theory (labor, nature, capital), but also on the company's strategy and structure, on the demand, competition and industrial connections (Porter's Diamond).

The competitive environment created because of globalization has brought the need for affirmation in the markets through new advantages. Supply specialization and concentration of resources through the reunion of companies has become a solution for conquering markets by using competitive advantages. At the same time, clustering connections between companies, research institutions and authorities contribute to economic development through innovation and knowledge transfer.

Social and green economy in which prosperity is guaranteed through innovation, knowledge transfer and a better use of resources is the priority of EU development set in

the Europe 2020 Strategy. Smart, sustainable and inclusive growth can be ensured through clusters, which contributes, to the modernization of the economy by increasing the competitiveness of products, services and labor (Ungur, 2017).

The need to promote cluster support policies comes from the fact that clusters are designed to support predominantly small and medium-sized enterprises and to exploit their competitive advantages on the market. Because the economy of European countries is mainly concentrated in SMEs, we believe that supporting cluster development is important for ensuring economic growth in the countries of the region. This support can be achieved through policy measures, including financial ones, which need to be promoted at the state level. The hypothesis behind the research was that the implementation of clustering support policies could contribute to the development of clusters. This hypothesis generated several research questions: what cluster support policies are, what cluster financing possibilities and mechanisms exist and what is the impact of these policies on the cluster development process?

## **2. Policies to support and develop cluster programs**

### **2.1. Importance of cluster policy**

International experience shows that there are possibilities to encourage cluster development through policy measures. Clustering policies are related to traditional industrial policies. In recent years, they have shifted their focus to the creation and development of industrial sectors, based on the use of modern, science-intensive technologies and to represent centers of industrial integration (production) of small and medium-sized enterprises (Government Decision no. 614 of 20.08.2013). EU industrial policy is specifically aimed at: (1) ‘speeding up the adjustment of industry to structural changes’; (2) ‘encouraging an environment favorable to initiative and to the development of undertakings throughout the Union, particularly small and medium-sized undertakings’; (3) ‘encouraging an environment favorable to cooperation between undertakings’; and (4) ‘fostering better exploitation of the industrial potential of policies of innovation, research and technological development’ (European Parliament). From these, the orientation of European policy towards the integration of technological, scientific and SME entities is clearly outlined.

In some sources, clustering policy is presented as an attractive alternative to traditional industrial policy (Fesability study, 2015). Traditional industrial policy is considered to be outdated because it is focused on the promotion of the economic sectors and priority enterprises. While clustering policy is based on the idea that the well-being of a country (regions) is determined by the functioning of groups of societies which are interconnected through productive relationships. Traditional industrial policy was based on state-defined policy objectives aimed at solving existing market problems, while clustering policy treats the economic development as a process of cooperation where greater importance is given to cooperation between companies, organizations, public institutions and structures associated by common operational objectives based on horizontal communication, and not on centralized development strategies.

Therefore, the main object of cluster policy is not an individual company, but the development of an industrial system for the whole region that can support such productive relationships among the actors. Another advantage of cluster policy is to reduce the likelihood of government errors (compared to traditional industrial policy) because some of the responsibilities are directed towards cluster participants. Under these conditions, the state has a role of coordinator of the regional development processes.

**The importance of cluster policy** and the role of clusters in regional development derives from the following aspects (Sizov, 2010).

- ✓ the cluster policy making contribute to the development of the competitive market in order to increase competitiveness of companies;
- ✓ cluster policy influences microeconomics by analyzing markets and economic entities not on the basis of inherited production factors but on the basis of newly created factors. The microeconomic approach in the cluster policy allows for consideration the local development characteristics and the development of effective programs oriented to accelerating development and increasing the competitiveness of companies;
- ✓ the implementation of cluster policy is based on ensuring interaction between state authorities, businesses, scientific and educational institutions to coordinate efforts to increase innovative products and services, which helps to increase labor efficiency;
- ✓ realization of cluster policy is oriented towards stimulating the innovative potential of SMEs, which have the largest numerical share in clusters and which are the main reasons for cluster policies promotion.

At international level, we delineate a few clustering policy models:

1. The European model, based on the concentration of competing companies within the same geographical area, which produces different products and forms a common marketing strategy.
2. The North American model - combines a number of industrial companies based on the principle of territorial specialization.
3. The Japanese model, characterized by concentration of SMEs around a large company-monopolist.
4. The Russian model, characterized by the active role of the state in the clustering process.

## **2.2. European policies to support cluster activity**

At the European level, national cluster development programs have emerged since 1995, even though there have been some business reunions with common objectives. By the end of 2000, programs of support and development of business clusters have been already exist in 26 EU countries. These programs are important economic policy instruments and are included in national and regional development strategies and significant budgetary resources are allocated for their implementation.

The process of cluster formation in the European countries has taken place differently. In France, the development of cluster activity was slowed down because of the traditional centralized state sector. Only with the adoption of the Territorial Development Program the first organizations for manage the territorial development and they fund have appeared. More than 100 projects for regional development were subsequently developed and adopted through reunion in cluster systems. France pays particular attention to strengthening the links between universities and industry with the aim of developing small innovative business. All researches in the field of innovation were supported by the state and were commissioned by the National Planning Agency.

Regulatory level in France were set to increase mobility requirements for scientific staff of national research centers. They have been given facilities to open their own companies and provide consulting services to industrial companies. Thus, clusters were created on the basis of partnerships between local industrial groups and universities or research centers.

In the United Kingdom, the Regional Development Concept states that economic performance can be achieved on the basis of local development, which involves the decentralization of the decision-making system. Territorial planning was initiated by the



central government, which has only general and financial coordination tasks for the projects. The direct management of regional development projects is the responsibility of the territorial authorities

Traditionally, Sweden is a country oriented towards a fundamental macroeconomic policy, i.e. an open market with a set of rules that are identical for all, substantial investment in infrastructure, education and science. The geographic factors, the density of economic activities and the Swedish academic tradition represent a number of favorable factors for the clusters development. However, the Swedish authorities were skeptical about the reunion of enterprises in clusters. It is considered that the geographical location of the companies is too dispersed and that the population density is rather low, which creates difficulties in the implementation of cluster projects.

After 2000, the situation has changed due to the reorientation of economic policy towards supporting and promoting clusters. Sweden's National Innovation Strategy was approved and a Vinnväxt program was launched to promote sustainable growth based on the international competitiveness of the regions through innovation system development. The first three regional groups that received support under this program were selected in 2003. They received financial support of 10 million SEK per year for a period of 10 years.

The Norwegian commercial and industrial policy of the twentieth century was focused on supporting the development projects of individual companies. These companies could obtain financial support from the state for the implementation of some innovative ideas or projects. After 1990, the Norwegian authorities have noticed that most innovative projects have been developed through the cooperation of several companies and the cooperation of business and academic sectors. Based on this observation, Norway has embarked on a new path of economic development, namely the reunification of companies in clusters to support innovation and increase competitiveness.

In 2002, a professional and financial support program for clusters was launched, called Arena - Innovation Networks. It was meant to contribute to the development of cooperation between industry, research and society. Later, in 2006, another program, called Norwegian Center of Expertise (NCE) was launched. The program aims to support the sustainable growth of innovation and internationalization processes in clusters and is geared to support Norway's long-term economic development. The Norwegian Expert Center is managed and implemented by three major Norwegian innovation agencies: Innovation Norway, the Norwegian Council for Science and SIVA and is funded by two ministries: the Ministry of Commerce and Industry and the Ministry of Local Administration and Regional Development.

In Latvia, the focus of economic policies on cluster development began after 1999 under the Phare European program. This program was created to assist candidate countries in Central and Eastern Europe on their way to development and cooperation.

At the level of state policy, it has been drawn up a national innovation program for 2003-2006, in which special attention is given to the development of business clusters. Responsible for supporting the cluster policy and its implementation are the Ministry of Economy in cooperation with the Investment and Development Agency of Latvia. In 2007, it was approved the Program for promoting innovation and commercial competitiveness for 2007-2013, in which it was mentioned that clusters development in Latvia lags behind and should be supported by active coordination of state and business policy. Financial incentives from the state began to be granted by the Government of Latvia only after 2009 that served as the impetus for the development of clusters.

Latvia's experience shows that it is difficult for small countries to compete on the international market and maintain the entire production cycle within the country. An

efficient solution would be the specialization, ie the organization of clusters across the Baltic region where Latvia could be competitive with their specific products and services.

The analysis of European cluster support programs allows us to delimit some features of European cluster policy as follows:

- 1) Orientation on high tech projects (biotechnologies, information technologies, etc.), traditional branches being rarely supported in cluster programs.
- 2) Selection of cluster projects on the competition base. Authorities only set criteria, without requiring projects that are more promising as priorities.
- 3) The principle of competition: not all projects receive support, but the best.
- 4) The main beneficiaries of the programs are small and medium-sized enterprises.
- 5) The long term for the preparation of the calls for proposals and the organization of the competitions in several stages.
- 6) Several national agencies are responsible for the implementation of cluster policy, which diversifies funding sources.

We also note a number of shortcomings of European cluster policy:

- Excessive bureaucratization of the cluster support contest;
- inflexibility in correcting details of the projects submitted to the competition;
- the lobby phenomenon that leads to the promotion of projects on non-transparent principles;
- too long period of time between the submission of the project application and the time when the financial support was actually granted;
- supporting more clusters than planned in the program, which decreases from the financial allocations to each winner;
- lack of criteria for monitoring the activity of clusters which received support.

However, European cluster support programs have significant economic outcomes by their contribution to the development of new technologies, to the creation of new jobs, to the increasing competitiveness of enterprises, etc.

### **2.3. Policies to support cluster activity in the US, Japan and the Russian Federation**

In the **United States**, cluster concept was the basis for regional development policies and was considered one of the country's priority development directions. The specificity of US clusters is to focus on commercialization of R&D activity outcomes. The US, through the federal contract system, offers R&D companies the possibility of free use of industrial equipment and state-owned scientific laboratories; subsidies for purchasing raw materials; tax incentives; free land rent and other facilities.

Due to the state-level support of the research field, the conditions for research in the entrepreneurial sector have changed. In many industries, corporations have created and developed research departments for the execution of state orders.

A relevant example of the American cluster is Silicon Valley, which gathers hundreds of corporations, research centers and start-ups. The core of this cluster is the close cooperation between research centers and venture capital funds. This cluster includes Intel, Yahoo, Google, Apple Computer, eBay and many more. Clusters in the US are developing due to the involvement of public authorities at all levels.

A special experience in cluster creation is found in Japan. The specificity of this country, in terms of cluster development, lies in the predominant importance of a large company around which the cluster is created. All cluster participants are subject to strict hierarchy. The process of initiating and developing clusters have been taking place due to public policy support for research. All laws on research, technology and innovation were adopted as strategic long-term development programs. The focus in the science and

innovation development policy was on the need to strengthen the regional position. The financial plan for R&D funding in Japan was geared towards increasing the competitiveness of industrial technologies developed as a result of collaboration between corporations, public authorities and the academic sector. The Cluster Support Initiative was adopted, which has contributed to the formation of the administrative groups of joint research coordination. The development of research cooperation centers was encouraged by state universities that, in collaboration with industrial enterprises, carried out research and development activities.

Japan has been borrowing new technologies and elaborations from other states and developing them in its research centers. Therefore, we can say that the creation of the first clusters in Japan has been based on the experience of other states, especially the US. The main distinction between Japanese clusters and those existing in other states is their orientation to modern technical science areas, such as integrated schemes, robot technologies, nanotechnologies, etc. A lot of attention is being paid to the mixed fields: biotechnology, eco and biopharmaceuticals. It should be noted that in Europe, the main areas of cluster concentration are the traditional ones.

In the Russian Federation, cluster projects are supported by the federal "Economic Development and Innovation Economics" Program 2020. This program provides allocations of around 5 billion rubles per year for the formation of innovative clusters. The Ministry of Finance has the central role in the implementation of cluster policies in the Russian Federation. This mechanism is typical for economies in transition, while in the developed countries the main role belongs to the branch ministries. Against this background, the innovative development in the Russian Federation faces the opposition of officials and experts from the Ministry of Finance, which considers as a priority the efficiency of budgetary expenditures, but not the development of clusters. Another barrier to the innovation policy in the Russian Federation, related to insufficient public funds. International donors such as USAID, UNIDO, and others compensate this lack.

In 2012, in the Russian Federation, have started the program of support for territorial innovation clusters. The list of these clusters was completed as a result of the competition selection. In recent years, this program has contributed to the development of a cluster network in the Russian Federation and brought important economic benefits.

An important factor in this achievement was the subsidies from the federal budget. In the period 2013-2015, the total volume of subsidies exceeded 5 billion rubles. The development of innovative territorial clusters and their performance have contributed to increasing investment attractiveness. For each 1 ruble of subsidies, 3.5 rubles from extra budgetary sources were attracted (98 billion rubles from the public budget, 360 billion rubles extra budgetary), (Abakshin et al, 2017).

At the state policy level, the Russian Federation supports cluster development through grant programs, special tax regimes, credit facilities and international collaboration.

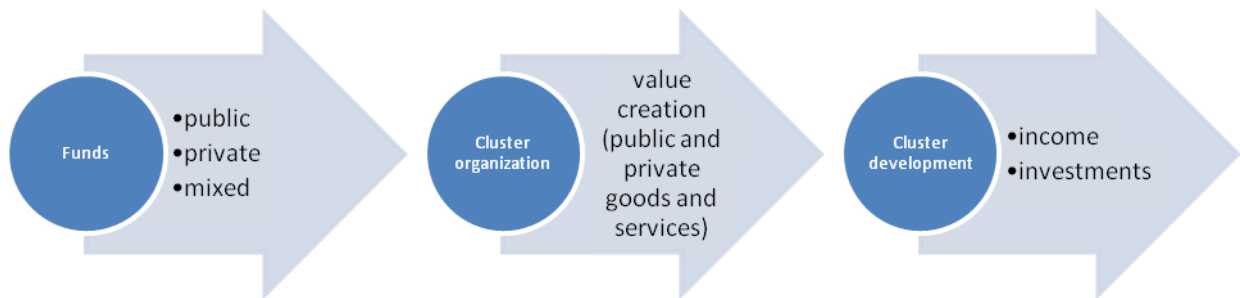
### **3. Models of cluster funding**

An important component of cluster development policy is the financial policy of support cluster initiatives. Funding clusters is a topic discussed in numerous specialized studies at European level (Lämmer-Gamp, Meier zu Köcker and Christensen, 2011; OECD 2007). Some were based on analyzing the possibility of developing clusters in Central and Eastern Europe (Ketels and Sölvell, 2006; Pavelková and Jirčíková, 2008).

The clusters' funding is possible in two ways: from public or private sources, with the possibility of combining them. Some empirical research has shown that the public sector is the most important source of funding for clusters (Abakshin, 2017), while others

(Ketels and Sölvell, 2006) highlighted the importance of external donors (international organizations), especially in developing countries. For countries that have recently become EU members, the largest share of clusters budget comes from the private sector.

Previous studies allow us to separate two financing models of cluster activity and a mixed model that combines both (Figure no. 1):



**Figure no. 1. Models of cluster activity**

*Source: developed by author.*

#### *Model 1: Public funding*

This funding model provides the organization of cluster activity on the basis of public budget allocations such as EU budget, national public budgets, government support programs at regional or local level.

#### *Model 2: Private funding*

This model provides the full funding of the cluster based on private funds. These funds may be of different types, such as: cluster membership fees, own sources of equity, unpaid profit, depreciation fund, etc., loans, leasing, venture funds, etc.

#### *Model 3: Mixed type financing*

The mixed model is based on a combination of public and private funding sources. The share of each source may vary but, as usual, the largest share of the mixed financing model belongs to public sources.

### **3.1. Public funding mechanisms**

Studies show that the most part of cluster activity funding in developed countries comes from public budgets because business development and innovation promotion is an economic priority for a modern state.

*The main mechanism of public funding* of cluster projects, practiced since the 1990s. XX is based on competition. The authorities announce a competition to provide financial support for innovative development programs through clusters. The programs that participate in the competition must meet certain criteria, which makes this funding mechanism an objective one. This instrument of cluster policy gives the opportunity to choose the most attractive cluster project from a point of view to influence the economy, competitiveness, investment attractiveness, etc.

At the European level, there are Community funding programs meant to support the innovation development, job creation, problems and challenges solving, as well as to help increase the EU's competitiveness in the global market. About 80 billion euros are allocated at the European level to finance cluster projects. This money is provided through European cluster support programs, including: AKA Orizont 2020; Innosup Cluster;

Cosmos. Competitiveness of enterprises and SMEs; Interreg - European Territorial Cooperation (ETC); European Regional and Social Development Fund.

### 3.2. Private funding mechanisms

The creation and development of a cluster requires a large volume of funding, since this is one of the most costly types of economic projects. As public funding is insufficient, there is a need to attract private funds to initiate a cluster project.

The *main forms of private cluster financing* are private investments; companies own funds; credit products of commercial banks.

The specificity of cluster activity is the lack of profits in the early stage of the project, which reduces the chance to take credits from institutional investors. Under these circumstances, the following mechanisms for attracting borrowed capital are available: funding from suppliers (commodity credits); debt financing (factoring); bank credit under the personal guarantee of the third party, in particular - the parent company; venture capital funding.

The most important task in the cluster development process is to determine the optimal structure of funding sources. The volume of funding, the degree of risk and the cost of borrowed capital are the most important features of funding sources. Below we will present an analysis of these features (Table no. 1):

**Table no. 1. Criteria for choosing the optimal cluster financing structure**

<i>Source</i> <i>Criteria</i>	<i>Accessibility</i>	<i>Cost</i>	<i>Volume</i>	<i>Risk</i>
<b>Equity</b>	Maximal	Low	Minimum	Minimum
<b>Issues of securities</b>	Medium (mainly for large companies)	Significant	Medium	High
<b>Leasing</b>	High	High	Medium	Low
<b>Credits</b>	High	High	Large (it is difficult to obtain long-term loans)	High
<b>Venture funds</b>	Low	High	Low	Acceptable
<b>Budget allocation</b>	Extremely low	High	Low	Low

*Source: developed by author based on Tingaev, 2014.*

### 3. Conclusions

Focusing on competitive advantages in clusters can be supported at the state level by promoting support clusters policies. An analysis of the international situation has shown that the importance of promoting clusters has been recognized in both developed and less developed countries. Innovation-based growth promotion strategies and cluster financing government programs exist in most countries in the world.

Within the clusters policy, the state has the role of providing information and analytical support in the cluster policy implementation; to develop strategies for cluster development; to use existing instruments and economic policy measures to implement regional grouping initiatives; it integrates the principles of cluster policy into the activities of ministries and individual agencies responsible for economic and social development.

Besides providing the directions of economic development based on regional competitive advantage, it is necessary to find financial sources to support cluster initiatives. In this sense, it is important to estimate the risks to finding the most optimal funding scheme. From the analysis of existing financing models worldwide, we conclude

that the mixed financing model is an optimal one because it offers the possibility of combining public sources with private ones. This mechanism excludes pressure on the public budget and offers the advantage of attracting private sources through various financial instruments.

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# MONITORING FINANCIAL STABILITY THROUGH MONETARY INDICATORS

**Senior Scientific Researcher Ph.D. Olga TIMOFEI**

National Institute for Economic Research of the Academy of Sciences of Moldova and  
Ministry of Economy, Republic of Moldova  
E-mail: o\_timofei@yahoo.com

***Abstract:** Ensuring financial stability has always been a natural concern and lately has become a priority for central banks, which are at the forefront of national financial systems. Central banks contribute to financial stability because they are responsible for ensuring price stability and on the other hand, a stable financial environment facilitates the realization of price stability. The monitoring of the financial stability of the state cannot be conceived without monitoring the evolution of monetary indicators, their fluctuations being related to the overall balance of financial flows in the economy, largely reflecting the situation on financial markets, foreign exchange markets, state budget and external balance of payments. The growth rate of money supply affects most of the macroeconomic indicators, such as output, employment, prices and interest rates. The aim of this article is to present and evaluate the evolution of the monetary indicators in the Republic of Moldova in order to analyse the evolution of the financial stability of the state.*

***Key words:** financial stability, monetary policy, central bank, monetary indicators.*

***Classification JEL:** E44, E52, E58.*

## 1. Introduction

The information which is based on the analysis of monetary developments constitutes an essential support for governments and central banks in deciding the country's economic policy. The economic theory, as well as its historical precedent, shows a strong correlation between monetary expansion and inflation (Friedman, 1968; Albertini and Silem, 1988). Although the analysis of monetary developments is geared in particular to identifying risks to long-term price stability, it also provides some important indications in terms of a closer time horizon useful for monitoring financial stability, "due to the information on the cyclical position of economy, how the financial system works and how it interacts with the real sector. In spite of the fact the use of monetary aggregates as an objective or as an intermediate target in the conduct of monetary policy has become obsolete, their importance as an indicator seems to be rediscovered both in theory and in practice" (Popescu, 2015).

The global financial crisis has made the monetary authorities in tandem with researchers to review the paradigms underpinning the promoted monetary policy, its goals and instruments, as the existing ones have compromised their capacity to maintain financial stability. In this respect, the analysis of monetary developments may represent a solution to monitor the economic downturn and minimize the challenges that all central banks face in assessing the various risks beyond the traditional forecasting horizon, especially with the excessive price increase.

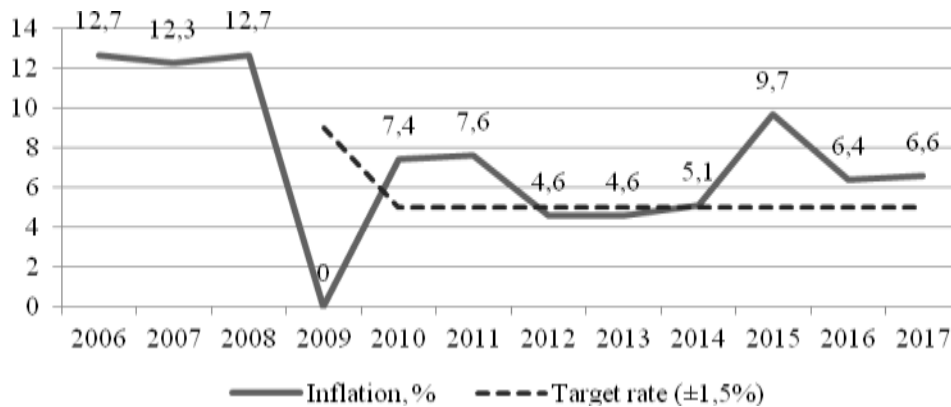
## 2. The monetary policy conduct during 2006-2017

The role of the National Bank of Moldova in maintaining the financial stability of the country is an intrinsic one, based on the structure of the financial system of the Republic of Moldova, where the banking sector has a leading role, as well as its double hypothesis of monetary and prudential authority. The tasks underlying financial stability objectives are exercised both by regulating and prudential supervision of the institutions under its authority and by effectively formulating and transmitting monetary policy measures and supervising the optimal operation of payments and settlements of systemic importance.

Since 1993 when the national currency was introduced in the Republic of Moldova, the NBM promoted a monetary and foreign exchange policy aimed at achieving the stability of the national currency by setting quantitative targets for money supply in the economy. This strategy, based on the use of the monetary system as an operational objective and the use of money as an intermediate objective, has been given up by several countries in the world, which have become more and more concerned of price stability since the 1990s. The weakening of the strong relationship between monetary aggregates and inflation, the development of the financial system and the diversification of the payment means and respectively the diminishing of monetary policy has led to the quitting of the monetary aggregate targeting strategy.

The National Bank abandoned the targeting of monetary aggregates in 2006 with the signing of the Republic of Moldova - European Union Action Plan and with the need to harmonize the national legislation with the European Union legislation. The fundamental objective of the NBM being changed from "achieving and maintaining the stability of the national currency" into "ensuring and maintaining price stability" (NBM, 2007). The new monetary policy objective in the Republic of Moldova was adopted under conditions of increasing the share of "cash in circulation" in the structure of the monetary base, increasing the massive inflows of foreign currency and excessive dollarisation, and controlling monetary aggregates under the conditions of a long- mainly monetary, becoming a rather difficult task. In order to maintain price stability, since 2009, after two years of monetary policy adjustment for the implementation of the new target, the inflation target of 9% was set, with a deviation of  $\pm 1.5\%$  from 2010 - to 5%, with a deviation of  $\pm 1.5\%$  (Figure no. 1).

The adoption of the direct inflation targeting system in the Republic of Moldova favoured the sustained decline of the annual inflation rate below the 10 percent threshold, and overcome the inertia of inflationary expectations. Maintaining inflation in a predictable corridor has favoured the relaxation of monetary policy and supported a slight economic recovery after the international financial crisis.



**Figure no. 1. Inflation evolution between 2006-2017, %.**

Source: National Bureau of Statistics, 2018. *Statistical Databank*. [online] Available at: <<http://www.statistica.md/pageview.php?l=en&idc=407&nod=1&>> [Accessed 01 March 2018].

According to the graphical analysis of the inflation evolution rate, there is a significant decrease in inflation with the adoption of the direct inflation targeting system. At the same time, the 2009 situation fully reflects the impact of the international financial crisis on the national economy, which is very open and vulnerable to external shocks.



The evolution of macroeconomic indicators in 2009 was mainly determined by the decrease in the volume of remittances and private external financing, the decrease of exports, the suppression of domestic demand and the increase of GDP. The recorded disinflation during this period led to the increase of Moldovan products on the domestic and foreign markets, the diminution of the production volume and the decrease of the demand for domestic products, which had a very negative impact on the state of the economy in general and created inflationary conditions for later periods.

The upward increase in prices in 2010-2011 was conditioned by the first-round effects of international oil price increases influenced by the social-political tensions in North Africa and the Middle East; second-round effects due to increases in electricity, gas, heating, fuel and food prices, resulting in higher prices for basic inflation-related goods and services; increasing domestic demand as a result of increased disposable income of the population with the increase in remittances and salaries; increasing external demand with the recovery of key trading partners' economies.

In 2012 the NBM manages to create the necessary conditions for keeping inflation in the range of 5.0 percent  $\pm$  1.5 percentage points, a target set as early as 2010, according to the NBM monetary policy strategy for 2010-2012. Since 2013, the conduct of monetary policy has been affected by the persistence of disinflationary pressures. In 2014, the disinflationary climate strengthened on the basis of the depreciation of national currencies of major trading partners, the decline in oil and food prices on international markets, and the decline in aggregate domestic demand.

Until November 2014, the NBM promoted an incentive monetary policy, maintaining the base rate applied to the main short-term monetary policy operations at the historic minimum of 3.5 percent annually. In December 2014, the risks of intensifying inflationary pressures began to materialize. The diminishing of the foreign exchange income of the population and of the domestic exporters has created strong expectations of a depreciation of the national currency for both individuals and economic agents. The sudden depreciation of the Russian currency and the introduction at the end of 2014 of special administration at Banca de Economii S.A., B.C. "Social Bank" S.A. and B.C. Unibank S.A. has further amplified these expectations. Accelerating the depreciation of the national currency has increased the risk of higher prices for regulated services in 2015.

At the end of 2014, the consumer price index exceeded the NBM targeting corridor. The main reason for the rise in prices during this period was the fraud in the banking sector, which resulted in the extraction of an enormous amount of money from banking assets. In order to establish a stability in the created situation, the NBM tried to save the devalued banks by injecting an additional amount of liquidity from the foreign exchange reserves, which led to the depreciation of the national currency and strongly affected the purchasing power of the national currency, conditioning the inflationary expectations of the population, under the pressure of import prices. In response to the intensification of inflationary risks, the central bank has adopted a more restrictive monetary policy, shrinking aggregate demand and pushing the economy toward an economic downturn and recession.

In addition to deteriorating macroeconomic conditions, Moldova had to cope with a systemic financial crisis by the end of 2014. A special administration system was established for Banca de Economii S.A., B.C. "Social Bank" S.A. and B.C. Unibank S.A. because of the precarious financial situation created at these three banks, as well as the fact that the nominated banks did not respect the prudential indicators established by the NBM normative acts. In December 2014, the NBM granted these banks emergency credits of 6450.0 million lei, in order to ensure the stability of the entire domestic financial system and to protect individual deposits and legal entities not affiliated to banks.

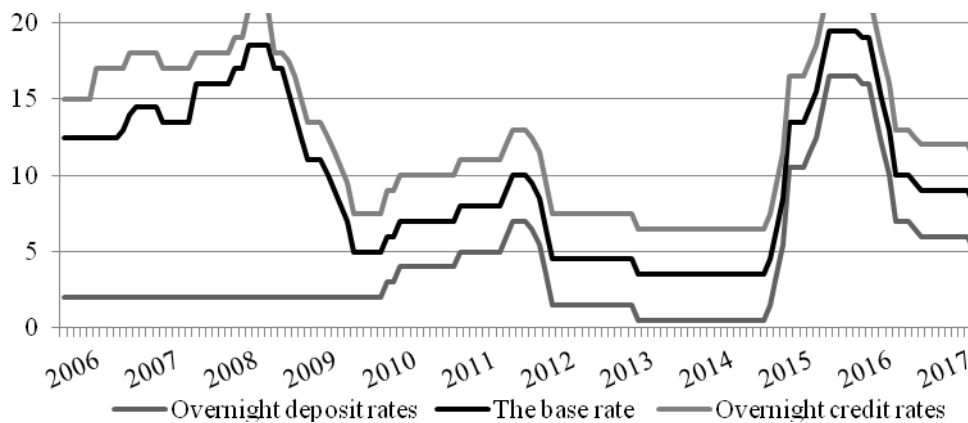
Taking into account that the targeting of inflation as a monetary policy objective is in fact the ultimate goal of creating favourable long-term conditions for economic growth and development, promoting this policy when the foreign exchange risk is accentuated in Moldova, and maintaining at all costs of inflation in the targeted corridor proves to be risky because of the effects it can generate in both the real and the financial sector. On one hand, the depreciation of the national currency leads both to the decrease of the population's welfare and the wealth of economic agents. On the other hand, real sector constraints can affect the health and security of the banking sector by lowering borrowers' ability to repay loans and increasing the volume of bad credit in the banking system.

The adjustment of monetary conditions from the perspective of the monetary policy objective was achieved through the interest rate policy supported by a determined liquidity management of the central bank. Within the latter, money market operations, permanent facilities and the minimum reserve mechanism continued to have the main role.

The set of monetary policy instruments used by the NBM in accordance with the operational actual framework proved to be appropriate to the requirements of monetary policy implementation.

According to the NBM monetary strategy for 2010-2012 and beyond 2012, the NBM has at its disposal a main instrument: open market operations and several ancillary instruments: permanent facilities, reserve requirements and foreign exchange market intercessions.

Once the inflation targeting system was changed, the basic interest rate has become the main policy instrument through which the central bank directly influences the level of interest rates on interbank deposits, balancing demand and supply on the money market. The base rate variation corridor is defined by the interest rates on the permanent facilities offered by the Central Bank, which determine the upper and lower limits of interbank market fluctuations, especially for the shortest maturities. Since the beginning of the analysed period, this corridor has considerably narrowed (Figure no. 2).



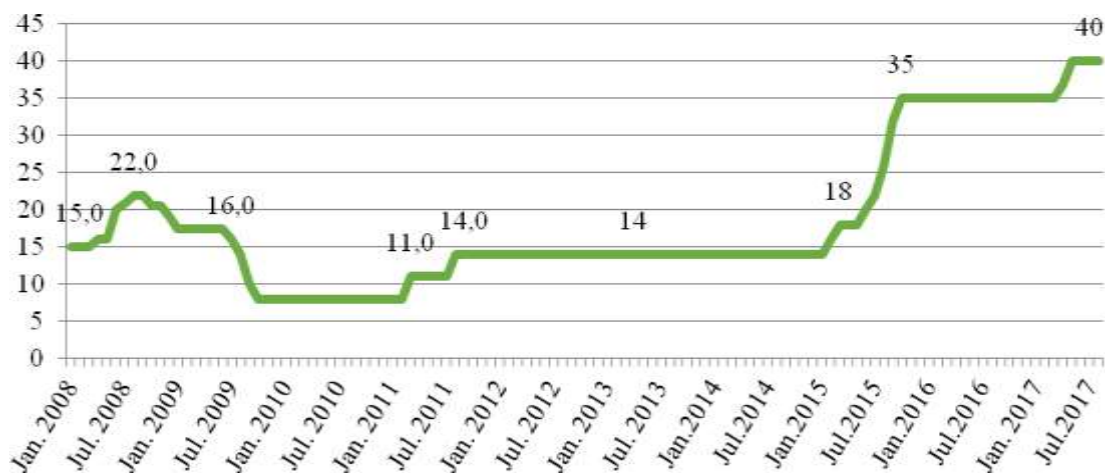
**Figure no. 2. Evolution of interest rates on NBM monetary regulation instruments in 2006-2017, %.**

Source: NBM, 2007. *Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2007*. [online] Available at: <[www.bnm.md](http://www.bnm.md)> [Accessed 01 March 2018].

During the period 2008-2017 the NBM changed the base rate level several times. The highest level of the base rate was recorded at the end of 2015 by 19.5% under the influence of inflationary pressures caused by the devaluation of the domestic banking system in the period of 2014-2015, after it was gradually lowered to 9% to the end of 2016.

Regarding the use of reserve requirements, these are an active monetary policy instrument of the NBM, with several modifications of the mechanism being implemented during 2006-2017. The NBM uses the required reserve ratio to influence the demand for short-term money and the short-term interest rate by increasing - in order to constrain monetary masses in circulation, and by diminishing - to relax the monetary conditions. In Moldova, commercial banks maintain separate reserves in Moldovan Lei and foreign currency (USD and Euro) in open accounts at the central bank, allowing the National Bank to send separate impulses to the economy, depending on the money mass that is followed (in national or foreign currency).

The Mandatory Reserve Requirement in the Republic of Moldova was increased especially in the periods before the economic recession, at the end of 2008, when the effects of the global financial crisis on the real economy were felt, and from the middle of 2015, when the inflationary expectations and the devaluation of the national currency have influenced the NBM to increase the reserve requirement (Figure no. 3). Since October 2015, the required reserves ratio has remained unchanged by the end of 2017, regardless of NBM prudent steps to ease monetary conditions on the interest rate channel. Thus, one third of the commercial banks' resources currently remain in accounts in the form of minimum reserves and cannot be used in lending and financing the national economy, irrespective of the lowering of other monetary policy rates.



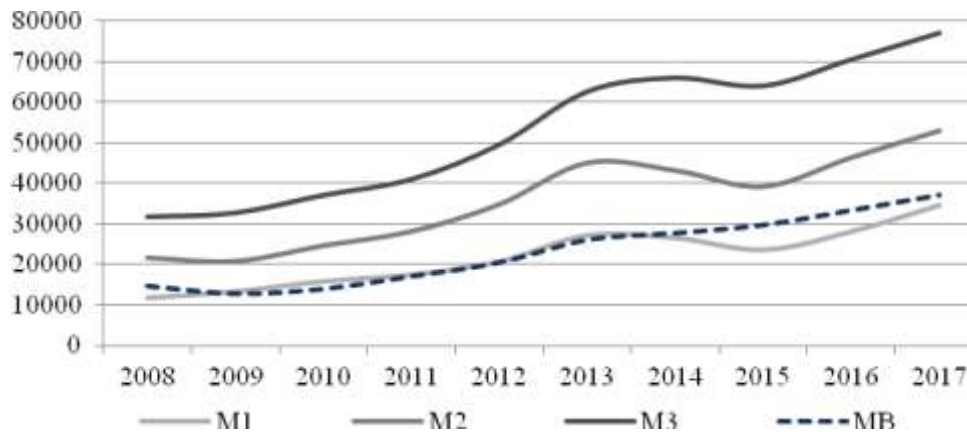
**Figure no. 3. Evolution of the reserve ratio from the attracted funds in MDL, %.**

Source: NBM, 2007. *Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2007*. [online] Available at: <[www.bnm.md](http://www.bnm.md)> [Accessed 01 March 2018].

The analysis of the determinants of the inflationary process in the Republic of Moldova and the NBM monetary policy conduct as a reaction response, highlighted the inhomogeneous influence of the inflationary factors. Some of these factors come out of the sphere of influence of the monetary policy promoted by the NBM. This fact was also confirmed in 2009-2011 when, with the deepening of the sovereign debt crisis and the recession in the euro area and globally, which affected the global demand and international prices, influenced the growth rate of domestic economic activity and in the following years, irrespective of the relaxation of monetary conditions at a level previously practiced by NBM.

### 3. Monetary mass and its components analysis

Although the volume of money supply has raised over the entire period between 2000-2015, post-crisis money supply growth has slowed considerably. The lowest values of the money supply increase were recorded in 2009, during the period of the national economy's perception of the effects of the global financial crisis (Figure no. 4).



**Figure no. 4. The evolution of the money supply during the period 2008-2017, MDL mil**

Source: NBM, 2007. *Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2007*. [online] Available at: <[www.bnm.md](http://www.bnm.md)> [Accessed 01 March 2018].

Analysing the impact of monetary policy instruments on the currency supply, we can see that they have an uneven effect on the structure of the amount of money in circulation, being influenced by certain specific factors. The volume of monetary aggregates analysis in dynamics and its structure outlines the specific characteristics of the evolution of the money supply in the Republic of Moldova and delimits the small impact that the commercial banks have in its multiplication.

Although the crisis in the Republic of Moldova was felt only in 2009, the annual money increase rate supply began to decrease as early as 2008, the period characterized by NBM active interventions in the money market and the tightening of the monetary policy by the gradual increase of the rate the overnight credit rate and the minimum reserve ratio. In addition to restrictive monetary policy, the volume of remittances from Moldovans working abroad, which have felt the impact of the crisis since its inception in 2007, has also diminished.

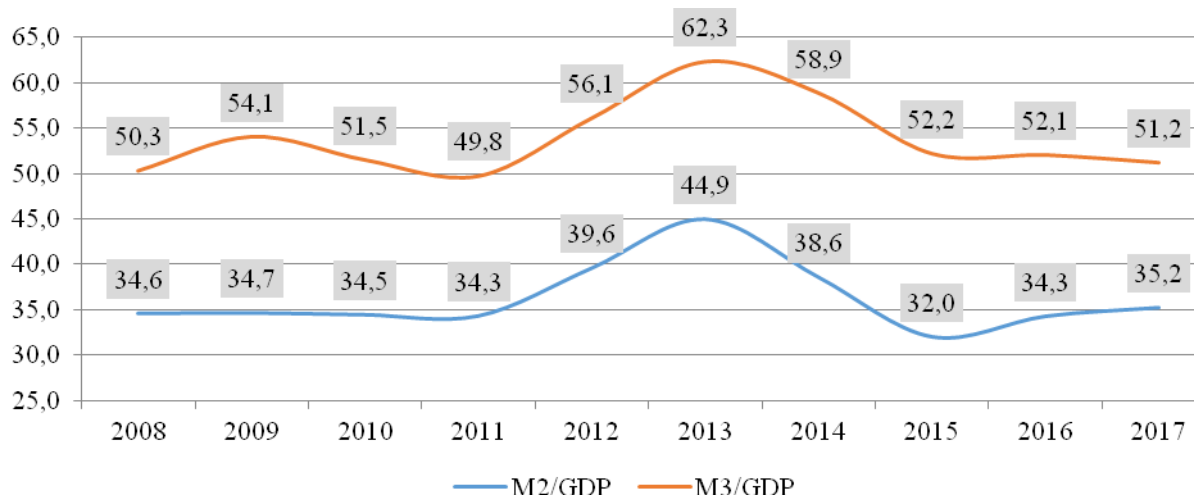
In the analysed period, the process of monetization of the Moldovan economy evolved differently, a process visible from the analysis of the annual variations in real terms of the money supply. At the same time, two periods can be outlined during which the annual growth rate of money supply has dropped dramatically:

1) The period between 2007-2009 when the dynamics of the monetary mass was diminishing as the effects of the international financial crisis have repercussions on the Moldovan economy. During this period, it is observed that in the case of the national currency (M2), the slope of the curve was much steeper, demonstrating the slowing of the financial intermediation process both internationally and internally due to the decline in economic activity.

2) The period 2014-2015 when the dynamics of all monetary aggregates registered negative values as a result of the devaluation of some banks in the domestic banking system, which had a negative impact on all macroeconomic indicators and had a negative impact much more than the effects of the financial crisis.

One of the early warning indicators of risk is the degree of economy monetization, expressing the level of financial intermediation in a country and is calculated as a ratio between broad money and GDP (M2/GDP). Taking into account the high weight of money in foreign currency in the total monetary mass, we considered it useful to calculate this indicator and its tracking for monetary aggregate M3.

In the case of Moldova, the M2/GDP recorded values between 32% and 44.9% (2008-2017, Figure no. 5), which are relatively low compared to other countries: 85.6% in Bulgaria, 64.5% in Poland, 80% in Slovakia, data for 2015.



**Figure no. 5. Evolution of Monetization Degree in the Republic of Moldova (2008-2017)**

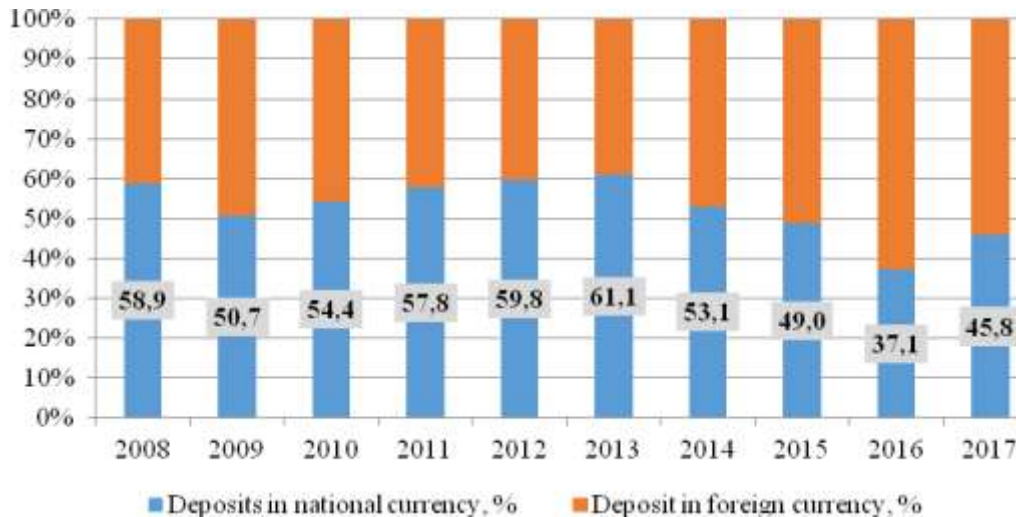
Sources: NBM, 2007. *Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2007*. [online] Available at: <[www.bnm.md](http://www.bnm.md)> [Accessed 01 March 2018].

National Bureau of Statistics, 2018. *Statistical Databank*. [online] Available at: <<http://www.statistica.md/pageview.php?l=en&idc=407&nod=1&>> [Accessed 01 March 2018].

For a developing country like the Republic of Moldova, the value of this indicator should be at least 50-60%. The low levels of M2 / GDP and its developments indicate macroeconomic imbalances seen in higher inflation (2006-2008, 2010-2011, 2015) and fragile economic growth (2012-2014) interrupted by periods of economic decline that have influenced the process (M3/GDP) and highlights the mismatch between demand and aggregate supply.

The higher level of economy monetization calculated on the basis of monetary aggregate M3 shows the existence of a shortage of money in national currency for sustainable economic growth. This shortage, being substituted by foreign currency, leads to maintaining or increasing dollarisation of the economy, which negatively influences the efficiency of monetary policy impulses.

The phenomenon of excessive dollarization of the economy is also seen in the analysis of the economies structure in the economy, another predictive indicator of financial instability for the countries in transition. According to this indicator, the share of savings in national currency for a state like the Republic of Moldova should account for at least 70% of total economies. A lower share of these shows the existence of a major impact of external factors on the country's financial stability, factors uncontrollable by the domestic monetary authorities.



**Figure no. 6. Evolution of savings in national and foreign currency in the Republic of Moldova (2008-2017)**

Source: NBM, 2007. *Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2007*. [online] Available at: <[www.bnm.md](http://www.bnm.md)> [Accessed 01 March 2018].

It is noticed that during this period the weight of the economies in the Republic of Moldova is about 10-20% lower than the minimum level necessary to ensure the country's financial stability. We note that in times of economic recession, under the influence of external factors in 2009 and under the influence of domestic factors in 2014-2017, the volume of deposits in national currency decreases very much (Figure no. 6). The dollarisation of economies, which do not depend on the monetary policy decisions of the NBM or on the banks' desire to hold foreign currency liabilities, but more on the behaviour of foreign exchange curators who, in order to mitigate currency risk, decide to keep their savings and other foreign currency assets vulnerability of the economy to speculative attacks. This vulnerability largely depends on exchange rate fluctuations.

#### 4. Conclusions

The following conclusions regarding the evolution of the financial stability of the Republic of Moldova during the years 2006-2017 can be made taking into consideration the analysis of monetary developments in the Republic of Moldova, including through SAT indicators:

- The overall conduct of monetary policy has been characterized by caution, due to the need to strengthen trends of accentuating inflation expectations and to counteract any negative signal induced by external factors on the need to adjust administered prices;
- The National Bank largely managed to maintain the Consumer Price Index within the variation corridor following the implementation of the inflation targeting system until 2015, when under the influence of the domestic factors the destabilization of the financial and banking sector occurred which later led to inflationary effects that came out of the control of the monetary authorities;
- The degree of monetization of the economy of the Republic of Moldova has proved to have low values, which shows the existence of macroeconomic imbalances as well as fragile economic growth, an obvious lack of correlation between aggregate demand and supply;
- The analysis of the structure of the population savings denotes an excessive weight of the foreign currency in the total money, which is a risk factor for the country's economic

stability due to its exposure to the influence of external factors uncontrollable by the domestic monetary authorities.

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## SOME ISSUES IN RURAL AREAS: REFLEXIONS, SUGGESTIONS

**Professor Ph.D., Habil., Leonid BABII**

"Alec Russo" State University of Bălți, Republic of Moldova

E-mail: leonid\_babii@mail.ru

***Abstract:** Subsidies made to Republic of Moldova will contribute to modernization of the economical activities in agriculture and, first of all, to growth of labor productivity and to reduction of cost prices. This article includes a suggestion to obtain subsidies by the Government from taxes and to direct them right to farmers and in the field of scientific researches and innovative activities.*

***Keywords:** agriculture, subsidies, rural space, taxes, fees, investments, innovations.*

***JEL Classification:** O13, H23.*

At the present time, many economic branches, first of all organizations face a number of difficulties. The generator (of these difficult situations) are - labor productivity, low efficiency, the cost price of the finished products (compared to external cost prices) is relatively high. As a result, agricultural food stuffs are non competitive, they can not compete with the imported products, even on the domestic market.

The imported fruits and vegetables in recent years have "put down" the domestic producers". Though some economic activities have achieved certain successes, the producers export their finished products, this export share make an insignificant percentage in the total economic activities.

A prime "idea" how the domestic producer could be assured in its activities would be activation of subsidies. Concerning subventions – grants, they should be set only for a certain period of time afterwards the producer will solve his cost price problems on his own funds.

In our view, subsidies should be conditional ones. For example on contract subsidy conditions the producer can earn revenue, perform competitive activities and earn profit. Taking into account the contracts conditions, the earned profit by the producers, should be directed to increase labor productivity, to reduce all other efforts, in order to optimize work organization, and optimum use of the material resources.

Otherwise, unconditionally granted subsidies on permanent basis, without legal agreements or without a contract, these subsidies will contribute to preservation of private forms of economic organizing and to the usage of obsolete moral means of production.

And there is another negative consequence of the unconditional subsidies. The money provided in the form of subsidies is taken from the budget revenues, which directly contributes to cut the budgetary expenditures, i.e. to salaries.

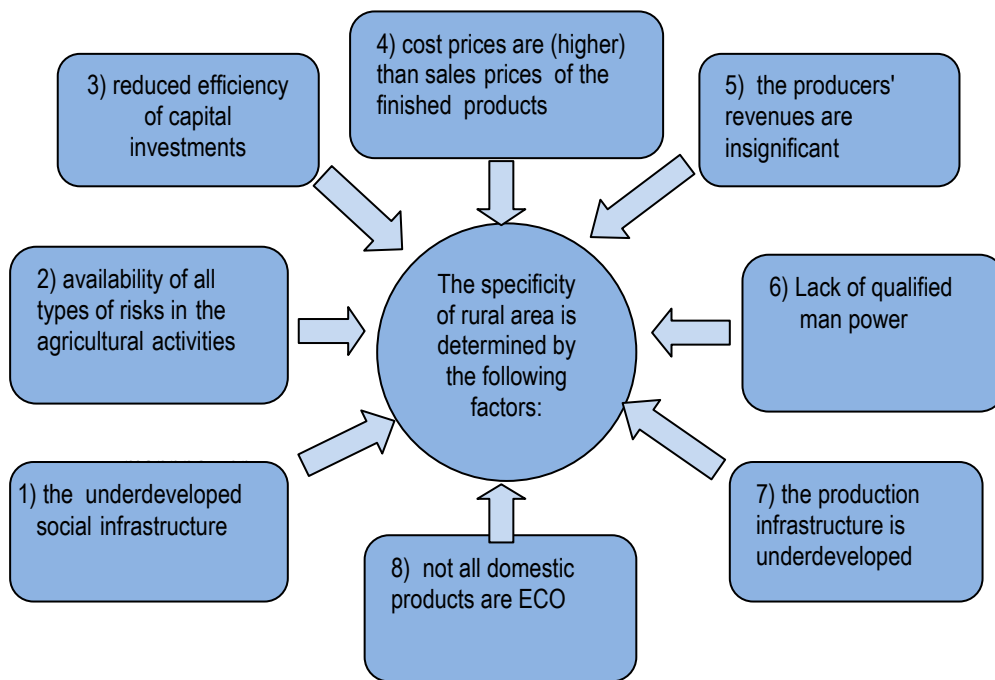
Reduction of wages of the public sectors leads to uninterrupted decrease of demand. As a consequence, in the home market, at a reduced demand, the domestic producer is uninterruptedly unable to market his finished products. So, subsidies have to be allotted as financial "loans" that should not be refunded, if the producer honors his deal in relation to the state. When an economic agent takes advantage of subsidies, and after some time "abandons" his activity, then this "rogue" should be bound by the contractual conditions to return to the state the subsidies for previous periods of time. Proceeding in this way, the state motivates the producer to use subsidies not for consumption, but for productive accumulations, for creating or purchasing of efficient production facilities, for modernization of the respective activities, in order to increase competitiveness of the domestic products on the internal and external markets. In order to exclude financial frauds of any producers (and not only), it would be advisable to grant barter grants. The producer could have free access to some freezer-type warehouses.



Outsourcing services for farmers in rural areas, funded by subsidies can serve as a "barter" form. Other examples of "barter": the farmer is not given money but, for example, instead of financial resources but he will get instead livestock, productive poultry, being imported by the state from abroad (for example from the Netherlands, France, from other successful countries in agriculture development). Thus subsidies must be of "barter" type, directed to financing of scientific research works, on various projects, generating ideas, invisible intelligent products, creating effective forms of work organization.

In the activities of providing "support", through subsidies financing rural area, it is necessary to take into consideration specificity of (rural area). Among the economic activities in the rural area of the Republic of Moldova, the agriculture is the main foundations for all of them. The specificity of rural area is determined by the following factors:

- 1) the underdeveloped social infrastructure;
- 2) availability of all types of risks in the agricultural activities;
- 3) reduced efficiency of capital investments;
- 4) cost prices above (higher) sales prices of finished products;
- 5) insignificant incomes of producers;
- 6) the lack of qualified labor;
- 7) the production infrastructure is underdeveloped;
- 8) not all domestic products are ECO (Figure no. 1).



**Figure no. 1 Specificity of the rural area**

In this context for each of the 8 blocks in Figure no. 1, there is a "place" for conditional "barter" type subsidies. Forms of support in agricultural activities other than cash can be: creation of suitable infrastructure for organizations, various sales exhibitions, state purchases of domestic products exclusively. An important form of support for the domestic producer may be customs duties. This (taxation) could have several functions:

1. the increase of the prices for imported products on the domestic market, including compatibility of the domestic products;
2. the financial resources for importing agricultural products may constitute funds for agricultural subsidies;

3. taxation on imports, in this case, would reduce the costs allocated from the national budget;

4. tax imposition could contribute to extension of economic independence of the Republic of Moldova in the International economic relations.

Through subsidies, domestic producers can not increase only their labor but also to modernize their forms of labor organization, to create new brand agricultural food stuffs, ECO products, and may become "monopolists" in their production. Subsidies and taxation of imported agricultural food products can favor the local producer.

In this context, prices for domestic products should not be higher than the respective prices for imported products. The amount of imports and the volume of domestic products must ensure the need for agricultural food products; for each agricultural food product it is necessary to support a certain minimum volume of domestic products, otherwise the Republic of Moldova may become dependent on the outside producers; the revenues of importers, of domestic producers from the marketing of agricultural food products are determined by the consumer's buying attitude.

The amount of subsidies in the profile of agricultural food products will not exceed accruing amounts from the taxation of the concerned product; domestic producers and importers carry out their business activities to achieve maximum profit.

The concept of taxing subsidies may be interpreted by a formalized example, given in Figure no. 1.

Formalization of paternalism - protectionism policy: where:  $\eta$  - denotes the level of tax assessment;  $\beta$  - share of subsidies in the price of domestic products;  $V_1$  - the volume of domestic products,  $V_2$  - the volume of import products;  $C_{10}$ ,  $C_{20}$  - the cost price of domestic products, of the imported one;  $I_1$  - the profit of the domestic producer,  $I_2$  - the profit of the external producer,  $P_1, P_2$  the share part of profit in the price of domestic products and of the imported ones;  $V_{\min}$  - the minimum required product of import;  $V_0$  - the required minimum for domestic product ;  $A$  - buying attitude of the population comparatively the respective product;  $D_0$  - subsidies for scientific and practical research, projects etc.

Proceeding from the above notations, easily to state:

$$C_1 = C_{10}(1 + P_1) \leq C_{20}(1 + P_2)(1 + \eta) = C_2(1 + \eta) \quad (1.1)$$

The trading price of the domestic products ( $C_1$ ) will not exceed the price of the imported products ( $C_2(1 + \eta)$ )

$$V_1 + V_2 \geq V_{\min} \quad (1.2)$$

(The volume of the domestic products plus volume of the imported products will not exceed the necessary minimum for agricultural products)

$$V_1 \geq V_0 \quad (1.3)$$

(The volume of the domestic products will exceed the necessary minimum of the domestic agricultural products)

$$C_1 V_1 + (C_2(1 + \eta)) V_2 \leq A \quad (1.4)$$

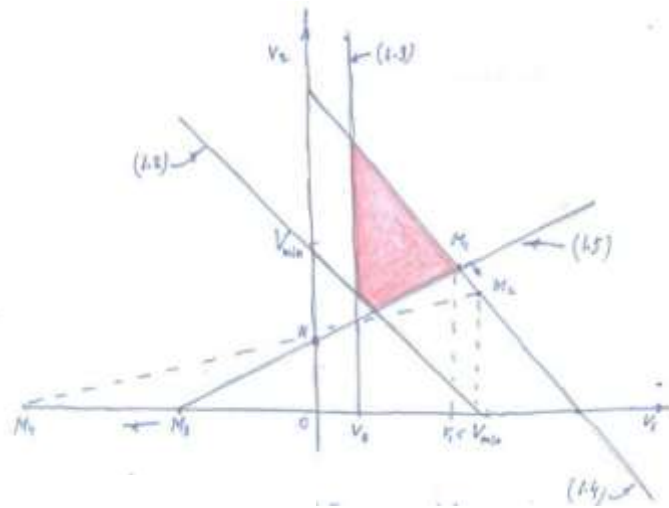
(the revenues of the domestic producers ( $C_1 V_1$ ) and oter taxes ( $C_2(1 + \eta)$ ) must exceed the buying power of the consumers (A))

$$D_0 + C_1 V_1 \beta \leq C_2 V_2 \eta \quad (1.5)$$

(The subsidies intended for sustaining the scientific research works plus subventions directed to producer will not exceed financial encashments after tax assessment)

$$I_1 = C_1 V_1 (1 + \beta) - C_{10} V_1 = > \max$$

(The domestic producer should maximize his profit - Figure no. 2)



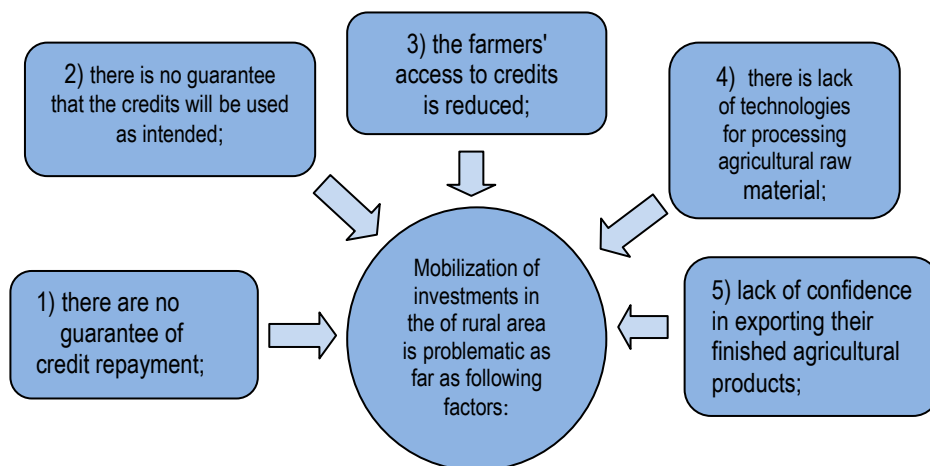
**Figure no. 2. The concept of "paternalism-protectionism" interpretation**

The economic-mathematical model "paternalism-protectionism" can be interpreted graphically (Figure no. 3). The abscissa of M1 denotes the local producer's revenue. Subsidies intended for scientific research, technology development, innovation "displace" point M3 towards point M4, the point N is fixed, the straight line M4N displace point M towards point Mo, the abscissa to point M2 determines the increasing volume of domestic products (development of scientific researches).

The given model may serve as basis of provisional concept of domestic producers. Subsidies are constituted exclusively out of tax assessments, intended for development of scientific research, and for provisional support of domestic producer.

The process of mobilization investments is problematic as far as in the rural areas:

1. no guarantee of credit repayment;
2. no guarantee that the credits will be used as intended;
3. the farmers' access to credits is reduced;
4. there is lack of technologies for processing agricultural raw material;
5. lack of confidence for export of the finished agricultural products (Figure no. 3).



**Figure no. 3. Mobilization of investments**

Overcoming these situations becomes one of the most important problems for all structures of all fields at the micro, medium and macro territorial level. The concept of overcoming the difficult situations is given further in the form of 3x4 cm boxes (Figure no. 4).

The first line "Structures, scientific researches, planning carries out its activities: (1.1) initiating the necessary funds for scientific researches, for projects, determining executors of the research works, of design, creation of infrastructure for necessary research works and projects;

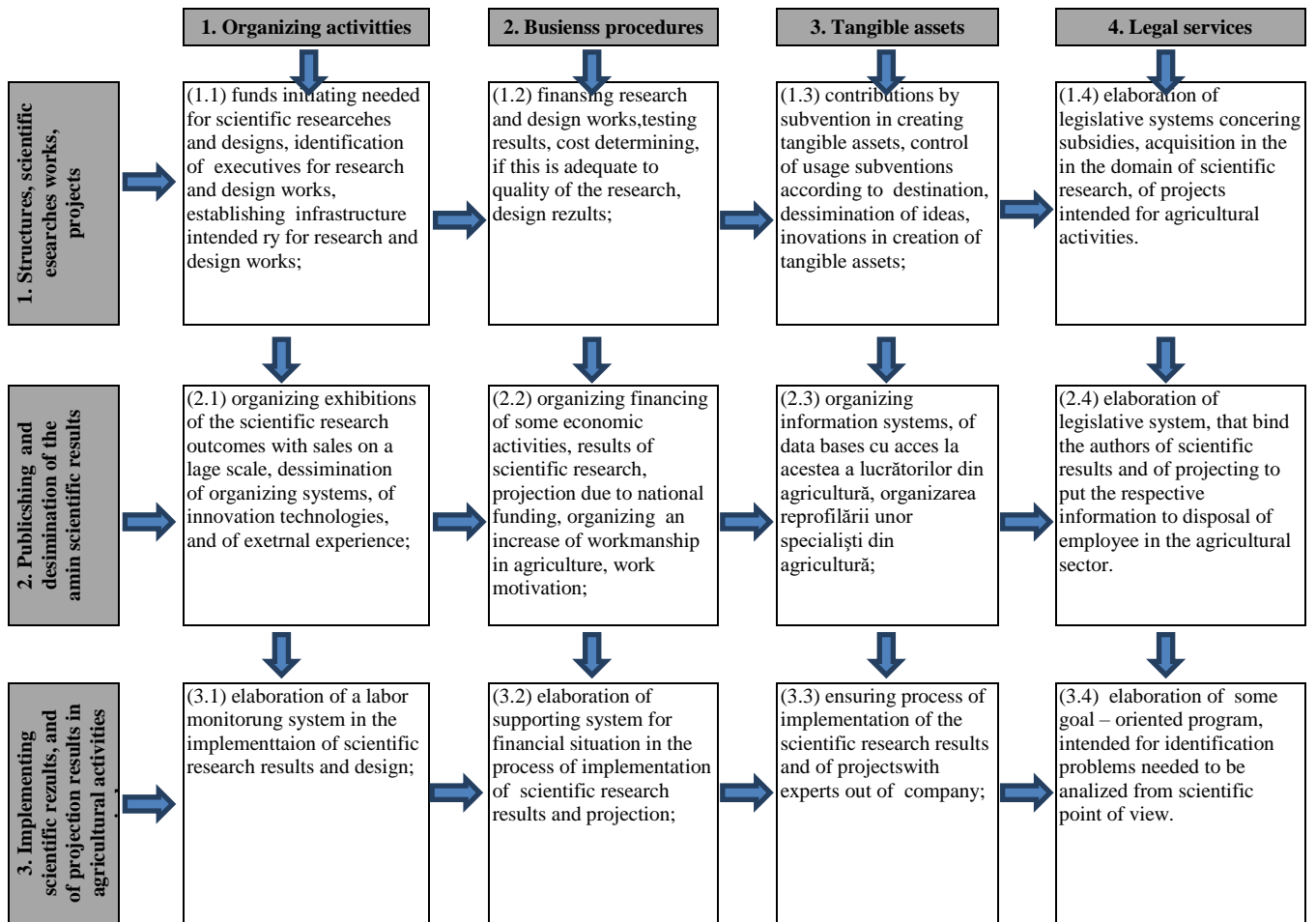
(1.2) the funding of research works, projects, results testing, cost estimation, it is appropriate to quality of research and projects results; (1.3) contributions through subsidies to creation of material assets, control of the subsidies usage according to its destination, promotion of ideas, innovations in creation of material assets; (1.4) elaboration of legislative systems regarding subsidies, acquisitions in the field of scientific research works, projects in the profile of agricultural activities.

The second line "Publishing, dissemination of scientific results on a large scale": (2.1) organizing exhibitions of scientific research results, of large sales, dissemination of organizational systems, of innovation technologies, case study of external experience; (2.2) organizing financing of some economic activities, the results of the scientific researches, designs funded by the state, organizing the increase of labor quality in agriculture and its motivation; (2.3) organizing information systems of the databases and farmers access to them, organizing further training of specialists in agriculture sector; (2.4) development of the legislative system that obliges authors of the scientific and projects results to make this information available to employee of agricultural sector.

The third line "Implementation of scientific and project results in agricultural business": (3.1) Development of a labor monitoring system in the process of implementing the scientific research and project results; (3.2) development of a financial support system for implementation process of the scientific research and project results;

(3.3) Ensuring the process of implementing the scientific research and project results of with external specialists out of the firm; (3.4) development of target programs designed to identify the necessary issues to be scientifically analyzed.

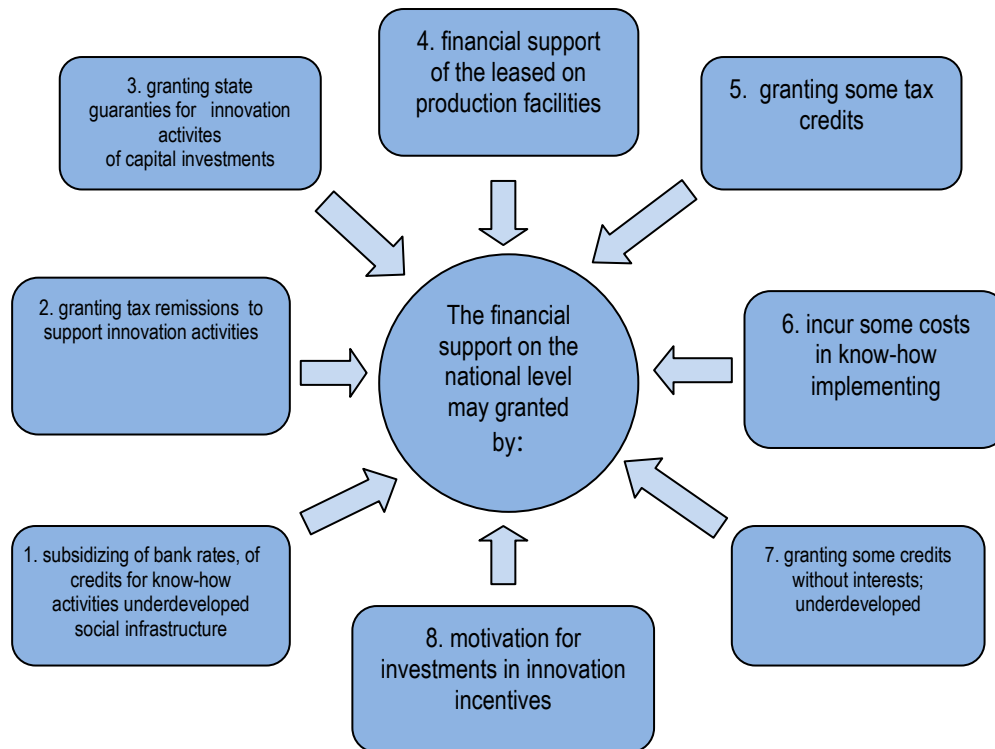
The boxes (1.1), (2.1), (3.1) are accompanied by the column 1 „Organizing procedures”, blocks (1.2), (2.2), (3.2) are accompanied by the column 2 „Economic Activities”; blocks (1.3), (2.3), (3.3) are accompanied by the column 3 „Tangible assets”; blocks (1.4), (2.4), (3.4) are accompanied by column 4 „Legal services”.



**Figure no. 4. Block-diagram "Implementation of innovations"**

The formulation and solving of problems in rural areas must be part of the interdependencies included in Fig. 4. The granting of subsidies to agricultural producers, on systematical and on unconditional basis, will contribute to the maintenance of inefficient machinery, irrational forms of organizing agricultural activities. Grant can and must be given indirectly by means of a conditionally "barter" transaction. The State may financially support by granting:

1. Subsidizing bank rates, of credits for innovations;
2. tax remissions to support innovations;
3. oferirea state guarantees for know-how activities;
4. financial support for leased production facilities;
5. granting tax credits;
6. incur of some costs in know-how implementing;
7. granting credits without interests;
8. motivation of investments in know-how activities (Figure no. 5).

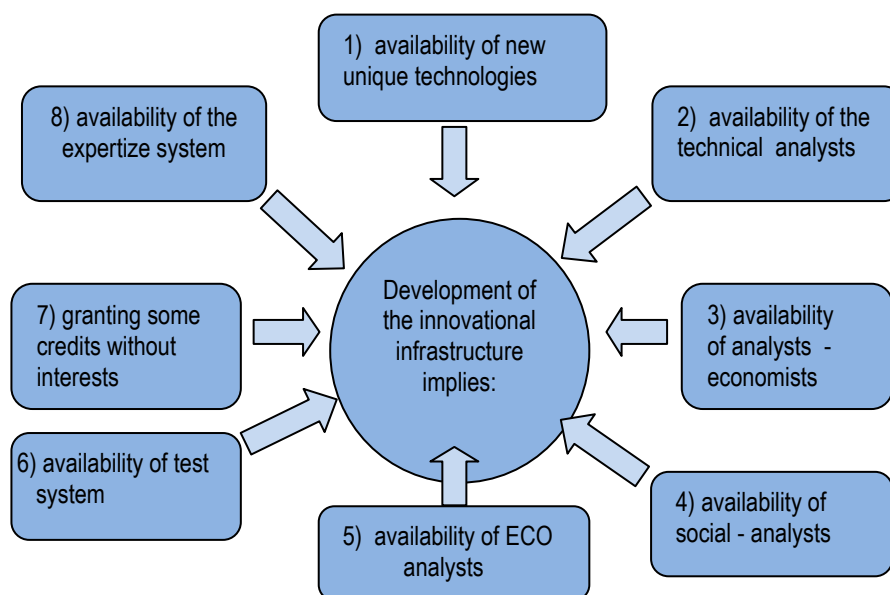


**Figure no. 5. Suppoting know-how**

Each form of financial support must be accompanied by a contract providing for certain responsibilities of the beneficiary, forms of taxation in cases where the finances granted have not been used in the field programmed by the contract.

The emergence of innovations, including agricultural food stuff sector, in the urban area of the Republic of Moldova implies the presence of highly professional intellectuals, the presence of demand for innovations, the presence of working conditions in the scientific and practical research activities, the equipment, the means necessary for the testing ideas, innovations, the presence of scientific infrastructure, the material and social motivation of innovators. The development of the innovative infrastructure implies:

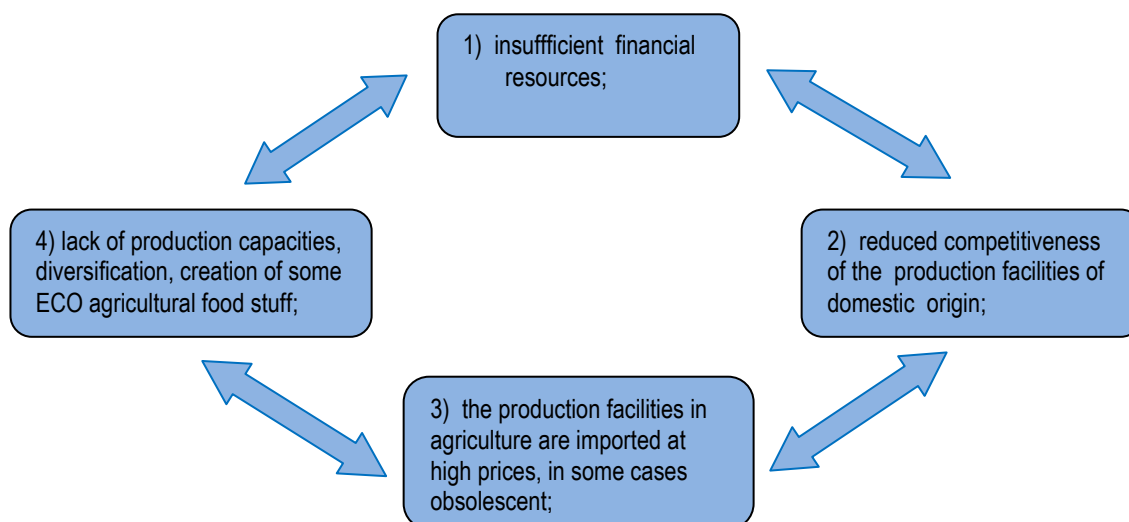
- 1) availability of new unique machines;
- 2) availability of technical analysts;
- 3) availability of analysts-economists;
- 4) availability of social analysts;
- 5) availability of ECO analysts;
- 6) test system availability;
- 7) availability of the certification system;
- 8) availability of the expertise system (Figure no. 6).



**Figure no. 6. The innovation infrastructure**

Failures in the development of agriculture are determined by a number of factors that form a "circle" of mutually multiplied blocks, including:

- 1) insufficient financial assets;
- 2) reduced competitiveness of production facilities of the manufactured in the origin;
- 3) the production facilities in agriculture are imported at high prices, in some cases obsolescent;
- 4) lack of processing capacities, diversification, creation of ECO agricultural food products (Figure no. 7).



**Figure no. 7. Multiplier of failures in agriculture**

### Conclusions

Agriculture is one of the most difficult economic activities. Risks "trap" farmer from all "corners", therefore subsidies are needed. In order to make subsidies more efficient it is necessary to perform controls between farmers and state. Subsidies must be

conditional ones and be used for certain purposes provided for in the contract. The use of subsidies, for example, by organizations is inadmissible.

Subsidies in Moldova should contribute to modernization of economic activities according to example of the European Union countries, they must contribute to the improvement of labor productivity, to cut the cost prices. Subsidies must be obtained by the state from taxes. Tax duties can create preconditions that prices for domestic food products will not exceed the prices for imported goods, thus will contribute to creation of the necessary funds for subsidizing agricultural activities in the country. The subsidies must be allotted:

- a) directly to the farmer;
- b) in the field of scientific research works and innovative activity.

The amount of subsidies a) and b) must not exceed the financial resources obtained from the tax assessment. Otherwise, farmers' subsidies being ("good" for them) will cause "a bad" thing for employee of government financed organizations. Grants to farmers should not be allotted from the state budget but from the tax assessment. The level of tax assessment of agricultural food products, the volume of the granted subsidies to farmers can and must be calculated using econometric-mathematical models (Popescu, 1977, p.105). Tax assessment should not eliminate imports but create prerequisites for increasing level of competitiveness of the agricultural food products on domestic and external markets.

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# THE IMPACT OF CONSTRAINED THEORY ON ENTREPRISE PERFORMANCE

**Ph.D. Student Rebeca Ioana BOSTAN**

Valahia University of Târgoviște, România

Email: bostanrebeca@gmail.com

**Ph.D. Student Cristina Mihaela TOMA**

Valahia University of Târgoviște, România

Email: cristina.toma@gmail.com

**Abstract:** *The theory of constraints dates back over 30 years, and its applicability within companies has the role of improving their level of production and efficiency. This article discusses how managers use constrain theory to continuously manage and improve company development goals. The theory of constraints is based on the level of trust provided by high-quality services as a key element used to create the competitive edge for the entity's evolution. According to the theory of constraints, the entity's leadership has the role of improving the performance of production so that the role of production management is to maintain flow and continually improve it.*

**Keywords:** *performance, theory of constraints, enterprise, constraints.*

**JEL Classification:** *M41.*

## 1. Introduction

Constraint Theory (TOC) is a general philosophy of management introduced by Eliyahu M. Goldratt in his 1984 book "The Goals," designed to help organizations achieve their goals (Cox et al., 1986). In the late 80's, many studies were struck that aimed at differentiating total quality management (TQM) from TOC. Over the course of 10 years, the issue of TOC vs Six Sigma and / or TOC vs Lean has been debated. According to the TOC, the management of an entity has the role of improving its performance, so production management has the role of continuously maintaining and continuously improving production flow. The theory of constraint is based on the idea that each system has at least one a us, which can be defined as any kind of situation which prevents the system from achieving a high level of performance in its goals (Goldratt, 1990). According to TOC's writings, Dr. Eli Goldratt presents in his article "Sitting on the Shoulders of the Ignitants" four concepts related to flow management:

The main objective of the operations is to improve the flow.

This primary objective should be transposed into a practical mechanism that guides the operation when it does not produce (hinder production).

Local efficiency must be eliminated.

There must be a focusing process to balance the flow.

According to the Theory of Constraints, localized management is the main cause of many of the problems that we encounter today in companies, such as' lower overall performance results than those expected, the difficulties to ensure and maintain an advantage strategic market, financial difficulties, fires to extinguish constantly, consumer service expectations rarely satisfied and conflicts between employees of different departments, between other (Houle, 2001).

## 2. Literature review

The theory of constraints has a wide range of implementation scales. The theory can be applied in production, logistics, distribution, distribution, project management, accounting, research and development, sales and marketing and so on. The main idea is that each system has at least one point of interest; there are a lot of studies in the literature that have different concentration zones and reveal different aspects of TOC. Therefore,

there are several definitions for OCD. On the other hand, there is a common point that is defined in almost every study, constraint (Lakshmi et al., 2012).

The main purpose of each company is in increasing profit. Conformable this view, constraints are the main obstacles to achieving the goals of companies (Lakshmi et al., 2012). In other words, everything that exists to get more profit is considered a constraint. So, if companies can face constraints in their system and manage these constraints, they would do so have a continuous improvement management system so they can get higher profits. This simple logic leads to many questions and, for this reason, just push researchers investigate every aspect of TOC.

### **3. Flow Improvement - the main goal of operations**

The main objective of production management is to improve the flow of work. With the help of raw material production and the components are transformed into finished products that are intended to be marketed. In order to contribute to the company's high performance, the manufacturing process must be made in tims according to the agreed rules and costs.

The critical factor of profit generation is production time, as the company will only earn profits when the finished products are delivered to the customer and paid for by the customer.

TOC recognizes the critical role of production time in flow management (planning, execution control and continuous improvement), however, is suggested a shorter path for improving the entity's performance. This can be done with the Production Buffer (PB). PB is the total time allocated to production to complete the order. The term "buffer" is used by TOC to denote time that includes more than average machine processing time (touch time). It also includes assignment for installing machines for certain parts or products, waiting times in front of busy machines, waiting times for missing parts as a whole, and unexpected problems known as "Murphy". In most production environments, touch-time represents a small part of the production time (1% or less).

SDBR (Simplified Buffer Tube) is the OTC solution for MTO - Make to Order. OTM is a production environment that produces customer orders. SDBR uses the Production Buffer (PB) for flow management. When the actual touch time is very small compared to the elapsed time, there is no need for a detailed flow mapping.

By using TOC, the implementation of solutions becomes easy and fast because it can be integrated into computerized systems.

### **4. Eliminating local efficiency**

The early 1980s capture the concern of TOCs to suppress local efficiency. Although the purpose of TOC was to stop using local performance to measure departments, machines, or workforce "how to change?", it nevertheless offered concepts and methods clear and practical to replace them "crossing?" (Verma, 2010). Among them we mention:

Provision of timely delivery of the first measurement for production performance:

- DDP - Performance Date Due - to denote the level of reliability of shipping as promised to customers. This is the percentage of orders delivered on time.
- TDD (Dollar Entry Days) or TVD (Days Value Value in local currency) indicates the financial impact of delayed orders and the number of days late and has a financial impact on the company because it affects the cash flow (represents the amount of money what could have been in the company's bank account multiplied by the number of days).

- TOC (Throughput) Accounting - Provides management with a set of operational measurements to make decisions about the entity's performance. The three operational measurements are:
  - Capacity - money generated by the system;
  - Investments - money invested in the system, including facilities, machines and materials.

Production costs - all the money spent by the company's management generates profit. According to TOC, production management has the role of concentrating on the flow. If the flow is the number one priority, then the rest, the quality and the cost, will be ranked in the following places and will be subject to control. Under the SDBR concept, "D" means Road and customer orders are a priority for the production system. The production system is driven by the company's commitment to the customer and by planning, the company is developing awareness of market and accepting it as a trusted provider.

### **5. The existence of a focusing process has the purpose of balancing the flow**

The TOC approach is a managerial and flow management approach, helping to highlight problematic areas in the stream that require improvement. Since TOC focuses on stream improvement, the top priority will be CRCs, resources that do not have the ability to maintain flow. The second priority is for resources that have no restrictions to disrupt constraints or to cause major delays in the flow.

TOC has a powerful focusing mechanism for POOGI called Management Buffer and is part of the SDBR solution. During processing of work orders, their status is constantly monitored, taking into account the production time. At certain time intervals, the system asks for sampling, so during sampling, the system checks the reasons for the delay.

Using TOC tools and thinking processes, causes are deeply analyzed to develop and develop a solution to solve problems strategically.

It says that TOC has a powerful focusing mechanism for all initiatives to improve the production area. Issues solved and eliminated interruptions improve the flow and make the production area more reliable, providing a potential competitive advantage for the company.

The five-step continuous improvement process is based on finding constraints in the system. These are Goldratt points out that the completion of all five steps will lead to a continuous improvement process and, as we know, the nature of change will change. In a production environment, for example, constraint may change from a physical constraint within the plant to an insufficient market demand or a company policy that needs to be changed.

### **6. Five points of focus**

Goldratt introduced a method called five concentrating steps to solving system problems on a continuous improvement basis (Goldratt, 1992).

Step 1: Identify constraints within the system (Marton et al., 2010). At this stage, the entity's management identifies that part of the weaker system and determines whether it is a matter related to the entity's policy or physical constraint.

Step 2: Methods of exploiting the constraint (Marton et al., 2010). Constraints are exploited by using component elements, organizations not engaging in shifts that can generate a potential cost.

Step 3: In the third stage, the organization's management adjusts the entire system to allow constraint to operate under the most efficient conditions (Marton et al., 2010).

Step 4: Raise constraint (Marton et al., 2010).

If the organization reaches this stage, it means that the other steps have not been enough to eliminate the constraint. Major changes such as reorganization, divestiture, or capital improvements may occur.

Step 5: At this stage, if the compulsion process has been interrupted, the organization will repeat the steps again to find what limits the performance of the system (Marton et al., 2010).

## **7. Principal advantages and disadvantages of constant theory**

### **Benefits:**

- Existence of potential for extra productivity gains, but with minimal changes in operations.
- The most efficient and powerful tool for increasing production capacity
- Very simple to apply and communicate, being ideal for all teams of an economic entity.
- This is excellent to stimulate teamwork because the different areas are aware of the existence of constraints, but also the need for co-operation to assist in the coercion process.
- A very effective process for all the efforts to perfect the beginning, as it offers very tangible and immediate benefits.
- This constraint theory increases productivity / turnover, but without the need for additional staff or space.
- It provides a way of evaluating the real values of change (by using T, O, I) and using them to select the most advantageous options and to determine the right decisions / behavior.
- Only by increasing congestion can the overall production capacity increase (Cox et al., 1986).

The goal of the theory of constraint is to overcome the problems arising from the incompatibility of production capacities between machines or stages which requires re-arranging the factory to generate compatibility, through the efficient management of the elements that affect this goal. These elements include the following (Hussein, 2013): efficient management of records, satisfying workers and enhancing their competence through training and motivation, ensuring customer satisfaction through the control of critical success factors.

### **Disadvantages:**

- The most important disadvantage is that it can be very difficult to apply in the work environment of economic entities, but with all this impediment, it is still very applicable).

## **8. Conclusions**

Consequently, constraints theory is a new philosophy in the management of economic entities. It has been found that TOC has proven to be very effective in the recent past, but also in all sectors of the industries that use it. This article may be the general guide to its five basic steps in any field, but also the application of the TOC principles.

We believe that the management of the TOC buffer is a very good focusing mechanism for all initiatives to improve the production area. Any problem solved and eliminated interruption improves flow, makes the production area more reliable and offers a competitive advantage to the company.

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## CREDIT DEFAULT SWAPS AND MACROECONOMIC FORECASTS - HOW CAN THEY INFLUENCE EACH OTHER?

**Scientific Researcher 3rd degree Alina Georgeta AILINĂ**

“Victor Slăvescu” Centre for Financial and Monetary Research, Bucharest, Romania  
E-mail: alina.glod@gmail.com

**Scientific Researcher Cătălin DRĂGOI**

“Victor Slăvescu” Centre for Financial and Monetary Research, Bucharest, Romania  
E-mail: hipercub@gmail.com

***Abstract:** Credit default swaps is an increasingly used tool for assessing access to external funding, although any increase in investors' risk aversion may influence their quotations. Vulnerabilities and tensions at the international and regional level may lead to increased volatility in financial markets, increase risk aversion to investors, influence macroeconomic forecasts and ratings of rating agencies, increase credit spreads volatility swaps, tighten exchange rates and inflation and may also affect access to sovereign foreign financing. Also, macroeconomic forecasts, whether favourable or unfavourable, influence the value of CDS quotations. Therefore, deviations from the reality of the forecasts may have clear negative effects on CDS, sovereign risk and macroeconomic realities that they should reflect. When forecasts are more unfavourable than in reality, the CDS may tend to grow, and this growth can lead to the deterioration of macroeconomic reality and implicitly forecasting, causing a negative snowball effect. Thus, this article aims to analyze the link between CDS, sovereign risk, macroeconomic developments and forecasts for Romania. The article aims to provide a number of solutions to alleviate these shortcomings.*

***Key words:** CDS, Forecasts, Sovereign risk, Romania.*

***JEL Classification:** G15, G23, H63.*

### 1. Introduction

According to the NBR definition (RSF, 2011, p.8), a Credit Default Swap (CDS) is a contract whereby a party (the protection buyer) pays a premium periodically to another party (the protection vendor) in return for receiving a compensation where a third party (referred to as a reference entity) does not pay. Therefore, a Credit Default Swap (CDS) is an important financial asset instrument for securing a financial entity against bankruptcy risk. The protection vendor is required to buy the benchmark at face value in the event of a credit event and to receive a premium (CDS premium or CDS spreads) from the buyer of the protection under the contract or when is produced a credit event. CDS therefore fairly reflect the credit risk of an entity, supporting both the debt instrument and credit, and on the other hand, signalling faster than the bond market, the possibility of a financial crisis in the future.

However, a possible negative influence of CDS in the economy can be noticed by the sometimes vicious behaviour of commercial banks, many with international equity, which often justify interest increases on traditional lending products by the deterioration in the perception of financial markets on risk of the country (evidenced by the increase in CDS quotations that have government bonds as support). Thus, in raising interest rates for commercial banks, it is invoked the stop of a cheaper financing from parent banks on the back of unfavourable exchange rate developments or financial products denominated in euro, pounds, Swiss francs or dollars, and the bigger risk of a country.

The motivation of such behaviour, though it has a kernel of truth, is not fully justified, especially as part of these macroeconomic developments are anticipated and implicitly "modelled" in a negative sense. For example, in the public space and in the literature are invoked mistakes, vices and errors in forecasting important macroeconomic indicators (such as inflation, economic growth, budget deficit and public debt of a country or a group of countries) by some international financial institutions (IMF, European Commission, European Bank for Reconstruction and Development, World Bank, rating agencies etc.). A rather pessimistic forecast or estimate directs future behaviour in the

economy: investors will be more reserved to invest, employment policies will be postponed, inflation and exchange rates will tend to grow on a global background of mistrust, and insecurity, taxes and interest rates will increase, implicitly interest rates on a country's loans etc. A rather optimistic estimate leads to a rather positive "direction" of an economy: borrowing costs will fall, investors will be stimulated to invest and hire, inflation and exchange rate are tempered against a favourable climate, budget revenues increase on the background of a blooming economy, interest rates remain satisfactory or reduced, etc. Incidentally or not, the forecasts of international financial institutions are often for certain groups of countries over which they have economic interests to be modelled rather negatively. The cost of such "errors" is not borne by the issuers of such forecasts, but only by the economy and economies evaluated. A solution would be that, as the ratings realised by rating agency as well as the forecasts of international financial institutions, governments whose assessments were in most cases negative, in a major discrepancy with reality, also to provide a classification or a rating for each such an institution, working only with those institutions that have correctly assessed and anticipated the future, proving their seriousness.

Therefore, the article, on the one hand, emits the inductive scenario above, and deductively, it seeks as far as it can prove empirically for Romania, whether the macroeconomic forecasts influence or not, and in what sense, the developments of CDS and ratings, either directly or indirectly, through developments in macroeconomic indicators.

## **2. Literature Review**

Although they are relatively new instruments, introduced in the last two decades, CDSs are gaining increasing importance both in their use on the capital market and as the subject of study for a vast literature. When considering the literature, some of the studies focus on the implications of CDS in the economy and others analyze the impact of important macroeconomic and microeconomic variables on CDS development and trends.

In the first category could also be considered the study of Paskaleva (2017), which explores the link between informational value of credit default swaps and financial crisis, analysing the ability of credit default swaps to predict the crisis. She discovers that, especially in developed capital markets, CDS is a significant indicator explaining the periods proceeding financial crises. Thus, for emerging markets such as Bulgaria, Romania and Turkey she discovers that the CDS fluctuations are capable of predicting shocks and forthcoming crisis on capital markets and have significant information value (results identical to those of Coudert and Gex (2006) and Naziri (2009)). Thus, these authors and many others take into considerations the fact that economic fundamentals (e.g. GDP, inflation, unemployment) are the leading indicators for upcoming crisis together with investment expectations (often evaluated through the evolution of CDS) and political and social framework.

Also, looking at the link between Romanian banking lending activity and CDSs, in 2011, Mihai & Neagu study, the authors discover also a rather poor relation between CDSs and the cost of funding from abroad for most of the Romanian commercial banks (except the larger ones), conclusions sustained also by the banks declarations in an ad-hoc survey. According to the above authors, the result of the behavior of the Romanian commercial banks comes on the grounds of small and more and more concentrated CDS market and on the fact that the trading of bond issued internationally is rather a limited activity of the banking sector of Romania.

In the second category, for example in Kim & Park & Park (2015) paper, there is an investigation whether changes in CDS spreads depend on macroeconomic conditions

(analyzed by the prism of various proxies) and the authors hypothesize that an important factor in explaining the differences in CDS spreads is the business cycle. They found that the coefficient of the business cycle variable orthogonal to the risk-free rate, equity volatility and leverage ratio factors is strongly significant and robust. Also, they discover that the business cycle variables explain more of the CDS spreads changes for investment-grade firms and that their structural model variables, including the proxy of the business cycle, explain approximately 65% of the changes in CDS spread.

### **3. Methodology and data used**

The article launches the hypothesis of the close link between the forecasts of the main macroeconomic indicators, the evolution of the macroeconomic indicators and CDS, implicitly sovereign risk ratings. At the same time, empirically, for Romania is trying to analyze the link between the CDS, the sovereign risk, the macroeconomic evolutions of some macroeconomic indicators and the forecasts on them. The empirical analysis carried out on Romania's case is mainly of a logical type and of an econometric type (correlation), but due to the extremely limited set of data it is necessary to give caution in interpreting the obtained results. In this article, we have appealed to the National Bank database, monthly bulletins for the period 2013-2017, including the January 2018 bulletin, to the data of the Ministry of Finance, and the reports on the European Commission's autumn and spring forecasts for the same period, therefore the frequency of the data is annual. For the actual evolutions of the indicators we used the data of the National Bank of Romania and for forecasts of the indicators from European Commission. The datas for forecasts are taken as the most recent for each year, without taking into account, for example, for the forecast for year  $t+1$  the forecast made in the year  $t$  for year  $t+1$ , but the forecast of the current year. The number of observations is extremely limited, the data set being annual, but to the extent that the analysis would include a significant number of countries also the econometric analysis would be of considerable significance.

For the case study for Romania, we used CDS quotas on sovereign debt instruments, data being taken from the financial stability report of the NBR and the value of the annual series was made by compiling the monthly series as arithmetic mean. The rating classification is rather regular, using the ratings of the following rating agencies: Moody's, Fitch and S&P and the instrument underlying this rating is the state bonds for denominated contracts in foreign exchange on long term. Thus, the article seeks to point out, besides the importance of developments of macroeconomic indicators also the importance of forecasts in determining the evolution of CDSs and ratings for sovereign risks.

### **4. Results**

As we have seen above, a multitude of studies aim to reveal the possible determinants of CDS quotations, but the link between the CDS and the macroeconomic forecasting is less addressed in the literature. Thus, the article tries to clarify the link between the CDS quotations, the evolution of some macroeconomic indicators and their forecasts, revealing the problem of the deviation from the reality of the forecasts. For empirical analysis on Romania we used annual sets for the period 2013-2017 (see Table no.1).



**Table no. 1. The evolution of several macroeconomic indicators, their European Commission forecasts, the evolution of CDSs and ratings of the main rating agencies for the period 2013-2017**

	2013	2014	2015	2016	2017
<b>GDP (%)</b>	3.50	3.10	4.00	4.80	7.00
<b>GDP (%) aut.frkst.</b>	2.20	2.00	3.50	5.20	5.70
<b>GDP (%) spr.frkst.</b>	1.60	2.50	2.80	5.20	4.30
<b>CAB</b>	-1.54	-1.01	-1.97	-3.50	-6.46
<b>CAB aut.frkst</b>	-1.70	-1.90	-1.20	-3.70	-5.50
<b>CAB spr.frkst</b>	-5.60	-1.70	-1.20	-3.70	-5.00
<b>NLNB(%GDP)</b>	-2.10	-1.40	-0.80	-3.00	-2.83
<b>NLNB(%GDP)aut.frkst</b>	-2.50	-2.10	-1.20	-2.80	-3.00
<b>NLNB(%GDP)spr.frkst</b>	-2.60	-2.20	-1.60	-2.80	-3.50
<b>NBER</b>	4.4190	4.4446	4.4450	4.4908	4.5681
<b>NBER aut.frkst</b>	4.4190	4.4379	4.4349	4.4887	4.5595
<b>NBER spr.frkst</b>	4.3865	4.4739	4.4214	4.4887	4.5214
<b>HICP</b>	3.20	1.40	-0.40	-1.10	1.10
<b>HICP aut.frkst</b>	3.30	1.50	-0.40	-1.00	1.00
<b>HICP spr.frkst</b>	4.30	2.50	0.20	-1.00	1.10
<b>GDGG (%GDP)</b>	37.80	39.40	37.90	37.60	38.70*
<b>GDGG (%GDP) aut.frkst</b>	38.50	39.40	39.40	38.90	37.90
<b>GDGG (%GDP) spr.frkst</b>	38.60	39.90	40.10	38.90	39.30
<b>CDS</b>	199.00	152.60	121.80	117.00	102.10
<b>Ratings Moody's</b>	Baa3 p.neg.	Baa3 p.st.	Baa3 p.st.	Baa3 p.poz.	Baa3 p.poz.
<b>Ratings S&amp;Ps</b>	BB+ p.st.	BB+ p.poz.	BBB- p.st.	BBB- p.st.	BBB- p.st.
<b>Ratings Fitch</b>	BBB- p.st.	BBB- p.st.	BBB- p.st.	BBB- p.st.	BBB- p.st.

Source: NBR dates, monthly bulletins, including Jan 2018 bulletin, financial stability reports for 2013-2017; ratings are obtained from the Finance Ministry website. The date's fervency is annual. \* For GDGG (%GDP) for the year 2017 the data are from Ministry of Public Finance of Romania from April 2017.

The notations are: GDP (%) - Gross domestic product, volume (percentage change on preceding year); GDP (%) aut.frkst. - Gross domestic product, volume (percentage change on preceding year) autumn forecast; GDP (%) spr.frkst. - Gross domestic product, volume (percentage change on preceding year) spring forecast; CAB - Current-account balance (in billions of euro); CAB aut.frkst - Current-account balance (in billions of euro) autumn forecast; CAB spr.frkst - Current-account balance (in billions of euro) spring forecast; NLNB(%GDP) - Net lending (+) or net borrowing (-), general government (as a percentage of GDP); NLNB(%GDP) aut.frkst - Net lending (+) or net borrowing (-), general government (as a percentage of GDP) autumn forecast; NLNB(%GDP)spr.frkst - Net lending (+) or net borrowing (-), general government (as a percentage of GDP) spring forecast; NBER- Nominal bilateral exchange rates against ECU/Euro; NBER aut.frkst - Nominal bilateral exchange rates against Ecu/euro autumn forecast; NBER spr.frkst - Nominal bilateral exchange rates against ECU/Euro spring forecast; HICP- Harmonised index of consumer prices (national index if not available), (percentage change on preceding year); HICP aut.frkst - Harmonised index of consumer prices (national index if not available), (percentage change on preceding year) autumn forecast; HICP spr.frkst - Harmonised index of consumer prices (national index if not available), (percentage change on preceding year) spring forecast; GDGG (%GDP) - Gross debt, general government (as a percentage of GDP); GDGG (%GDP) aut.frkst - Gross debt, general government (as a percentage of GDP) autumn forecast; GDGG (%GDP) spr.frkst - Gross debt, general government (as a percentage of GDP) spring forecast; CDS – credit default swap quotations related to sovereign debt instruments issued by Romania; Ratings Moody's -

sovereign risk from Moody's; Ratings S&Ps -sovereign risk from S&P; Ratings Fitch - sovereign risk from SR-Fitch.

Colour notations for forecasts: white - forecast identical to real value, very light grey - the forecast could have a rather positive impact in terms of reducing CDS and improving ratings, grey - the forecast could have a rather neutral impact in terms of reducing CDS and improving ratings, very dark grey - the forecast could have a rather negative impact in terms of reducing CDS and improving ratings.

From the above table, we can see that out of the 60 springs and autumn forecast data, only 18 records could have a positive impact on CDS and only 4 forecasts are overlapping perfectly on reality. However, CDS quotations have been declining year-on-year, and ratings for sovereign risk for Romania from major rating agencies also show a relatively positive and stable trend.

Although more significant correlations could be made with longer series of data, noting the lack of denseness of forecasts data, it is worthwhile presenting the correlations of CDS quotations and ratings with some macroeconomic indicators and their forecasts, however, to indicate possible links between CDS and macroeconomic forecasts for Romania (see Table no. 2).

**Table no. 2. The correlations between CDS and ratings from Moody's, S&Ps and Fitch with several macroeconomic indicators and their European Commission forecasts for the period 2013-2017 for Romania**

	<i>CDS</i>	<i>Ratings Moody's</i>	<i>Ratings S&amp;Ps</i>	<i>Ratings Fitch</i>
<b>CDS</b>	1			
<b>Ratings Moody's</b>	0.94	1		
<b>Ratings S&amp;Ps</b>	0.95	0.84	1	
<b>Ratings Fitch</b>	-0.67	-0.86	-0.45	1
<b>GDP (%)</b>	-0.71	-0.87	-0.48	0.98
<b>GDP (%) aut.frkst.</b>	-0.83	-0.87	-0.63	0.87
<b>GDP (%) spr.frkst.</b>	-0.82	-0.80	-0.70	0.72
<b>CAB</b>	0.70	0.87	0.46	-0.99
<b>CAB aut.frkst</b>	0.62	0.82	0.41	-0.98
<b>CAB spr.frkst</b>	-0.27	-0.02	-0.54	-0.49
<b>NLNB (%GDP)</b>	0.24	0.42	0.00	-0.74
<b>NLNB (%GDP) aut.frkst</b>	0.08	0.33	-0.14	-0.70
<b>NLNB(%GDP)spr.frkst</b>	0.24	0.51	0.00	-0.86
<b>NBER</b>	-0.78	-0.94	-0.60	0.98
<b>NBER aut.frkst</b>	-0.75	-0.91	-0.55	0.99
<b>NBER spr.frkst</b>	-0.78	-0.88	-0.72	0.80
<b>HICP</b>	0.79	0.56	0.83	-0.19
<b>HICP aut.frkst</b>	0.82	0.59	0.85	-0.22
<b>HICP spr.frkst</b>	0.86	0.68	0.85	-0.37
<b>GDGG (%GDP)</b>	-0.07	-0.20	-0.22	0.10
<b>GDGG (%GDP) aut.frkst</b>	0.11	0.39	-0.17	-0.79
<b>GDGG (%GDP) spr.frkst</b>	-0.39	-0.24	-0.62	-0.22

Source: NBR dates, monthly bulletins, including Jan. 2018, financial stability reports for 2013-2017; ratings are obtained from the Finance Ministry website. The data's fervency is annual;\* for GDGG (%GDP) for the year 2017 the data are from Ministry of Public Finance of Romania from April 2017. The notations in Table

no.1 are maintained also here. The colour notations: white - correlations of and over 0.75, very light grey - correlations that can fall within the range [0.50-0.75), grey - correlations with values between [0.25.0.50), very dark grey - correlations below threshold 0.25.

For the table no. 2, note mentioning that we have not taken into account the entire correlation matrix, eliminating correlations between indicators and forecasts and between forecasts, between them. Also, we can see a very strong positive correlation (over 0.75) between CDS and Moody's and S&P's ratings and between CDS and Harmonised index of consumer prices, including autumn and springs forecast. Strong negative correlations of CDS are with GDP (%) autumn and spring forecasts and with Nominal bilateral exchange rates against ECU/Euro (NBER), including forecasts. It can be seen that in some situations the correlation between CDS and macroeconomic forecasts is stronger than with the real indicator (e.g. in the case of GDP and NBER), thus sustaining our approach.

Moreover, in Table no. 3, we take into account only the deviation between the forecast and the real value of the macroeconomic indicator and the evolution of CDS quotations and its annual deviation for the period 2014-2017 ( $\Delta$ CDS).

**Table no. 3. The correlations between CDS and CDS annual deviation with gaps between the European Commission forecasts for macroeconomic indicators and the effective data for macroeconomic indicators**

	<i>CDS</i>	$\Delta$ <i>CDS</i>
$\Delta$ GDP (%) aut.frkst.	-0.42	0.56
$\Delta$ GDP (%) spr.frkst.	-0.07	0.05
$\Delta$ CAB aut.frkst	-0.56	0.42
$\Delta$ CAB spr.frkst	-0.96	0.38
$\Delta$ NLNB(%GDP)aut.frkst	-0.50	0.98
$\Delta$ NLNB(%GDP)spr.frkst	-0.13	0.78
$\Delta$ NBER aut.frkst	0.65	0.49
$\Delta$ NBER spr.frkst	0.13	-0.55
$\Delta$ HICP aut.frkst	0.65	-0.23
$\Delta$ HICP spr.frkst	0.86	-0.95
$\Delta$ GDGG (%GDP) aut.frkst	0.13	0.13
$\Delta$ GDGG (%GDP) spr.frkst	-0.29	0.12

Source: NBR dates, monthly bulletins including for Jan. 2018, financial stability reports for 2013-2017; ratings are obtained from the Finance Ministry website. The data's fervency is annual;\* for GDGG (%GDP) for the year 2017 the data are from Ministry of Public Finance of Romania from April 2017. The notations in Table no.1 are maintained also here. The gap notation for macroeconomic indicators reflects the difference between prognosis and indicator. The colour notations: white - correlations of and over 0.75, very light grey - correlations that can fall within the range [0.50-0.75), grey - correlations with values between [0.25.0.50), very dark grey - correlations below threshold 0.25.

It is noted that the deviation of the spring forecast from the reality of the current account balance and also the deviation of spring forecast for inflation from the real HICP has a strong impact on the CDS quotation. At the same time, with regard to the annual deviation of the CDS, it correlates strongly and positively with the autumn / spring forecasts of the Net lending (+) or net borrowing (-), general government and strong and negative correlation with the spring forecast for inflation ( $\Delta$ HICP spr.frkst).

## 5. Conclusions

Although the literature abounds in CDS analyzes, a very few studies attempt to demonstrate the link between macroeconomic forecasts and the evolution of CDS, implicitly sovereign ratings.

Therefore, our hypothesis has invoked that the deviation of forecasts from real developments of macroeconomic indicators may negatively influence the evolution of CDS. If they are more optimistic than reality, they can help improve sovereign risk ratings and reduce CDS quotations, but they create a false picture of reality. If forecasts are more negative than reality, through a rolling effect, negative effects in the economy can be shown and can lead to rising CDS quotations and the degradation of international ratings. Thus, on the one hand, the article launches a challenge on the CDS theoretical framework, and on the other hand, it is doing a short deductive, empirical study of the relationship between CDS and the macroeconomic forecasts of the European Commission for Romania.

Romania's domestic macroeconomic developments, although having many aspects linked to their structural construction and to the economic cycle, are equally influenced by the public decision-making or by the international circumstances and assessments. Therefore, this article aims to reveal a possible link, not necessarily the one-way causal link, between CDS and macroeconomic forecasts and developments. Our results are in the area of the results presented by the literature but still retain the reserve of a very limited set of data.

From the analysis we can conclude that, despite some negative deviations on CDS, regarding the deviation of the forecasts from the macroeconomic indicators from their reality, the evolution of the CDS quotations for Romania was rather positive. This may be justified by the fact that during the analysis period deviations from exchange rate forecasts could be interpreted as having a rather positive impact on CDS.

Note mentioning that, macroeconomic developments need to be relatively predictable. Increasing the predictability of macroeconomic developments, legislation and public policy coherence, strengthening strategic areas for the Romanian economy (education, culture, health, infrastructure, defence, social security, etc.) and increasing the volume and impact of public investment in these areas; reducing regional disparities, are only a few aspects to be considered for a harmonious road map of the Romanian economy and improving macroeconomic forecasts.

Improvement of the forecasts of the main macroeconomic indicators can be reflected directly and indirectly, through the developments of the main macroeconomic indicators, on CDS and on the evaluation of country risk, guiding their evolution as accurately as possible.

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# THE CONNECTION BETWEEN TIME MANAGEMENT AND STRESS MANAGEMENT

**Ph.D. Student Ioana Cătălina GHÎȚĂ**  
Valahia University of Târgoviște, Romania  
E-mail: ghita.i.catalina@gmail.com

**Abstract:** *We live in a society of speed in which time, or better said its lack has become one of the most important sources of stress. Deadlines, communication „on the run”, increasingly busy agendas (coupled with a lack of manager’s will to change them) require a new approach. The support elements that come from a growing science, „Time management”, are great in reducing stress and preparing the body to the action of exogenous factors. Time management helps us to have some control over life, both in professional and personal life. It is essential to focus on results, so we can identify what activities contribute to our efficiency and what are the activities that waste our time and distract us from the proposed goals.*

**Keywords:** *time, stress, behaviour, time management.*

**JEL Classification:** *I15, J24, O15.*

## 1. Introduction

Almost one hundred years ago, the author who has set the basis of the scientific management, Frederick Taylor, was postulating the principle of “keeping strict evidence of time and labor quoting”, making a giant step towards the increase of the efficiency within an organization. Management means efficient and forcible leadership for a certain activity. From this perspective, the manager cannot do profitable business for the activity he is responsible if he does not know how to efficiently manage his resources. And time is a valuable, assertive, and irreversible economic resource.

Time compression is a more and more frequent topic of discussion, and the argument through which this theory stands up is the lack of time to successfully carry out all the activities we have set ourselves for a given day.

The bigger and bigger changes occurring around us every day which bring about greater and greater challenges through the adaptations they require create the impression of time compression.

There truly is a continuous flow of time, the way we handle this dimension can generate the impression of time flowing at an immeasurable speed. The fact that we cannot control time makes us more and more stressed as well as more and more frustrated.

## 2. Time – the most valuable resource

The time is our most valuable resource: whatever we do, we need time; time cannot be enhanced; time cannot be stored; time cannot be bought; success depends in a high degree on the way we manage our time.

We spend a great part of our lives going to work, solving the tasks required by our job before going home and handling problems generated by time, trying to solve all our duties outside our professional life.

Time management helps us obtain, to a certain extent, control over both our professional and personal life. It is essential to focus on the results as, in this way, we will be able to identify the activities which contribute to our efficiency and also the activities which waste our time and distract us from our attaining goals.

The key to a good time management rests in understanding the difference between urgent and important.

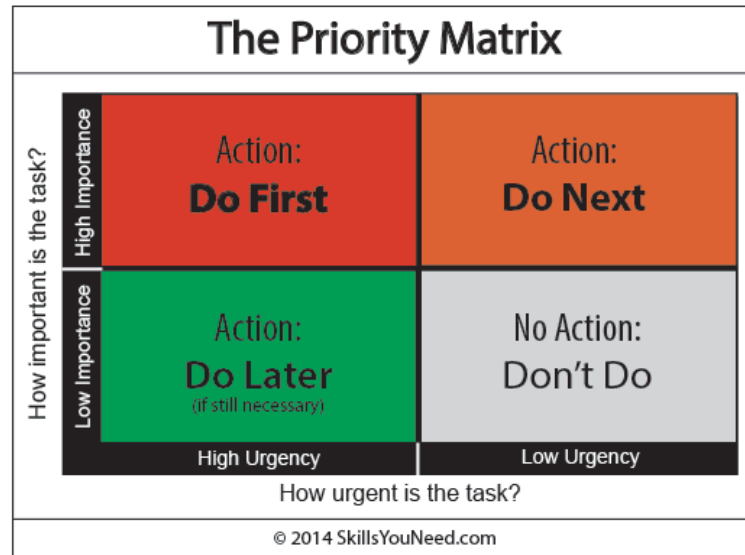
The urgent tasks require immediate attention, but our actions might not count, regardless of whether we offer our attention or not.

The important tasks matter, as ignoring them might lead to severe consequences upon ourselves or other people.

For example: answering our phone is urgent, regularly going to the dentist is important, picking up the kids from the kindergarten is both urgent and important, checking Facebook or reading funny emails is neither urgent nor important.

This distinction between what is urgent and what is important helps us prioritize the activities in our everyday lives whether we are at work or at home.

In order to organize our tasks, we can use a priority matrix.



**Figure no. 1. The priority matrix**

Source: Skills You Need, 2018. *Time Management Skills*. [online] Available at: <<https://www.skillsyouneed.com/ps/time-management.html>> [Accessed 14 July 2018].

In an interview, Peter Drucker expresses his regret regarding the way he uses his time: „if I look back, my greatest frustrations are, probably, in retrospective, that is, as I later understood, too often have I considered a priority what is urgent and, as a result, I have never got to write some of the books I should have written. I have written books which were urgent, or I have taught things which needed to be taught in that very moment, rather than the things necessary for the past five years. I wanted to be a sprinter rather than a marathon runner. However, this is something I have understood only later” - Peter F. Drucker, interview with reverend James Flammig, 1989 (Maciariello, 2016, pp.77-78).

Is there any connection between time and stress? There can only be one answer: YES.

### 3. Time – an important, stress generating resource

Time is the most important source of stress. It has been demonstrated that there are important connections between the presence of ‚stressors’ generated by time and lack of professional satisfaction, as well as a series of illnesses like: high blood pressure, premature ageing, high cholesterol levels and so on. In the case of faulty time management, stress manifests itself in subtle yet various manners, people subjected to stress tending to accentuate their usual behavior: the more shy individuals become shier and more uncommunicative, and the ones who prefer solitude will be more avoidant of social interactions. The ones who work late, will work much later overtime. Aside from these, there may appear also sleep disfunctionalities, isolation from the other members of

the organization, substance abuse. All these lead to the decrease of efficiency and an even worse time management.

Temporary presence of time ‘stressors’ can be, in some cases, an important motivating factor, the individual wanting to accomplish his or her tasks, their accomplishment bringing greater satisfaction than in the instance where stress-causing factors would be lacking (Corodeanu, 2005).

The studies elaborated along the years (Mintzberg in 1973, Vinton in 1992, Stalk&Hout in 1990, Kahn & Byasiere in 1992) (Whetten and Cameron, 2002) have pinpointed the most common sources of stress: time, meetings, unwanted situations and anticipation. The four categories of stress-causing factors are illustrated in the table below:

**Table no. 1 - The four time-related stress sources**

<b>Stress-causing factor</b>	<b>Sources of stress</b>
Time	Over strung work, losing control over the time
Meetings	Role conflicts, conflicts between the debates, actions
Situation	Bad work conditions, sudden changes in the organizational climate
Anticipation	Pleasant surprises, fear

Source: Whetten, D. and Cameron, K., 2002. *Developing management skills*. Boston: Prentice Hall, p.113.

Stress, a problem and responsibility of both employer and the employee, is considered the second most frequent health problem connected to one’s work in Europe, the most frequent being illnesses of the bones and muscles. The costs connected to the mental health disorders covered by the Companies surpass 200 billion Euros per year. Faultily conceiving, organizing and managing the activities, as well as inappropriate social context within the workspace hold psychosocial risks and can have negative effects on a psychological, physical or social level, as well as stress within the workspace, exhaustion or depression (European Agency for Safety and Health at Work, 2018).

**What are the causes which lead to the development of stress in the workplace?**

There is no such thing as the perfect workplace. Whatever career we might choose, whatever job we might have, we will face the problem of adjusting or modifying our expectations. Almost any job we might have this can be a source of stress. Almost any job we might have is a source of stress. The way in which we view our job determines the amount of stress which will affect us.

Stress affects individuals differently, but there are a number of situations which normally lead to occupational stress. The most common stress-generating factors within the workplace are (Goliszek, 1998, p.39; Vişan, p.23):

- Being unable to schedule time;
- Lack of time organization;
- Conflicts with colleagues or managers;
- The role within the organization: overwhelming tasks, ambiguity of the role, role-conflict;
- Characteristics of the organizational environment: contaminants, temperature, noise;
- Extra-organizational characteristics: the distance between home and the workplace;
- Legislation changes;
- Organizational characteristics: evaluation and communication systems, rythm of the changes;



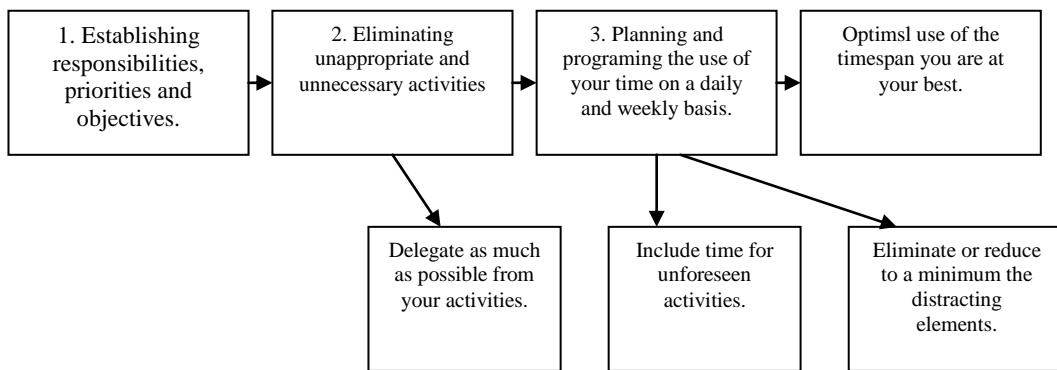
- Job uncertainty;
- Lack of necessary qualifications in order to fulfill some tasks;
- The feeling that the work is overwhelming;
- Too much or too little responsibility;
- Deadlines which cannot be kept;
- Communication excess (too many emails, conference calls, foreign language communication);
- Time issues (time zone difference, frequent business trips);
- Cultural and linguistic differences;
- Loss of orientation in the transition period;
- Incapacity to adapt to changes within the daily routine;
- boredom;
- Incapacity of using our own abilities;
- Lack of collaboration with the management;
- Value incompatibility: this occurs when people have a career which comes into contradiction with their own values and beliefs;
- Our activity is dull or it lacks challenges;
- Lack of team-spirit promoting etc.

The three methods of time streamlining and, implicitly, of stress reduction are: Organization; Prioritization; Planning.

**Planning techniques:** Mind mapping (A mind map is a diagram used to visually organize information. A mind map is hierarchical and shows relationships among pieces of the whole. It is often created around a single concept, drawn as an image in the center of a blank page, to which associated representations of ideas such as images, words and parts of words are added. Major ideas are connected directly to the central concept, and other ideas branch out from those); Spreadsheet (columns for key areas / timelines / deadlines / costs / other details); SWOT analysis for the evaluation of the objectives.

**Presentation of time management plan:**

- Give up the strive to plan absolutely everything. The attempt to plan each minute can become a waste of time and can become counterproductive;
- Do not overtake to many tasks at once;
- Delegate;
- Be creative;
- Be flexible;
- Take breaks;
- Be ready to give up your list;
- Use the technology at hand as much as possible.



**Figure no. 2. Time management plan**

Source: Center for Career Development, 2018. *Managementul timpului*. [pdf] Available at: <[http://www.dezvoltarea-carierai.com/media/files/Time\\_management\\_-curs.pdf](http://www.dezvoltarea-carierai.com/media/files/Time_management_-curs.pdf)> [Accessed 14 July 2018].

**Solutions to prevent stress and create a good psychosocial work environment:**

- Ensure workers have enough time and autonomy to manage their work;
- Clarify roles and tasks, providing regular constructive feedback;
- Inform workers about change and involve the, in decision-making;
- Implement policies to prevent harassment and violence;
- Ensure fair work distribution and reward;
- Facilitate open and two-way communication.

A few pieces of advice for making the best of the time available:

- Make time for work, it is the key to success;
- Make time for thinking, it is the source of power;
- Make time for playing, it is the secret of eternal youth;
- Make time for love, it is the pleasure of life;
- Make time for reading, it is the fountain of wisdom;
- Make time for friends, it is the road to happiness;
- Make time for laughing, it is the music of the soul.

**4. Conclusions**

Stress is a multi-faceted phenomenon with multiple causes and requires a systematic approach to its identification and management. It is a growing issue in the workplace especially due to the current economic downturn but it is also an issue that can be prevented and reduced so it does not become detrimental to workers' health. Employers will gain in performance improvements if employees are able to give their best and do not feel under constant unbearable pressure. Ample guidance and stress risk assessment tools are freely available to employers to support them in managing stress effectively.

I personally consider that, in the current conditions and with the attention channeled upon this syndrome, the problem o stress in the workplace will be diminished over time, It is important that each of us helps in this endeavor, adopts a more positive attitude and try to reduce stress at a personal level, as change begins with oneself.

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## INFORMATION AND RESILIENCE IN ENSURING THE SUSTAINABILITY OF INSTITUTIONAL SYSTEM

**Ph.D. Student Mirea-Gheorghe BERECHET**

Doctoral School of the Romanian Academy, Romania

E-mail: bmirel2002@gmail.com

**Ph.D. Student Simona-Ionela BECHERESCU**

Doctoral School of the Romanian Academy, Romania

E-mail: simonabecherescu@yahoo.com

**Abstract:** *At present, mankind, at the beginning of the era of knowledge, crosses rapidly the era of the fourth industrial revolution. Changes are so rapid and profound that, with reference to the whole of human history, there has never been a moment characterized by such great expectations or potential danger. All new developments and technologies have a key feature in common: they exploit the generalized power of digitization and information technology. The accumulation of information available today, the speed of their processing and the acceleration of innovation are difficult to understand or anticipate, constituting a source of constant surprise. Decision makers, often trapped in traditional, linear thinking clichés, are too absorbed by the immediate preoccupations to think strategically in relation to the forces that induce disruptions in institutional systems and which tend to shape our future. Technological competition implies the resilience of the activity and the ability of the institutional system to quickly reconfigure and adapt its purpose in accordance with changes of any kind: political-economic, national and international, climate etc. Resilience is given by safety, efficiency, quality, high productivity, adaptability, success, modern management, superior products, optimal costs. Thus, the creative factor must be supported and promoted by empowered institutions and policy-makers by supporting research and innovation, promoting sound policies to reduce the budget deficit, better spending orientation (improving infrastructure, investing in human capital), and sustainability tax.*

**Keywords:** *information, knowledge, risk, institutional resilience, management.*

**JEL Classification:** *H00, O10, P00.*

### 1. Introduction

Fundamental changes over the last decades have transformed human society from an industrial one into a knowledge base where knowledge accumulation plays a decisive role in technological, economic and social growth and development. Expressions such as the "Fourth Industrial Revolution" or "Industry 4.0" are increasingly being heard in public space, creating anxiety even among the scientific elites of mankind.

Scientists everywhere claim unanimously that humanity will be transformed by the accelerated rate of progress into four converging technologies: genetics, robotics, nanotechnology, and artificial intelligence. The Fourth Industrial Revolution is obviously one of knowledge, accelerating innovation, digitization, and generalization of advanced technology penetration into everyday life.

### 2. The Theory of Knowledge-Based Society

The World Economic Forum in Davos (Switzerland), held from 20 to 23 January 2016, attended by 40 heads of state and over 1,500 businessmen from all over the world, had the main theme of discussion The Fourth Industrial Revolution. In the 4 days of the forum, global economic leaders discussed the challenges and opportunities of the new industrial revolution that has just begun and will show its full effects from the next decade.

The rapidly evolving evolution of IT & C technologies will soon lead to profound changes in the labor market. The Fourth Industrial Revolution will lead, due to the wider implementation of robot and automated production lines, to the disappearance of poorly paid manufacturing professions that still exist today. On the other hand, it will lead to the

emergence of new highly specialized professions, especially in education, research, engineering and IT & C, which in turn will provide jobs for millions of people.

Daniel Bell used metaphorically the phrase "evolution as the laying of the leaves of an onion", understanding that every type of civilization (agricultural, industrial, post-industrial - based on knowledge) relies on the previous one, overcoming it. The theory of knowledge-based society is due to Daniel Bell who, since 1964, has emphasized that post-industrial society is a society in which the predominant element is no longer the enterprise, but something in which the intellect is predominant [...] most of the institutions of society will be a vast device of conglomerates of universities, research institutions, research corporations etc.

The new industry will mark the shift from activities based on traditional factors of production (land, labor, capital) to a new structure that can be described as innovative production based on knowledge and capital (European Commission, 2004, p.13).

Until recently, the institutional system of the industrial society had as its core the enterprise, which dominates specialized and unifunctional institutions (education produces specialists and research produces knowledge). The new institutional system will have to have at its core the R & D units, education, collecting - processing - disseminating information and linking multifunctional and multidisciplinary institutions through clusters, heterogeneous cooperation networks, strategic alliances etc.

### **3. From Information to Knowledge Deposit**

Both the concepts of "information society" and "knowledge society" are based on the notions of information, knowledge and, implicitly, knowledge deposits. We can define the information by going through the entire logical and psychological chain of signal - sign - date - information, as that time that reduces uncertainty.

An information becomes knowledge when it verifies the following predicates of sufficiency:

- there must be a cognitive subject to receive the information;
- the subject's cognitive background must be compatible with that information (it must contain information of the same type);
- the information must be integrated in a structural way.

Information can be structurally integrated into the cognitive background of the subject only when it meets similar knowledge of the same nature, being thus transformed into knowledge. The set of cognitive domains that have cognitive deposits formed in a subject form knowledge.

Information can be structurally integrated into the cognitive background of the subject only when it meets there similar knowledge of the same nature. In this case, the information is transformed into knowledge. The set of cognitive domains that have cognitive deposits formed in a subject form the knowledge deposit.

Knowledge is that information which, once received, finds in the pre-existing cognitive "deposit" of the receiving subject an informational base (and knowledge) that allows it to be structurally integrated. This is not just the logical sum of cognitive deposits taken individually, to this contributing fully the synergistic effect produced by the connections between them, manifested by causal action.

### **4. Competitiveness and Institutional Sustainability**

Enhancing competitiveness has become, in recent decades, a key coordinate of sustainable socio-economic development strategies. Sustainable development is based on access to information and involves a continuous increase in capacity to drive economic and

social development processes so that the environment can sustain both the present and the future of new generations.

Institutional competitiveness is the capacity of an institution to generate performance in a sustainable and competitive manner. From the theoretical point of view, the concept of competitiveness is based on two sub-concepts - comparative advantage and competitive advantage.

The competitive advantage is maintained thanks to the improvement and development of resources. Michael E. Porter (2008) states that the factors that determine the dynamics are more important in achieving success than the factors that determine constant advantages. It is in the interest of each organization to identify the best solutions to gain competitive advantages over competition, using effective analysis tools such as the Porter model.



**Figure no. 1. Porter's Five Forces**

Source: Porter, M.E., 2008. The Five Competitive Forces That Shape Strategy. *Harvard Business Review*, 86(1), pp.57-71.

The evolution of the vision of treating competitiveness at any of the above mentioned levels is strongly marked by the contemporary phenomenon of globalization.

However, unwanted and unforeseen events can trigger crises, can cause natural disasters, emotional trauma and material damage at individual, institutional and social levels, thus affecting the competitiveness and sustainability of institutional systems.

In the absence of precision of predictions about the occurrence of unforeseen events, institutions need to make a risk assessment that requires consistent reasoning, professionalism and experience. Risk is that random event that damages the institution by

affecting technical, human, financial resources, preventing it from reaching its established goals.

To minimize risks and make decision-making easier, decision-makers need to analyze all unknown factors, transform "uncertainty" into "risk", assume and manage it. In the current context of change, globalization of business and the internationalization of companies, risk management is another connotation.

The economic science of sustainability has in its composition the economic resilience that has the ability to stop the negative effects of shocks, to find solutions to various problems arising both from the inside and from the outside.

Accidental factors determine the temporary deviation of the market from the trend. These factors occur in an unpredictable way and easily alter the state of the conjuncture. This group of factors include conflicts between states, natural disasters, drought, strikes, some political measures of states etc. The capitalization of these conjunctural conditions largely depends on the adaptability extent of the enterprise.

Building the resilience of an organization / institution involves:

- developing a specific legislative framework;
- the allocation of necessary equipment and funds;
- designing a portfolio of procedures and working rules;
- socio-economic development of the perception of the importance of building resilience and social synergy between state and private institutions, local authorities, NGOs, citizens' associations, professional organizations, etc.;
- promoting and implementing at socio-economic level the culture of anticipation, prevention and risk preparedness;
- development of post-crisis plans and return to normality etc.

The redundancy structure can be implemented within an institution by:

- well-established goals by the management team;
- communication of objectives at all levels of the institution
- pursuing the activity in conditions of efficiency and efficacy of operation;
- the safety of obtaining quality financial information;
- compliance with laws and regulations;
- protecting goods and information;
- preventing and detecting fraud and mistakes through a well-organized internal control system;
- ensuring that public funds are managed economically, efficiently and effectively.

Knowledge of anti-fragility mechanisms is a systematic guide in the process of adopting non-predictive decisions in conditions of uncertainty in business, politics, medicine, and generally, in life. Black swans can be both positive and negative. In scientific research black swans are positive.

Nassim Nicholas Taleb (2007) presents in his works the social science that dominates the laws of power. Thus, he states that there is a similarity between the natural processes and the behavior of the social groups.

By various methods, system sustainability attempts to control externalities. Actions to control externalities take the form of government bans, isolations and regulations. Over time, modest damage causes a small anti-fragility error, but as time passes brings other errors, other challenges that ultimately help in gaining robustness and anti-fragility.

## 5. Conclusions

In a forward-looking remark, Winston Churchill once said that "the empires of the future are empires of the mind" (Churchill, 1943). Today, this observation has come true,

as we are witnessing a rapid breakthrough in IT & C technologies, progress that produces paradigm shifts in all areas of social life, in the competitiveness and sustainability of institutional systems.

Competitiveness suggests safety, efficiency, quality, high productivity, adaptability, success, modern management, superior products with optimal costs.

At institution level, the ultimate goal is to gain benefits and well-being. This can be achieved by using: research and innovation programs; modern technology; new products and services launched on the market, in other words, by using technological competitiveness; involvement of all decision makers.

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## CASE ANALYSIS OF THE GEORGIAN RAILWAY TRANSPORT SECTOR INTEROPERABILITY AND INTERMODALITY WITH THE EUROPEAN SYSTEMS

**Associate Professor Ph.D. Boris GITOLENDIA**

Georgian Technical University, Georgia

E-mail: boris.gitolendia@gtu.ge

**Abstract:** *This paper presents the results of research about the Case Analysis of the Georgian Railway Transport Sector Interoperability and Intermodality with the European Systems, Herein are listed challenges and problematic issues of compatibility of Georgian railway and its infrastructure and technical parameters to the EU standards and also some directives and regulations required for Georgian Railway Transport Sector in the context of “the EU – Georgia Association Agreement”. Also, article is giving a brief information about the “intermodal transportation” and the general importance of the role of rail transport in it. In author’s opinion, the development of Georgian railway into a railway with real European standards, in the context of Intermodality will have influence to rise of the cargo volume, which directly is connected to the economic development of the Country. Specific literature has been processed, description, synthesis and comparative analysis methods has been used for this research. The article is prepared on the bases of the Young Scientist Grant of the Shota Rustaveli National Science Foundation (NYS-2016-41).*

**Keywords:** *transportation, transportation infrastructure, Georgian railways, EU standards, regional development.*

**JEL Classification:** *R40, R42.*

### 1. Introduction

Due to the strategically important geographical location, Georgia has a key transit function within the entire Caucasus, as well as beyond its limits. During the Soviet empire, economics of the Caucasian republics, including transport infrastructure, belonged only to outskirts, deadlocks and/or objects inside the country and did not have a practical value in terms of the economic development and global integration in the rest of the world. After collapse of the Soviet Union, Georgian traffic arteries have regained their functions.

Under the conditions of deepening economic globalization, the connection between countries is unimaginable without international standards in transportation system. Taking into consideration strategic geographical location, Georgia's urgent task at this stage is a new understanding of the country's role in the global world and the necessity of acquiring additional international functions, which cannot be achieved in accordance with all kinds of high international standards without interconnecting transport with European systems. In this context it should be noted that, due to the enormous advantages, it is known that the preconditions for integration into the European Union are to carry out certain economic and institutional reforms, a set of criteria, without satisfying which EU membership and regional integration are impossible.

It is natural that the perfection of foreign economic ties is the greatest reserve of economic efficiency of each country. In the context of foreign economic ties, the EU market is attractive for Georgia due to various advantages. Georgia has greatly deepened relations with the EU in recent years, which has been strengthened with the most powerful and comprehensive so-called “EU-Georgia Association Agreement” in the history of EU-Georgia relationship (The Agreement is officially called "Association Agreement on the one hand, between the European Union and the European Atomic Energy Union and their Member States and on the other, Georgia"), a part of which is "Deep and Comprehensive Free Trade Area Agreement" DCFTA.

Since then the relationships between EU and Georgia have moved to a new, historically unprecedented level. The VI Title of the Association Agreement deals with

transport and related issues and, first of all, envisages modernization of transport sphere and the introduction of European standards.

For its part, intermodality and interoperability of the Georgian railway transport sector with the European transport systems is the necessary condition to fully exploit the Georgian transportation corridor.

## **2. About Georgian Railway Transport Sector**

In the context of Georgian transit function, Georgian railway is considered to be an alternative way of communication between regions of Caspia and Central Asia with Europe. Strategically important ports and terminals are directly connected with railroad lines of Azerbaijan, Ukraine, Russia, Bulgaria. Also main railroad of Baku – Tbilisi – Karsi soon will be operationalized in full capacity and that will directly connect Georgia with Turkey and transeuropean transport infrastructure. Traseca corridor that can operate a main stream of the transit from and to Europe via Caucasus attracts active attention of international society and big transport companies. In this context we can also consider “The Silk Road” project that Georgian government pines great hopes on.

Negative results of Georgia’s recent history made an impact on the Georgian railway. Despite the hard economic and political situation Georgian railway managed to successfully accomplish the role of economic improvement stimulator at first. Georgian Railway was established as a profitable enterprise. But the mentioned success was achieved by increase of manufacture volume (in this case it means increase of transit volumes), which was caused by an influence of political and economic factors and not by production development, increase of service quality and effectiveness.

For the purpose of studying the compatibility and accordance of Georgian railway transports with the Euro Standards and with the aim, to make general analysis of this issue it is important to evaluate overall condition of the Georgian Railway. For this purpose, one should evaluate amount of power that is used for the functioning of Georgian Railway. Only after this it will be possible to evaluate the intermodality of the railway branch and its future potential, which is the main aim of our topic.

Georgian Railway is divided into three branches: cargo transit, passenger transportation and infrastructure branches. These branches include such activities as cargo transit, passenger transportation and management of main infrastructure of the railway.

In general, cargo transit is the main source of the railway profit. Passenger transportation is mainly unprofitable operation because, the low rates of train travel are not enough for railway maintenance and service.

Georgian railway is profitable enterprise as the portion of cargo transits in full amount of transportations is enough to cover the loss caused by passenger transportations and to have some additional profits.

According to the research made by Consulting company “Booz Allen Hamilton” (BAH), nowadays, the operational railway network of Georgian Railway is in normal state, freeway is completely electrified, and main railroad allows traffic in both ways.

Infrastructure of Georgian Railway consists of multiple components: Bridges, Tunnels and Railroad, communication tools, electrification, depots, stations and their equipment. At this stage most part of infrastructure are more than 85 y.o.

Despite the fact that the state of all the infrastructure allows to operate continuously renovation works in the most parts is important. It is also important to prevent pollution of environment caused by railroad functioning.

Also, the big problem in the aspect of compatibility with the European railing system is the sizing of railings. Railing in Georgia doesn’t have so called “European Size”, change

in railing requires big investment decision and expenses. At the same moment, there are multiple ways of solving this problem.

With the renovation of infrastructure and change of trains certain capital investment will be required to found modern diagnostic center, which will allow avoiding late or insufficient reparations of mobile equipment. To establish diagnostic center, purchase of the appropriate equipment will be as essential as requalification of support staff. That will allow the usage of new equipment and its support. Therefore, to guarantee safe and effective work of Georgian Railway, big financial investment will be required.

The operational functions in Georgian Railway became commercialized. Third party is allowed to organize passenger and cargo transportation on Georgian railroads (at the same time new vehicles should be compatible with requirements and have proving certificate), which, according to already existing experience, helps Railroad to develop as profitable commercial enterprise. It also should be noted that according to the opinion of western experts full commercialization of Georgian railroad is advisable.

Since 1992 Georgia is the member of the Organization for Cooperation of Railways (OSJD), which creates advantageous environment for railway, to operate cargo transportation on the territory of membership countries with preferential fees. Also in 2011 Georgia joined The Convention concerning International Carriage by Rail (COTIF).

From 2017 digital signature system for cargo documentation was implemented, which gives an ability to make commercial and finance records of local cargo transportation digitally (without paper). New system gives the ability to railway clients to see and agree with cargo operations from every part of the world, which makes managment and service parts much more easier and flexieble. Work is prepared in virtue of young scientist scholarship of Shota Rustaveli National Scientific Fund (N YS – 2016-41) - Georgia.

### **3. Directives and Regulations required for Georgian Railway Transport Sector in the context of “the EU – Georgia Association Agreement”**

According to EU – Georgia Association Agreement, Georgian Railway should implement 8 main regulations. Regulations should start to work step by step in 2018-2021 years. Certain preparational steps were already made towards this. Main aspects of the European railroad guidelines are:

- ✓ Compatibility of technical and safety conditions (2004/49/EC Guideline about safety of the Railway union);
- ✓ Market opening and allowance on infrastructure (N 913/2010 Guidline for particular cargo of European railway network and 2012/34/EC Guidelane, which facilitated creation of united European railway zone);
- ✓ Qualification of the system staff and labor conditions of the drivers who operate the trains and locomotives in the railroad network of the union (2007/59/EC Guideline);
- ✓ Establishment of the railroad infrastructural compatibility tariff in the frame of the railroad system unification (2008/57/EC guideline);
- ✓ Matters regarding the rights of the passengers, public railray and auto transport services, duties and cargo transit operators (Guideline EC - N 1370/2007) and EC N 1371/2007);
- ✓ Important guidelines exist according to environment protection from local transportation of dangerous cargo, that are implemented gradually (2008/68/EC Guideline).

The main goal of enlisted guidelines is the improvement of Railway (Georgian one among them) positions on the European transportation market, also rise of its competitiveness on the market through improvement of technical parameters and

conditions. As a final result, we will get more flexible in operations and suited to European standards Railway.

#### **4. A brief explanation of the “intermodal transportation” and the general importance of the role of rail transport in it**

The terms “intermodal” and “intermodalism” are relatively new words. For example, at first it was used in Concise Oxford English Dictionary of 1980. Although meaning of Intermodalism was not the same as it is today. In 10<sup>th</sup> edition of the same dictionary (1999) the term “Intermodal” is explained as follows: Intermodal is a freight conveying process during of which the transportation conveying process deems appropriate or permissible to involve two or more than two modes of transport; and in the majority of cases, freight receiver has no direct connection with various terminal stations, customs and other logistical processes (cases, there is no direct connection or access between the loading/unloading point and the rail, inland waterway, sea, or air transport system).

There are more definitions for intermodal conveying but there is a little difference in their meanings.

During the process of the research conducted by us we formulated our own definition of “intermodal conveying”: “Intermodal conveying” is freight conveying by several types of transportation vehicles. During this time one of the carrier manages the organization of the whole transportation process starting from departure point to the point of destination passing through one or several points of loading. There is no managing operator and the client sign agreements with each carrier who is responsible for own part of the transportation. Therefore, the responsibility is upon the carrier for each cycle of the logistical chain.

As it is known utilization of various types of transport and selection of transportation methods while planning the freight transportation, depends on different factors (geographical, infrastructural, safety, social-political, regulatory and jurisdictional, transportation characteristics of freight, etc.). All of these factors make the final impact on a possibility of freight to end up in a specific transport corridor.

At the same time, due to the diverse objective reasons, situation in international business environment got quite hard. Competitiveness on the market gets higher based on tariffs, quality of service, safety of cargo, speed of transportation, border/customs continues functioning and other parameters. Therefore there is a risk that in nearest future Georgian Railway might give up leading positions irreversibly, if required reforms won't be implemented in time.

If we consider the advantages and the opportunities offered by the Railway for the effective functioning of the entire transport system, the importance of the role of railway transport in intermodal traffic does not require many substantiation. It is obvious, that the most important function in intermodal traffic has railway transport. This is especially important for countries, where the transportation can also be done by sea transport. In that case, it is well known that the Georgian Railway System, between Black and Caspian seas, is one of the most important parts of the Eurasian transport artery which connects Europe and Central Asia with the shortest route. Accordingly, the Georgian Railway and its compatibility with European standards in the context of the development of intermodal transportation in the Georgian transport corridor has great importance.

#### **5. Conclusion**

Georgia is the part of the world and it is natural that its development goes in the course of common tendencies. Its economic growth and Development depend on the usage of its potential as a transit country, which means that the modernization of Georgian

transportation and its usage with full potential requires economic partnerships with neighbor countries and international business organizations. All the efforts would be directed towards the maximum support of the integration of the priority business sector of Georgia and its strategic partners into regional and European markets

Growth of the national enterprise, especially the transportation system will be impossible without the implementation of models appropriate to international standards and without the systemic transformation in general.

In the recent period, Georgia has made important steps towards approximation of national railway transportation standards to European ones, though as it is shown above there's still lots of work to do, to make actual changes. Most of the main European Union guidelines regarding railway transportation should be implemented in 2019-2022 years, as opposed to previous years, abovementioned will cause change in general work of field, which will result in improvement of transportation field and will give more perspectives and chances for it.

Therefore, taking into consideration the size and significance of the complexity of the measures that the transport provides for the economy of any country, It can be said that the modernization and adaptation with the European and international standards of the railway transport as the main direction of the transport system of Georgia in the context of regional integration can be a key point to a further economic development and a powerful tool for achievement of national long-term goals.

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# APPROPRIATE WORKING CONDITIONS AS A KEY FACTOR FOR EMPLOYEE SATISFACTION IN SELECTED HEALTHCARE ORGANIZATIONS

**Assistant Professor, Ph.D. Janka VYDROVÁ**

Tomas Bata University in Zlin, Faculty of Management and Economics, Czech Republic  
E-mail: jvydrova@utb.cz

**Abstract:** *Employees satisfaction is currently a research theme for many institutions. Satisfied employees are doing better jobs, are loyal to their employer. The basic thing is to provide suitable working conditions that meet the basic needs of workers not only in healthcare organizations. Failure to meet these basic needs can cause high dissatisfaction. The aim of the article is to find out the strength of the dependence of the individual basic factors of the working environment and the overall satisfaction of the employees. These factors are noise, lighting, temperature at the workplace, air conditioning, rest room, soothing equipment, cloakroom, sufficient technical equipment of the workplace, visually pleasant environment and drinks at the workplace. The partial aim of the article is therefore to present the results of a research study in selected healthcare facilities in the Czech Republic. In total, 1281 questionnaires were evaluated. The research was conducted in the months of January 2017 to January 2018. One research question and one general hypothesis, which was part of the quantitative research, was established. This was verified using the Spearman's statistical method of correlation coefficient.*

**Keywords:** *Czech Republic, employees, healthcare organizations, job satisfaction, working conditions.*

**JEL Classification:** *I29, M10, M12.*

## 1. Introduction

The vast majority of healthcare organizations and workers want to provide safe and quality health care and services. Likewise, a large majority of healthcare organizations want to provide their employees with a safe, caring and quality work environment. Each healthcare organization must therefore decide what type of culture it wants to develop and insert. It is essential to become a safe, compassionate and caregiving place to work.

The working environment affects not only the physical but also the mental well-being of all employees, especially in the health professions. It is assumed that an inappropriate working environment can have negative health effects if workers do not have sufficient control over their work in terms of how challenging they are.

The culture of healthcare provider organizations should be regularly evaluated on the basis of ongoing work on the development and standardization of a cultural barometer that will help authorities to provide feedback. The development of organizational culture and its associated work environment (McSherry, McSherry and Pearce, 2013) unifies and implements the main components of organizational culture, based on the goals of not only healthcare organizations. Clinical management is defined as a form in which organizations are responsible for continually improving the quality of their services and ensuring high standards of care by creating an environment in which excellence in clinical care will develop.

## 2. Literature Review

Organizational culture has been defined as the norms, values and basic assumption shared by members of an organization. Organizational climate refers to members' perception of organizational features such as decision-making, leadership and norms about the work (Stone and coll., 2005). Creating a compassionate health care organisation culture requires effective leadership and management (Pinakiewicz et al., 2007).

Work climate can be seen as the shared perception of the way things is around here related to the underlying principles, values and norms of an organisation (Gershon et al. 2007), it is indicative of the organisation's goals and appropriate means of goal attainment (Kuenzi and Schminke 2009).

Often aspects of an organisation culture that health care workers feel are outside of their sphere of influence, whereas the workplace culture is one which they arguably influence directly. Workplace culture among operating room nurses. They indicate workplace culture includes structures, routines, rules and norms, which can ultimately impact on attitude, beliefs and subsequent behaviours. They further argue that the elements of workplace culture centre on job stress, job satisfaction and the practice environment (Escola et al., 2016).

Workplace health promotion (WHP) has emerged as an independent field in research and practice alongside the already established areas of job stress and occupational health service (OHS) (Ulmer and Groeben, 2005). More recently, the concept of integrated health and productivity management was launched, as integration between the disciplines WHP and occupational safety and health (Goetzel et al., 2008). Employee health can be a product of individual behavior (Ljungblad, 2014) and product environment. Managers can thus promote employee health by enhancing personal health practices and resources by offering a variety of health-related programs, activities and actions, and by creating a well-functioning work organization in general, beneficial to productivity, well-being and health (Goldgruber and Ahrens, 2010).

Regarding indoor environmental conditions, McCaughey et al. (2014) find that employee perceptions of workplace environmental conditions are related to individual-level outcomes, such as well-being and job performance. Meta-analytic studies confirm that generalized beliefs about an organization's environmental influence guide subsequent behaviour and specific attitudes such as satisfaction (Parker et al., 2003).

Organizations should support leaders in promoting their employees' health in every possible way to achieve a sustainable workplace. A good way to support leaders could include getting feedback about their health-promoting behaviour from their employees (Jiménez, Winkler and Bregenzer, 2017). A healthy workplace that is sustainable can be best achieved by changing organizational factors, such as critical working conditions (Swerissen and Crisp, 2004).

Laschinger (2012) stated poor job satisfaction is one of the principal reasons leading nurses to leave their positions. Accordingly, health-care managers are becoming more and more aware of the link between staff retention and job satisfaction (Hayes et al., 2010). Thus, job satisfaction in staff nurses is of great concern to health care organisations, and there is a pressing need to study the factors that can maintain and/or enhance the satisfaction of health care professionals (Caricati and coll., 2017).

Life satisfaction is defined as a cognitive assessment of satisfaction with one's life circumstances (Erdogan et al., 2012). Psychological literature consists mainly of small studies that focus on the use of psychometrically valid measures for life satisfaction and other key variables that are of interest to psychologists, such as job satisfaction, work stress, personality, physical disabilities, psychopathology and physiological illness. Psychological literature has also shown that work satisfaction is related to a range of work characteristics, including autonomy, coping strategies, work-related stress, occupational status, routinization and workload (Li and Lambert, 2008). Satisfaction measures an individual and overall assessment of the employment of employees (Erdogan et al., 2012). It provides a subjective assessment of human happiness and is considered one of the main indicators of satisfaction. Workplace factors act as precursors to satisfaction, providing support to employees at the workplace of organizations and their immediate superior leads

to a higher level of job satisfaction in the relationship between workplace support and satisfaction (Newman, Nielsen, Smyth and Hooke, 2014).

While many studies have focused on the effect of outdoor environmental conditions, there is relatively little research on how well-being is related to environmental conditions indoors, i.e. at home or at the workplace (García-Mainar and coll, 2015). This line of research appears to have been restricted, so far, to studies of the relationship between individual characteristics, and health and safety, without considering the broader determinants of well-being. Particularly in developed countries, individuals spend a large part of their time indoors, so that conditions at home and at the workplace are of significance in determining general well-being and life satisfaction. In their survey of buildings and the environment, Frontzak and Wargocki (2011) conclude that, when indoor environmental conditions can be controlled by employees, satisfaction improves. Conditions of thermal, visual, and acoustic comfort, as well as of air ventilation, are shown to be important factors in shaping satisfaction at the workplace, and life satisfaction in general.

The workplace is one of the primary settings of adult life, and there is increasing interest in whether conditions at work are associated with personality trait development in adulthood (Hudson, Roberts and Lodi-Smith, 2012).

This attention dovetails with research suggesting that personality traits are associated with job performance and achievement in similar contexts, such as educational settings (Nofle & Robins, 2007). Total job satisfaction, personality traits and workplace conditions are combined (Le, Donnellan and Conger, 2014). Work conditions might influence the development of personality traits, in part, because the workplace provides clear contingencies that reward and punish particular kinds of behaviors (Hudson et al., 2012). Thus, the workplace might be an important context for human development in adulthood.

### 3. Methodology and Data

This article deals with the analysis and statistical evaluation of the employee satisfaction dependence on the provision and satisfaction of the basic factors of the working environment and the overall satisfaction of the employees of the selected health organizations. These factors are noise, lighting, workplace temperature, air conditioning, relaxation room, sanitary facilities, cloakroom, sufficient technical equipment of the workplace, visually pleasant environment and drinks at the workplace. The aim of the article is to find out the strength of mutual correlation between individual factors and the overall satisfaction of employees. Research concentrated on healthcare organizations in two regions of the Czech Republic, namely in Zlín and Olomouc. These two regions were selected on the basis of similarity and consistency in selected macroeconomic indicators.

**Table no. 1. Macroeconomic Indicators**

	Olomouc region	Zlin region
Population (total)	633 157	583 093
Unemployment rate	4,35 %	3,43 %
Gross domestic product (CZK million)	215 650	222 918
Average gross monthly wage (CZK)	25 599	25 273

Source: Czech Statistical Office, own source



Two basic researches, both qualitative and quantitative, have been carried out. Qualitative research was focused on semi-structured interviews with selected healthcare representatives who are working on the organization's staffing levels. Qualitative research was conducted in January 2017 and its partial objective was to identify the key factors of the work environment that can generally be perceived as deficient.

Based on the results of qualitative research, a questionnaire was formulated, distributed to employees of selected healthcare organizations in person and by e-mail. The questionnaire was divided into ten parts, the first nine parts focused on the level of satisfaction of the respondent and the last part was used to identify the respondents. The pretest of the questionnaire was conducted in February 2017 on a sample of 20 respondents. On the basis of the results, the questionnaire was distributed and the main research ran from March 2017 to January 2018. The total number of questionnaires was 1281. The results of the questionnaires were used to test the hypothesis and research questions. Verification of the research hypothesis was performed using the statistical method of the Spearman correlation coefficient.

#### 4. Results and Discussion

The main objective of the present article is to find out the current state of satisfaction of employees of selected healthcare organizations in connection with the provision and satisfaction of basic working conditions at the selected workplace. Thus, one hypothesis was established.

H1: There is a statistically significant dependence between total employee satisfaction and selected core labor factors.

H01: There is no correlation between total employee satisfaction and selected core labor factors. in the selected healthcare organization.

HA1: There is correlation between total employee satisfaction and selected core labor factors. in the selected healthcare organization.

**Table no. 2. Correlation between selected core labor factors and employee satisfaction**

	Satisfact ion (S)	Noise (N)	Lighti ng (L)	Tempe rature (T)	Air contiti oning (AC)	Relaxa tion room (RR)	Bathro om (B)	Cloakr oom (C)	Techni cal equip ment (TE)	Visual enviro nment (VE)	Drinks (D)
S	Corr. Sig.	-,097** ,001	,295** ,000	-,065* ,021	,211** ,000	,063* ,023	-,040 ,156	,109** ,000	,112** ,000	-,065* ,021	-,045 ,104
N	Corr. Sig.	-,097** ,001	,541** ,000	,152** ,000	,054 ,051	-,018 ,517	,167** ,000	,075** ,007	,057* ,043	,149** ,000	,290** ,000
L	Corr. Sig.	,295** ,000	,541** ,000	,304** ,000	,409** ,000	-,085** ,002	,150** ,000	,200** ,000	,192** ,000	,061* ,030	,362** ,000
T	Corr. Sig.	-,065* ,021	,152** ,000	,304** ,000	,209** ,000	-,072** ,010	-,001 ,961	-,100** ,000	,212** ,000	-,198** ,000	,027 ,331
AC	Corr. Sig.	,211** ,000	,054 ,051	,409** ,000	,209** ,000	,176** ,000	,234** ,000	,342** ,000	,363** ,000	,156** ,000	,546** ,000

RR	Corr.	,063*	-,018	-,085**	-,072**	,176**		,576**	,467**	,505**	,501**	,163**
	Sig.	,023	,517	,002	,010	,000		,000	,000	,000	,000	,000
B	Corr.	-,040	,167**	,150**	-,001	,234**	,576**		,630**	,579**	,570**	,380**
	Sig.	,156	,000	,000	,961	,000	,000		,000	,000	,000	,000
C	Corr.	,109**	,075**	,200**	-,100**	,342**	,467**	,630**		,357**	,467**	,594**
	Sig.	,000	,007	,000	,000	,000	,000	,000		,000	,000	,000
TE	Corr.	,112**	,057*	,192**	,212**	,363**	,505**	,579**	,357**		,675**	,238**
	Sig.	,000	,043	,000	,000	,000	,000	,000	,000		,000	,000
VE	Corr.	-,065*	,149**	,061*	-,198**	,156**	,501**	,570**	,467**	,675**		,190**
	Sig.	,021	,000	,030	,000	,000	,000	,000	,000	,000		,000
D	Corr.	-,045	,290**	,362**	,027	,546**	,163**	,380**	,594**	,238**	,190**	
	Sig.	,104	,000	,000	,331	,000	,000	,000	,000	,000	,000	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

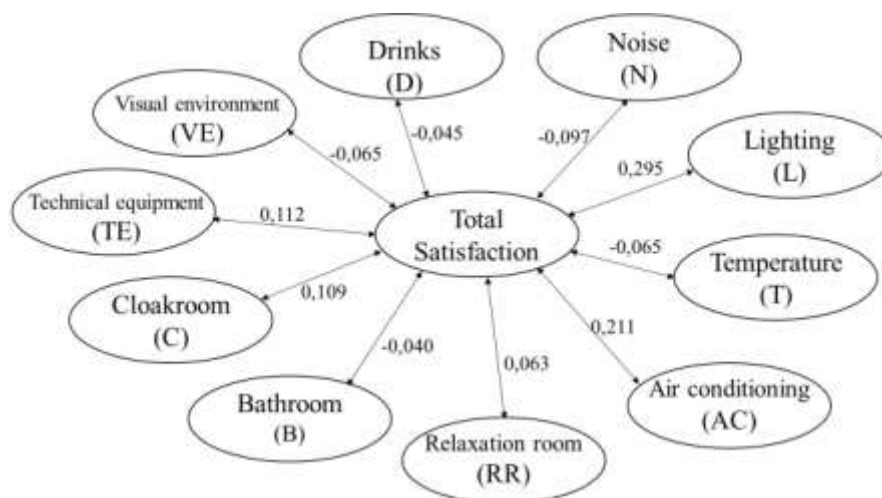
\* . Correlation is significant at the 0.05 level (2-tailed).

Source: own source

On the basis of statistical results for individual factors, and given that the p-value is less than the established value of 0.05 or 0.01 for more sensitive data, we can predominate most of the factors as those where there is a statistically significant dependence between the examined factors and overall satisfaction. All of these factors are all, except for social facilities and the provision of drinks at the workplace. Here, the strength of the bond, which is among the different factors, needs to be examined. For the purposes of this article, we will only deal with the dependence and correlation between the overall satisfaction and the factors that may affect overall satisfaction.

The strength of the link is illustrated in Figure 1: The power of individual factors to the overall satisfaction of employees.

**Figure no. 1. The power of individual factors to the overall satisfaction of employees**



Source: own source

The individual factors were identified by Herzberg's motivation theory as unsatisfied, thus causing discontent when working. Given the average values of the individual factors, the results of the research are expected, ie there is a dependence between individual factors and overall satisfaction, but the link is weak to medium. According to research results, working conditions in selected health care establishments are satisfied by employees.

Research question: Question 1: What is the level of benefits provided in terms of working conditions that affects the overall satisfaction and loyalty of employees of certain healthcare organizations? was verified by qualitative research conducted in January 2017.

The research results highlight the importance of benefits provided to employees beyond the employer's obligations. The aim of the research was, in the first phase, to identify the key benefits that may be important for employees of selected healthcare organizations. The second part of the research was aimed at finding a relationship between the working conditions provided and the overall satisfaction of the employees. The aim was to find out the relationship between the above provided appropriate working conditions beyond the employer's obligations and the overall satisfaction of the employees. In general, it may seem that the more benefits to employees, the better. According to the result of qualitative research, this claim has not been confirmed and accurate reporting is required according to managers' reports. This allows to increase employee satisfaction and save organization's finances.

According to semistructured interviews, the author also wondered how employees perceived the benefits and satisfaction of the offer. Here was an unambiguous answer, which concerned the provision of improved working conditions, particularly in the area of hygiene and social. According to the employer, these benefits are, in their point of view, the most important for employees.

The results of quantitative research confirmed these assumptions. Employees are really considered to be the most important and key to their work satisfaction. It is essential that employees have appropriate working conditions that meet the requirements of their specific work. It is also inevitable that, in such a specific sector, it would also be possible for at least a short regeneration, provided that it fulfills its job responsibilities. Meeting staff and employers' opinions is difficult, but in terms of providing suitable working conditions, this is unavoidable for job satisfaction, as these factors can be regarded as dissatisfactors, so their dissatisfaction also brings high job dissatisfaction. The goal of each employer, as mentioned above, is to have satisfied and motivated employees, and the first and fundamental step towards this satisfaction is precisely the creation of adequate and quality working conditions.

## **5. Conclusion**

The results of quantitative research show the correlation between the different factors of the working environment and the overall satisfaction with the work in selected health care facilities. Using the Spearman correlation test, these dependencies were demonstrated and the relationship between the factors was established. Employee satisfaction is currently a very topical topic and therefore the author is interested in this issue. In the discipline of organisation psychology, investigators are increasingly interested in job satisfaction as a central determinant of turnover, work performance, and outcome and general well-being of workers. Nowadays, managers are aware that workers' dissatisfaction could be very costly and harmful for organisational efficacy. Research has indeed proven that job satisfaction is strongly associated with motivation and performance (Zhang and Zheng, 2009), reduced absenteeism and turnover (Siu, 2002). A good work climate boosts employees' motivation, which, in turn, has a strong impact on people's ways of working and performance. A good work climate supplies social support, shared goals and an instrument for coping with

stress. This, in turn, leads to higher job satisfaction (Utriainen and Kyngäs, 2009). Accordingly, there is evidence that the better the work climate, the higher the job satisfaction. In the health care context, a bad work climate has been recognised as a potential source of stress among nurses and to predict intention to leave (Meeusen et al., 2011).

Available psychosocial resources taken together inside and outside work did not balance the experienced work stress in nurse managers and the clinical directors who were exposed to high work demands (Lindholm, 2006). High demands for work are currently in all sectors of work and these demands are steadily increasing. There is no profession that would not interfere with technological progress, interpersonal relationships and communication, or increased user requirements.

Effective leadership and management, resource provision and support, education and training along with the right management and human resources systems (Bejtkovsky, 2013) and processes play a crucial role in creating an optimal culture of healthcare organizations and the working environment (McSherry et al., 2018).

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## CORRELATION OF SUSTAINABLE DEVELOPMENT AND FOOD SAFETY INDICATORS

**Associate Professor Ph.D. Maria OLEINIUC**  
"Alec Russo" State University of Bălți, Republic of Moldova  
E-mail: mariadodu@yandex.ru

**Abstract:** *Following the successive events that have taken place in the global arena in terms of economic growth and its consequences, there has been a need to assess the consequences of all the changes that have taken place. The indicators of sustainable development and food security indicators help us to assess the current state of world development. Through the indicators of sustainable development, we can clearly identify the situation with regard to the three development approaches: economic approach, ecological approach and social approach.*

**Key words:** *Deep poverty index, Food consumption score, Food Diversity Rate, Share of the poorest quintile in national consumption, Share of the population below the minimum food consumption, expressed in energy value (2 282 kcal / day) (extreme poverty rate).*

**JEL Classification:** *D1, E21, I32.*

### 1. General information

Following the successive events that have taken place in the global arena in terms of economic growth and its consequences, there has appeared a need to assess the consequences of all the changes that have taken place. The indicators of sustainable development and food security indicators help us to assess the current state of world development. Further, the author will show what is the correlation between these indicators and what can we measure with their help.

Through the indicators of sustainable development, we can clearly identify the situation with regard to the three development approaches: economic approach, ecological approach and social approach.

The reflection of sustainable development indicators includes the solution of several issues that arise over the last period of time, depending on the approaches discussed, and namely:

- The complexity of the social approach estimation: the different significance of the social dimension at international level, the difficulty in measuring the social capital in a particular country, region;
- The reception of the multinational contingent: By analyzing the indicators we can not hide such conditions as pollution, floods, and various natural disasters that penetrate the frontiers.

Regarding data collection and processing are considered the following assessments:

- a. Availability of current issues;
- b. Data processing achievement level;
- c. The methods applied in calculating data related to sustainable development.

The main analytical aspects indicating the level of sustainable development indicators are (United Nations, 2007):

- a. Poverty;
- b. Government;
- c. Health;
- d. Education;
- e. Demography;
- f. Natural risks;
- g. Atmosphere;
- h. Lands;

- i. Seas and oceans;
- j. Fresh water;
- k. Biodiversity;
- l. Economic development;
- m. World Economic Association;
- n. Consumption and production patterns.

From all the analyzed aspects, we will only analyze those that have a direct influence on the measurement of ensuring food security.

We will continue to address the level of sustainable development through the indicators of realency of the analyzed issues.

a. The aspect of poverty. For the calculation of this aspect we will identify the following indicators (Biroul Național de Statistică, 2018):

Poverty Depth Index (Pa) - which represents the average consumption of the population in relation to the poverty line. This indicator shows what allowance must raise the incomes of all the poor, up to the poverty line. This indicator is calculated based on the formula:

$$P_a = (1/n) \sum_{i=1}^q \left( \frac{L - C_i}{L} \right)^\alpha \quad (1)$$

where:

Pa - the depth of poverty index (for the depth of poverty  $\alpha = 1$ );

L - the poverty line;

C - average consumption expenditure per adult equivalent;

i - individual persons;

n - total number of persons;

q - the number of people with average consumption expenditure per adult equivalent less than the poverty line.

**Population share under the absolute poverty line (Rsa)** - the number of households in households with monthly costs per adult equivalent less than the absolute poverty line, expressed as a percentage of the total population. The absolute poverty line represents the amount of food costs that provides a consumption of 2282 kcal / person / day, adjusted to the structure of food consumption of households in deciles 2-4, plus non-food costs established on the basis of the average household costs.

$$Rsa = \frac{n_s}{N_{tot}} * 100\% \quad (2)$$

where:

Rsa – poor population ratio / absolute poverty rate;

ns - the number of people with average monthly costs per adult equivalent less than the absolute poverty limit in the reference period;

Ntot - the total annual average of the current population in the reference year.

**The poorest quintile share in national consumption (Ps)** - Volume of consumption / costs for households in quintile I (20% of the poorest households) in relation to the total consumption / expenditure of all households in the country. It is unilateral to inequality and shows how the population's consumption is lower than the average quintile (consumption of the whole population). Population distribution on quintiles is made after consumption / spending per person, separately for each population group.



$$P_s = \frac{V_s}{V_{tot}} * 100\% \quad (3)$$

where:

$P_s$  - the share of the poorest quintile in national consumption;

$V_s$  - the volume of consumption / costs for quintile I households (20% of the poorest households) in the reference year

$V_{tot}$  - the total consumption / costs volume of all households in the country in the reference year.

**The population share below the minimum energy consumption (2 282 kcal / day) (extreme poverty rate) (Rse)** - The number of households in households with monthly costs per adult, lower than the extreme poverty line, relative to the total population, expressed in percentage. The extreme poverty line represents the amount of food costs that ensures a consumption of 2282 kcal / person / day, adjusted to the structure of food consumption of households in deciles 2-4.

$$Rse = \frac{n_s}{N_{tot}} * 100\% \quad (4)$$

where:

$Rse$  - the population share below the minimum food consumption, expressed in energy (2 282 kcal / day) (extreme poverty rate);

$n_s$  - the number of population with average monthly costs per adult equivalent below the extreme poverty limit in the reference period;

$N_{tot}$  - the total annual average of the current population in the reference year.

b. **Natural risks** take into account the population living in areas prone to threats obtained from natural conditions;

c. **Land**s shall calculate such indicators as the area of the arable land under cultivation and the proportion of land covered by forests;

d. **Freshwater**: the rate and ratio of total water resources used, the intensity of water use according to economic activity;

e. **Biodiversity**: the ratio of the total protected terrestrial area by the ecological region; changes that come from external threats regarding crop and plant species.

f. **Economic development**: GDP evolution per capita, GDP investment quota, labor productivity and disposable income of the labor force.

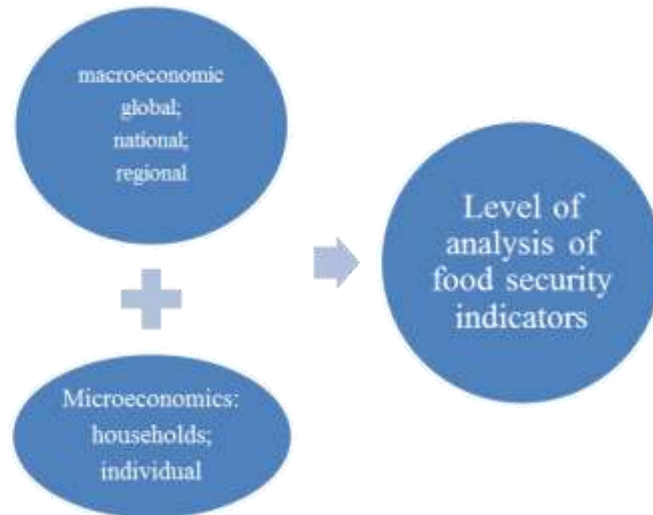
## 2. Discussion of the experimental study

Through the indicators, we can analyze different situations regardless of the applicable level and which are difficult to quantify directly. We can not assert with certainty that an indicator is better and the other is worse, or an indicator reflects a more effective analysis and the other does not. All indicators reflect the real level of the created situations, everything depends on what we want to find out through one indicator or another. The more complex the studied phenomenon is, the greater the need to apply a stunning set of indicators, as the level of food security and sustainable development can not be measured by a single indicator. So it appears that for the food security analysis we have to group together a series of indicators that reflect what the real situation is. However,

by performing the grouping of indicators, we need to consider that the pooled indicators are justified and have a direct correlation.

Based on the conditions created by radical changes in the third millennium, there are a number of indicators through which we can reflect on ensuring food security at any desired level: world, national, regional, local, individual. What we can show through Figure 1.

Food safety measurement indicators that are included regardless of the level under consideration are delimited in several ways: demographic; the disposable income of the population; the level of available assets; the costs incurred; food consumption; access to drinking water and sewage systems; health.



**Figure 1. Level of analysis of food security indicators**

Source: elaborated by the author

As a result of the situation created in the Republic of Moldova regarding food security (2007-2008 crisis, natural calamities, political crisis), we will only consider those indicators that have a direct influence on food security and which are reflected in the literature of that domain.

On the basis of the analyzed literature, we have several classifications of indicators of food security at individual level and households that are in turn grouped according to several criteria. We will also combine these indicators (Maxwell, Coates and Vaitla, 2013):

**Diversity and frequency of food:** the result of this indicator reveals the diversity of food consumed by the population, but not the quantity, but in the last period of time, the relationship between diversity and the caloric value of the products consumed has also been demonstrated by stringent debates;

Diversity and frequency of foods include indicators such as: food consumption score (FCS), food diversity rate; food consumption, the subsistence minimum.

FCS takes into account the consumption frequency of one or more food products. The main food groups to be assigned to FCS are: cereals, beans, meat, milk and dairy products, vegetables, fruits, oils, fats, sugar.

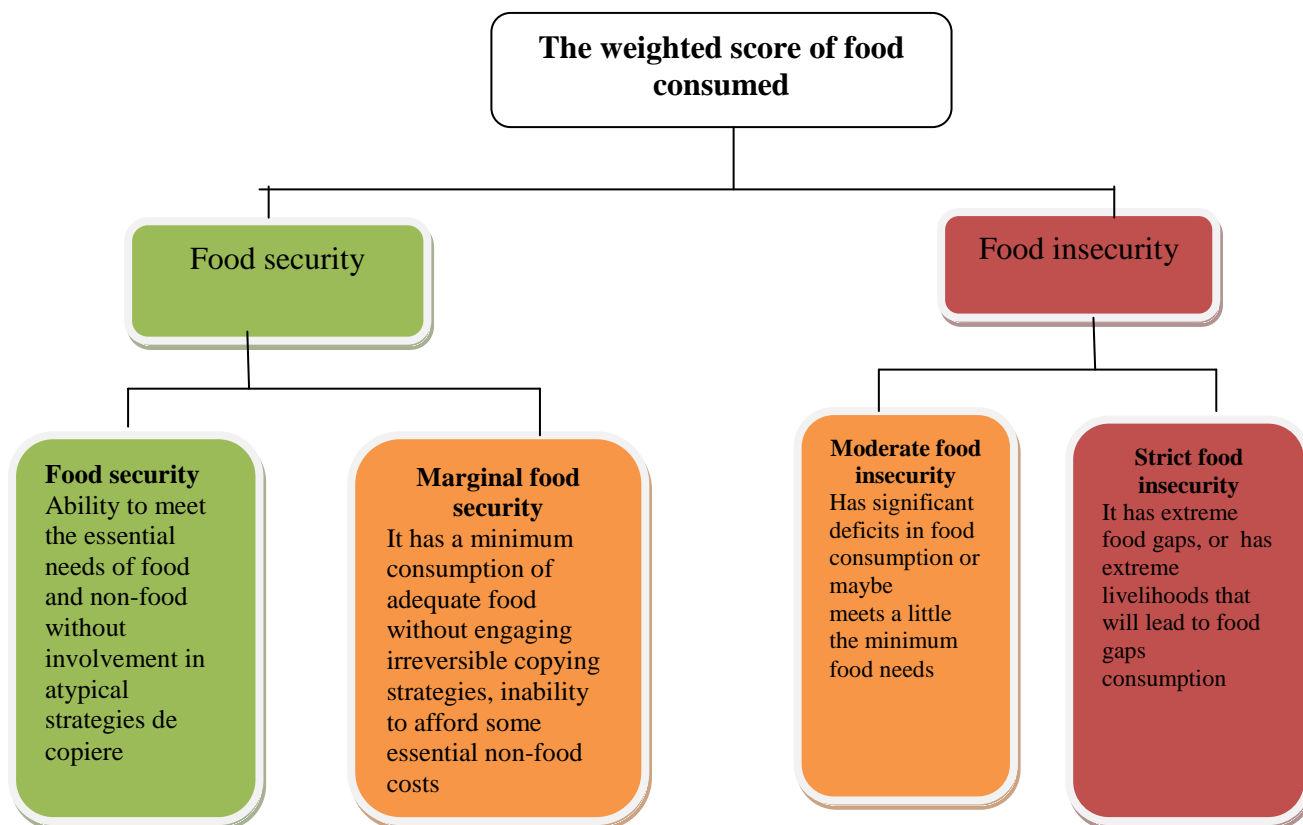
Households are grouped into three large groups according to the results obtained from the FCS calculation: food insecurity, marginal food security and food security. The level of delimitation of these three groups is based on the Weighted Consumption Food Score (Table 1).

**Table 1. Food consumption thresholds**

Group of food consumption	Standard limit	Limits adjusted with oil and sugar consumed daily
Poor food consumption	0-21	0-28
Food consumption at the limit	21-35	28-42
Acceptable food consumption	>35	> 42

Source: World Food Programme, 2015. *Food security assessment report. Executive summary, Syria, October 2015, Data collected May – June 2015*, p.17.

The weighted score of consumed food is calculated as the product of the nutritional density that is assigned to each group of foods consumed in the number of days. Figure 2 shows the food security delineation of weighted food weights.



**Figure 2. Delineation of food security according to the weighted score of consumed food**

Source:elaborated by the author

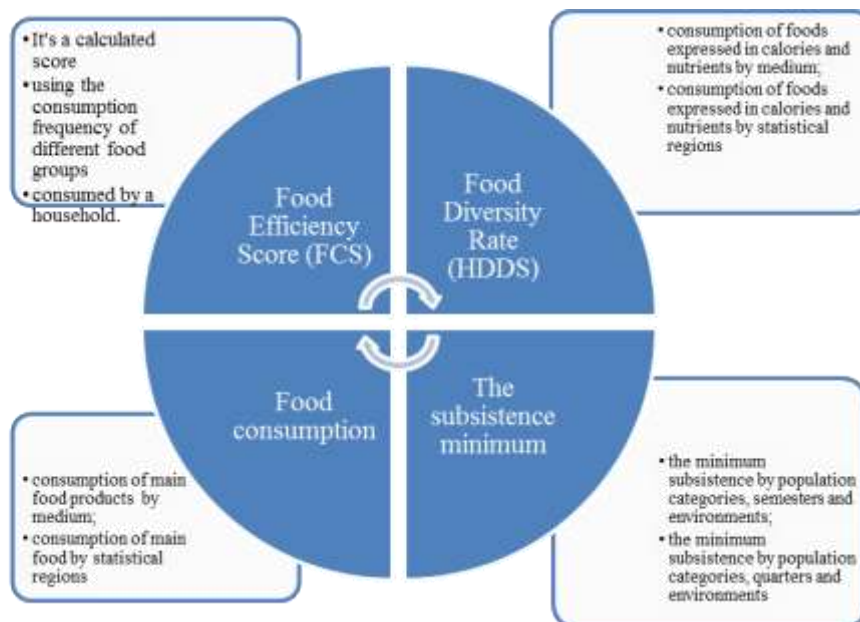
Each household is given a weight that is derived from the total score of foods consumed (Table 2) which is calculated weekly: the minimum is "0" and maximum "112". But to see dynamically what is the total food score at national level, it is calculated annually.

**Table 2. Food groups and assigned weight**

Food product indicator	Food Group	Share
Corn, wheat, porridge, rice, millet pasta, bread and other cereals.	Cereals	2
Potatoes and sweet potatoes		
Beans, peas, peanuts	Beans	3
Vegetables	Vegetables	1
Fruits	Fruits	1
Beef, goat, bird, eggs and fish	Meat and fish	4
Milk and dairy products	Milk	4
Sugar and sugar products	Sugar	0,5
Oils, fat and butter	Oil	0,5

Source: World Food Programme, 2015. *Food security assessment report. Executive summary, Syria, October 2015, Data collected May – June 2015, p.17.*

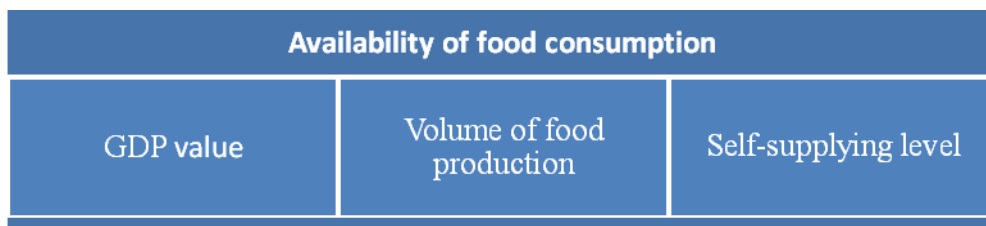
From the data presented in Table 2 we note that according to the physiological norms and the level of protein that a weekly person has to consume, the highest share of "4" belongs to the categories "Meat and Fish" and "Milk". Second place is "Beans" with "3" opens, and third place "Cereals" with a weight of "2".



**Figure 3. Structure of the indicator "Food Diversity and Frequency"**

Source: elaborated by the author

Food availability: This indicator reflects the behavior of people during food consumption. Here are analyzed such indicators as disposable income and consumer s' spendings on food. Figure 4 shows the "Food availability" indicators and what are the measurement formats.



**Figure 4. Indicators "Availability of food consumption"**

Source: elaborated by author

As mentioned earlier, scholars and researchers in the field have a growing concern to group and analyze food security indicators. Along with them, there are also world-class organizations such as FAO, UN, UNICEF and others whose tasks are both static and dynamic analysis of these indicators.

Each of the indicators analyzed so far overlaps with Agenda 2030 ODDs: "Zero Famine", "No Poverty", "Clean Water and Sanitation".



**Figure 5. Macroeconomic indicators for food security measurement**

Source: elaborated by author

But let us not forget that each indicator, no matter what its analysed level is, should not be considered the same for each country, because there are several circumstances that may affect the level of one or other of the indicators such as geographical location, demographic situation, political situation etc. Yes, it is certain that every country, regardless of the situations or threats it has in terms of food security, it must tend to make it more efficient. Macroeconomic indicators of food security we will also combine into one category. In the category of macroeconomic indicators that directly affect the level of food security we included: the indices of the agricultural production prices, the volume of water distributed to the territorial consumers, water supply systems in the territorial profile, the depth of poverty index, the consumer price index of food products; agricultural land, food production volume, import value of food. Figure 5 shows food security indicators at macroeconomic level. With the elaboration and approval of food security policies, there

was also the need to analyze food security indicators according to specific dimensions: availability, access, use and stability. Next, we will group all the microeconomic and macroeconomic indicators of food security according to the dimensions.

**Table 3. Grouping food security indicators according to size**

Dimensions of food security			
Availability	Access	Use	Stability
Food consumption score	Average prices and sales indices	The volume of water distributed to consumers in the territorial profile	GDP per capita
Food Diversity Rate	Prices and indices of sales of agricultural production	Water supply systems in territorial aspect	Value of food imports
Food consumption	Sources of food insurance: Urban or rural	Malnutrition level depending on the territorial aspect	Food price index of foodstuffs
The subsistence minimum	Investment level for farmers		Volume of food production
Available household income			Land with agricultural use
Household costs			Lands of the water fund

Source: elaborated by the author

Combining all these indicators is the most important indicator of food security proposed by FAO: the Global Food Security Index (GFSI). This indicator is designed to measure food security for 169 countries regardless their economic development level. Through this indicator, we can identify the gaps in ensuring food security in a country.



**Figure 6. Global Food Security Index**

Source: elaborated by the author

To a large extent, the Global Food Security Index covers risks for all levels and dimensions. But let us not forget that this indicator cannot take into account such phenomena as the risks related to food security, which the author has analyzed in the second chapter of this research.

The Consolidated Approach to Food Safety Reporting Indicators (World Food Programme, 2015, p.14) is a method through which we can measure the level of security in a particular country. To implement this method, it is necessary to use the food security indicators that we have previously analyzed. The following groups are taken into account in the Food Safety Reporting Matrix: the food consumption rate, the level of poverty existing in the country and the existing living strategies. Also, the size of the hood reached: food security and food insecurity.

Table 4 presents the Consolidated Approach for Food Safety Reporting Indicators. Each of the analyzed domains is characterized by dimensions, such as the current level of the indicators analyzed and the existing capacity.

The "current indicator level" dimension itself includes indicators that measure the level of households receiving food consumption. The "existing capacity" dimension includes indicators that measure the economic vulnerability of households.

**Table 4. Consolidated approach to Food Safety Reporting Indicators**

	Dimensions	Indicators	Food security		Food insecurity	
			Food security	Marginal security	Moderate food insecurity	Strict food insecurity
Current indicator level	Food consumption	Food consumption group	Acceptable $\geq 42$	-	Limit $28 \leq 42$	Poverty $0 \leq 28$
Existing capacity	Economic vulnerability	Poverty level	Total costs > The poverty line 100%	-	Poverty limit $100\% > 100\%$ of the food poverty line	Total exp < 100% din pragul sărăciei alimentare
	Exhaustion of assets	Categories of living strategies	None	Employee stress strategies	Crisis strategies for employees	Crisis strategies for employees

Source: World Food Programme, 2015. *Food security assessment report. Executive summary, Syria, October 2015, Data collected May – June 2015*, p.17.

For the assessment of food security at the level of international organizations, we can apply the indicators proposed in the EurAsEC Food Security Concept (Eurasian Economic Commission, 2018) and in the Concept of Food Security Improvement of the CIS Member States (E-cis Info, 2018).

According to the Food Security Concept of the Eurasian Economic Community, which was approved on December 11, 2009, the main indicators of food security influence are (Eurasian Economic Commission, 2018):

1. The size of the State Food Reserve, which includes the irreducible supply of food products, intended to prevent a food crisis or eliminate its consequences;
2. the volume of the capacity of the internal market for individual foods, defined as the annual per capita consumption of a given food by the average annual population;
3. The biological safety indicator, which includes the harmful substances content in 1 gram of food;
4. Energy value (kcal), protein (mg), fat (mg), carbohydrate (mg);
5. The degree of satisfaction of the daily energy demand for a person
6. The ratio between real food consumption, taking into account its food and energy value at the normative values;
7. The normative values of food value and food energy, established by the competent body of each EurASEC Member State;
8. The rational food consumption rules established by the relevant body of each EurASEC Member State;
9. Sufficient level of consumption of a separate foodstuff;
10. The ratio between real consumption and rational rate;
11. The level of basic food stocks in state reserves
12. The ratio between actual stock levels and annual consumption;
13. Level of food independence for individual foods;

14. The ratio between the value of a specific foodstuff's own production and that of the internal market of that product;

15. The level of economic accessibility of food - the ratio of food costs to total costs for all types of goods and services;

16. Daily nutritional value obtained from eating food products for one person;

17. Daily energy value obtained from the consumption of food products per person;

18. Sufficient stock of grain stocks in national resources;

19. Sufficient supply of pure drinking water;

20. The level of current, strategic and transferable stocks in relation to their regulatory levels;

21. The degree of satisfaction of the physiological needs of foods, taking into account their nutritional and energy value.

In the concept of enhancing food security of the CIS Member States, approved by the CIS Council of State Council Decision of November 19, 2010, a set of principles are established on which the level of food security can be assessed (E-cis Info, 2018):

1. The level of economic accessibility of food products - the ratio of food costs to total costs for all types of goods and services;

2. The potential capacity of the internal market for individual food - the product of a rational consumption of a given food product per capita to the average annual population;

3. The level of food self-sufficiency for food products - the ratio between the production volume of a specific food product and the real consumption of the product;

4. The biological quality indicator - nutrient value and vital energy content in 1 gram of food: energy (kcal), protein (mg), fat (mg), carbohydrate (mg);

5. The biological safety indicator - is determined by the content of harmful ingredients in the food, which does not exceed the admissible level (regulatory);

6. Daily nutrition and energy consumption of food for one person;

7. The level of enough calories obtained from the consumption of each food;

8. Sufficient level of grain stocks in national resources;

9. Sufficient supply of pure drinking water;

10. Physical accessibility of food for different categories of population;

11. Degree of dependence on food insurance and resource maintenance of the agro-food complex towards imports;

13. The degree of satisfaction of the physiological needs of foods, taking into account their nutritional and energy value.

As we can see, many of the indicators stipulated in both concepts are repeated. In order to assess the extent to which food security is achieved, the indicator - the proportion of agricultural and fishery products, raw materials and food products in the total volume of goods resources in the domestic market, expressed as a percentage, is used. The limit values of this medium-term criterion for CIS Member States may be recommended in Table 5.

**Table 5. Recommended limits for the main types of food in the CIS countries**

The name of the product	Recommended limits for main types of food,%
Cereals	95
Milk and dairy products (from the milk point of view)	90
Meat and meat products (from the point of view of meat)	85
Fish products	80
Sugar	80
Vegetal oil	80



In the Concept of Improving Food Security of the CIS Member States, the following conclusion is drawn on the principles of food security of the CIS Member States "Ensuring food security of the CIS participating states requires the substantiation of the internal production of the necessary food resources and the abstraction of drinking water in appropriate quantities with the dimensions of the main types of food consumption, using the feed system of the rules underlying the calculation of the minimum subsistence, on scientific basis physiological norms and rational consumption of food power supply. This regulatory framework is necessary to determine the limit of food consumption as the most important features of a healthy way of life of the population of states - CIS participants.

### 3. Conclusions

Food security indicators and Sustainable Development Indicators are very tight, even with some overlaps. The calculation of these indicators allows us to highlight the dynamic situation regarding food security at country level. The level of food security of each country shows us the most impressive result that a nation can have or other, namely, the health of the population. If a fairly high level of security is recorded, then it is obvious that the country's population has physical and economic access to agricultural resources and products according to vital needs. We recommend to the Republic of Moldova the elaboration of a database in which the results of the food safety indicators will be reflected in order to identify as quickly as possible the situation created and the possibility of neutralizing the threats received both from the exogenous and endogenous factors of the country.

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## LEGAL ASPECTS REGARDING EUROPEAN CIVIL STATES

**Lecturer Ph.D. Isabela STANCEA**

"Constantin Brâncoveanu" University of Pitești, Romania

E-mail: stanceaiza "@ yahoo.com

**Abstract:** *Persons who regain Romanian citizenship and prove this with the Certificate of Citizenship issued by the National Citizenship Authority or the diplomatic missions and consular offices of Romania submit the request for transcription of certificates / extracts of civil status, purchased from abroad at SPCLEP / the mayoralty of the administrative- territorial units from the last place of residence in the country, before renouncing the Romanian citizenship. The persons who prove the Romanian citizenship with the Certificate of Citizenship issued by the National Citizenship Authority or the diplomatic missions and consular offices of Romania submit the request for transcription of certificates / extracts of civil status, purchased from abroad, to the CSD. - Sector 1; persons who acquire Romanian citizenship and prove their domicile in Romania with a permanent residence permit issued by O.R.I. will address the request for transcription to the mayor of the administrative-territorial unit of the place of residence, according to the data entered in the residence permit.*

**Keywords:** *civil status, transcription, Member States of the European Union.*

**JEL Classification:** *K0, K19.*

The civil status attributions are performed by the county councils / the General Council of the Municipality of Bucharest and the staff assigned to them, by the local community public services for the registration of the persons, in the administrative-territorial units where they are constituted, as well as by the civil status officers from the mayoralties of the administrative-territorial units, in which there are no community public services for keeping records of the persons, by the mayors or officials designated by them with competences in this field, by the heads of the diplomatic missions and the consular offices of Romania, respectively by diplomatic agents carrying out consular functions or by some of the consular officers, by commanders of ships and aircraft outside the national territory and by the military civil servants designated by order of the Minister of National Defense u, as the case may be, the Minister of Administration and Interior, in case of mobilization, war, participation in defense missions collective, peace support, humanitarian assistance, or coalition<sup>1</sup>.

The civil servants delegated to the local community public services for the registration of persons, hereinafter referred to as SPCLER, in the administrative-territorial units where they are established, as well as those in the municipalities of the administrative-territorial units in which SPCLER does not operate, are obliged to draw up under the conditions provided by the law, civil status documents for Romanian citizens or for persons without citizenship and to register upon request the documents or civil status acts of foreign citizens who are domiciled or temporarily present on the territory of Romania under the same conditions as and for Romanian citizens<sup>2</sup>.

According to Article 4 of the GD. 64/2011, the commanders of ships and aircraft shall record in the logbook and in the road book, respectively, births and deaths occurring on these means of transport outside the territory of Romania.

On board a ship outside territorial waters, marriage can only be concluded between Romanian citizens on the basis of the passport issued by the competent authorities of the Romanian State, the medical certificate issued by the ship's doctor or another competent doctor, as well as the statement of the future spouses .

<sup>1</sup>Article 1 of the Government Decision no. 64 of 26 January 2011 for the approval of the Methodology regarding the unitary application of the provisions regarding civil status, published in the Official Gazette no. 151 of 2 March 2011.

<sup>2</sup> Article 3 of the Government Decision no. 64/2011 on civil status.

Diplomatic Missions and Career Consular Offices of Romania record civil status acts and facts regarding Romanian citizens produced abroad and issue civil status certificates<sup>1</sup>.

The civil status documents regarding the Romanian citizens living abroad, which are registered at the diplomatic missions or the consular offices of Romania, are sent by the Ministry of Foreign Affairs, as they are completed, to the DSC. - Sector 1, together with the primary documents on which the documents were drawn up.

Civil Status Documents - the copy is archived at D.S.C. - Sector 1, which sends communications of mentions of birth and, where appropriate, marriage and acts on them; upon request, issue civil status certificates to the eligible persons<sup>2</sup>.

The civil status registers - copy II are sent to D.G.E.P.M. Bucharest - D.S.C. within 30 days of the date when all the documents were completed. Upon receiving the registers - copy II, they are faced with copy I at D.S.C. -Sector 1, for the purpose of operating the existing entries on the documents - copy I.

The civil status documents of the Romanian citizens, drawn abroad to the competent local authorities, are required to be transcribed in the Romanian civil status registers within 6 months from the return to the country or from the reception of the certificate or the state statement abroad civilian. Requests for transcription to be submitted to the local community public office for the registration of persons or to the mayoralty of the administrative-territorial unit of the applicant's place of domicile shall be approved by the mayors, after obtaining the prior approval of S.P.C.J.E.P. The applications registered with the civil status services of the Bucharest municipalities shall be notified in advance by the head of the Local Community Public Service for the Evidence of Persons. Applications for Romanian citizens who have never been domiciled in Romania are transcribed with the approval of the District Mayor of Bucharest 1 and with the prior notice of the General Directorate for the Evidence of Persons of Bucharest. Once the application has been registered, checks shall be carried out to determine:

a) if the holder of the certificate or the birth, marriage or death certificate is a Romanian citizen; checks are carried out at D.G.P. or to the National Authority for Citizenship;

b) if there is another act transcribed or reconstituted in the country; checks shall be carried out in the state-of-the-art registers and, where appropriate, at S.P.C.L.E.P. or at the hometown of the previous housings until the date of the registration of the act by the foreign authorities;

c) if S.P.C.L.E.P / the mayoralty of the administrative-territorial unit where the application has been filed has territorial competence for the approval of the transcription in the case of citizens who are legalized by a passport or travel document; the checks are carried out at the recording structure within the PSPC.E.P. from the last place of residence declared by the applicant.

The request for transcription shall be addressed to the mayor of the territorial-administrative unit within the jurisdiction of which the holder of the certificate / extract is domiciled and shall be made in his / her own name by a special proxy, authenticated according to the legal provisions.

Minors aged over 14 require the birth certificates to be transcribed on their own behalf, assisted by one of the parents or, as the case may be, the guardian, or by proxy special proxy; if the parents have different domicile in the country, the competent

<sup>1</sup> Article 70 of the Government Decision no. 64/2011 on civil status.

<sup>2</sup> Article 72 of the Government Decision no. 64/2011 on civil status.

mayorality for transcription of the birth certificate may be any of the two mayoralties within the minor's parents' domicile.

For persons who have not reached the age of 18 whose parents have their domicile abroad, the request for transcripts of birth certificates shall be submitted to the mayor's office of the last place of residence of parents in Romania, and if they had different domiciles, at the last home of one of the parents.

For Romanian citizens over 18 years of age residing abroad, the application is addressed to the mayor of the administrative-territorial unit from the last place of residence in the country, with the prior approval of SPCJEP, and if they did not have their domicile in Romania, the Mayor of Sector 1 of the Bucharest Municipality, with the prior notice of the General Directorate of Personal Identification of the City of Bucharest.

Persons who regain Romanian citizenship and prove this with the Certificate of Citizenship issued by the National Citizenship Authority or the diplomatic missions and consular offices of Romania submit the request for transcription of certificates / extracts of civil status, purchased from abroad at SPCLEP / the mayorality of the administrative-territorial units from the last place of residence in the country, before renouncing the Romanian citizenship.

In case of transcription of the marriage certificate, the application is addressed to the mayor of the administrative-territorial unit at the common domicile of the spouses, and if the spouses have different domiciles in the country, to any of the two city halls where they are domiciled.

In the case of transcription of the death certificate, the application is addressed to the mayor of the administrative-territorial unit of the applicant's place of residence, which is also obliged to order checks at the last domicile of the deceased or the mayor of the territorial-administrative unit at the last domicile in the country by the deceased.

The persons who prove the Romanian citizenship with the Certificate of Citizenship issued by the National Citizenship Authority or the diplomatic missions and consular offices of Romania submit the request for transcription of certificates / extracts of civil status, purchased from abroad, to the CSD. - Sector 1; persons who acquire Romanian citizenship and prove their domicile in Romania with a permanent residence permit issued by O.R.I. will address the request for transcription to the mayor of the administrative-territorial unit of the place of residence, according to the data entered in the residence permit<sup>1</sup>.

If the holder of the certificate or the civil status statement to be transcribed is not in possession of any document proving the Romanian citizenship as he left the country with his parents during his minority period, and if the applicant was not born in Romania, the city hall competent to transcribe the certificate checks DGP After the registration, the request for transcription shall be submitted to S.P.C.J.E.P., together with the report containing the result of the checks, showing that there is no longer any act transcribed or reconstituted in the Romanian civil status registers.

After checking the documents, S.P.C.J.E.P. returns the entire documentation together with the prior opinion, SPPC, respectively the town-hall of the administrative-territorial unit where the application was filed. Upon receipt of the opinion from the PSC, the Deputy Civil Status Officer presents to the Mayor the report accompanied by the request for approval of the transcript of the civil status certificate or extract.

On the basis of the approval of the request for transcription, as well as the documents submitted by the applicant and his records, the Deputy Civil Status Officer draws up the civil status document and issues the certificate corresponding to the entitled

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<sup>1</sup> Article 73 of the Government Decision no. 64/2011 on civil status.

person. After the registration of the civil status document, the request of the applicant, the report with the result of the verifications, endorsed by the CPCJP, the mayor's approval, the authenticated power of attorney, the photocopy and the certified translation of the certificate or the civil status statement are kept in the town hall's own archive; the original of the certificate or the civil status statement shall be returned to the applicant. It is forbidden to transcribe certificates and extracts of civil status purchased from abroad without the prior approval of S.P.C.J.E.P. and without the mayor's approval.

According to Article 77 of the Government Decision no. 64/2011 on civil status, in the case of rejection of the request for transcription by the mayor, following the negative opinion given by S.P.J.E.P., the submitted documents shall be returned to the applicant, communicating the reason for the rejection.

Marriages concluded abroad and divorced are recorded only on the birth certificate; the application, accompanied by the certificate of marriage, in original, photocopy and certified translation, as well as the original divorce sentence, photocopied and authenticated translation, shall be addressed to the mayor of the administrative-territorial unit holding the birth certificate forwarding, for approval, DEPA.BD It is forbidden to enroll the entries received abroad without the approval of D.E.P.A.B.D<sup>1</sup>.

Romanian citizens living abroad may apply for their entry in the Romanian civil status records from diplomatic missions or consular offices of Romania, certificates or extracts of civil status issued by foreign authorities, if the registration of the act or the fact civil status was made in advance to the authority of the State of residence; registration is made with the approval of the heads of diplomatic missions or consular posts, and their refusal is motivated.

The application for entry in the Romanian civil status records shall be submitted to the diplomatic mission or to the Romanian consular career office of the country where the registration was made in advance or from the country in the respective consular district. For the registration of birth certificates in the civil status registers of the diplomatic mission or the Romanian consular career, the application will be made by one of the parents, the minor who has reached the age of 14, assisted by one of the parents or, as the case may be, by guardian, or by special proxy. For the registration of the marriage certificates / extracts, the request will be made by the Romanian citizen's spouse, in his own name or by proxy with special proxy; the drafting of the act shall be made only in the circumstances in which it has been established that the Romanian citizen's spouse has entered in the Romanian civil status registers all the changes in the civil status; the proof shall be furnished by the birth certificate or, as the case may be, the marriage certificate, with all the inscriptions, issued by the authorities in the country. For the enrollment of death certificates / extracts, the request will be made by one of the family members or by another entitled person.

The special proxy must be apostilled or legalized by the competent authority, in accordance with local practice. Regarding the change of name and / or surname abroad, regarding the persons whose birth and marriage are registered in Romania, they are mentioned by mentioning civil status acts, they are operated only with the approval of D.E.P.A.B.D.

Romanian citizens living abroad, in whose civil status one of them intervened changes to divorce, adoption, change of names and / or surnames - if the change was made on the basis of a court decision pronounced in one of the Member States of the European Union or in one of the countries with which Romania has concluded treaties / conventions / agreements legal assistance or court decisions which are recognized in advance by the

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<sup>1</sup> Article 73 of the Government Decision no. 64/2011 on civil status.

competent court in the country - may submit a request accompanied by supporting documents to the diplomatic or consular career office of Romania in the State of residence with a view to enroll in the status registers civilian changes in their civil status.

M.A.E. - D.C. send D.E.P.A.B.D. the application, together with the entire documentation, on the entry of the statements on civil status documents.

D.E.P.A.B.D. approves the registration of the mentions, proceeds to obtain certificates or civil status statements, as the case may be, and transmits them through M.A.E. - D.C, requesting the holder to pay the relevant consular fees.

As regards the award of the CNP, Article 135 of the H.G. no. 64/2011, provides that Romanian citizens born abroad C.N.P. they are assigned the following:

a) by D.S.C. - Sector 1, for those born between 1 January 1980 and 31 December 2003, if the birth was registered at diplomatic missions or at the Romanian consular career offices abroad;

b) by D.E.P.A.B.D., by B.J.A.B.D.E.P, at the request of the civil status structure within the SPCJE for persons born abroad before 1980, whose birth documents were transcribed in the Romanian civil status registers. C.N.P. assigned to be communicated to the mayoralty of the administrative-territorial unit / S.P.C.L.E.P. with the prior approval of the transcript of the civil status certificate / statement;

c) by S.P.C.L.E.P. or, as the case may be, by the civil status officer in the town-hall of the administrative-territorial unit where the act of birth is transcribed, whether it is a Romanian citizen domiciled in the country or a Romanian citizen domiciled abroad.

In the documents and birth certificates drawn up for children born abroad from 1 January 2004, CN is entered. from the list allocated for each diplomatic mission and consular career of Romania, also enrolling in the consular file submitted to the CSD. - Sector 1; under C.N.P. taken from the list, with a horizontal line, the birth certificate number, the year of registration and the name of the child.

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## TYPES OF REFERENCES REGULATED IN THE MEMBER STATES

**Associated Professor Ph.D. Nicolae GRĂDINARU**  
"Constantin Brâncoveanu" University of Pitești, Romania  
Email: nicolaegradinaru@yahoo.com

**Abstract:** *The referendum designates the procedure by which all citizens with the right to vote are called upon to give their own judgment (the participants have to answer a specific question by choosing one of the answers that accompany the question) on a real (not personal), deliberative (the result of the vote having immediate legal effects) or in an advisory capacity (the result of voting being only an element of appreciation for the governors for the adoption or not of certain decisions / measures). The term and the legal institution of the referendum have their origins in Roman law, where the reference word designates the procedure by which the electoral body (made up of citizens with the right to vote) was consulted directly on a precise topic, in order to confer legitimacy on a decision. At present, the referendum is considered to be, by excellence, an instrument of direct democracy through which voters express their opinion and make a decision (usually normative) directly. The referendum is not an alternative to parliamentary democracy, and its abusive use can lead to the mitigation of the legitimacy and role of parliament as a representative body of the people.*

**Key words:** *referendum, Europe, vote, decision, democracy.*

**JEL Classification:** *KOO.*

The word "referendum" means the practice of subjecting to popular approval by direct vote a legislative measure initiated by the legitimate authorities of a state or region within a free and fairly organized democratic process. The question to the citizens, which is the subject of the vote at the referendum, is made by the authorities; receding is a popular and top-down popular vote.

In some jurisdictions with an Anglo-Saxon law system, the word "plebiscite" is used to designate popular consultations on changing the form of government (radical changes), and the word "referendum" refers to direct popular consultations on other national issues.

The referendum is classified according to several criteria as follows:

a) depending on the content of the text submitted to the vote, it may be:

- constitutional referendum;
- Legislative referendum;
- conventional referendum.

1. The constitutional referendum may be:

- organization of the referendum for the adoption of the first Constitution of a state;
- the referendum on the constitutional review (organized to amend some provisions of the Constitution in force);
- a sovereignty referendum (organized for territorial change issues, self-determination of a decentralized collectivity, or adherence of a state to a supranational organization such as NATO or the EU).

The constitutional referendum is based on the principle according to which the fundamental act of a state - the Constitution - can not be abrogated, replaced or modified without the consent of the citizens.

In some states, the constitutional referendum is binding and can be organized for all constitutional provisions / constitutional provisions of particular importance.

- In Ireland, Romania and Denmark, any constitutional review is subject to a mandatory referendum.

- In Austria and Spain, only the total constitutional revisions are subject to the mandatory referendum.

- Mandatory referendum on revision of certain constitutional provisions: Estonia - constitutional provisions on the revision of the Constitution;

- Latvia - the provisions on the democratic and sovereign character of the State, territory, official language and flag, elected by universal suffrage, equal, direct, secret and proportionate;

- Lithuania - Constitutional provisions on the state and the revision of the Constitution, as well as the non-alignment of Lithuania with the post-Soviet alliances;

- Denmark - in the case of the delegation of constitutional powers of the Kingdom authorities to international authorities if Parliament does not adopt this text by a 5/6 majority of the total number of members and the provisions on changing the voting age;

- Portugal - constitutional provisions on regionalization.

States that did not regulate the constitutional referendum, instead regulated the optional constitutional referendum, organized at the request of a state authority or a faction of the electoral body.

Thus, in France, the final adoption of constitutional amendments contained in a draft Government bill or in a legislative proposal adopted by the two Legislative Chambers is subject to the referendum convened by the President of the Republic.

The constitutional referendum can be organized on the initiative of the Parliament in Estonia, Lithuania and Malta (in the first two states, except where the referendum is mandatory), and in Austria at the request of one-third of the members of one of the Legislative Chambers.

The optional constitutional referendum, organized at the request of a faction of the electoral body, is regulated in Italy (500,000 signatures), Lithuania (300,000 signatures) and Hungary (100,000 signatures).

In Bulgaria, Greece, Luxembourg, the Netherlands and Portugal, the revision of constitutional provisions is not subject to a referendum.

2. Legislative referendum. In general, this type of referendum is more rarely regulated, and the conditions of application are more restrictive, as the law may undergo more changes than the Constitution, and the organization of legislative referenda could lead to a restriction of Parliament's competence and diminishing its prestige.

The constitutions devoted to the legislative referendum contain express provisions regarding its material scope.

In France, Article 11 (1) of the Constitution limits the material scope of the legislative referendum: the organization of public powers, the economic or social policy reforms of the nation, and treaties which, without contravening the Constitution, may have a certain influence on the functioning of the state institutions .

In general, the areas where national laws exclude the referendum are financial, fiscal and fiscal (Denmark, Estonia, Greece, Hungary, Italy, Malta, Poland, Portugal). They are also excluded from the material scope of the referendum: state of emergency (Estonia, Hungary); amnesty and pardon (Italy, Poland, Hungary); elections and issues falling within the jurisdiction of the judicial or administrative bodies (expressly excluded by Austria and implicitly by other states); the powers of Parliament, the judiciary and the Constitutional Court (Bulgaria); normative texts on public office, naturalization and expropriations (Denmark).

The implementation of international treaties can not be put to referendum voting in Denmark, Hungary, Malta and the Netherlands.



According to the initiator's criterion, the legislative referendum may be extraordinary or ordinary. The extraordinary referendum differs from the ordinary one by the fact that the popular vote on a determined act is organized at the request of a state body - the head of state, the parliament, a certain number of deputies or decentralized collectives (not a faction of the electoral body).

The extraordinary legislative referendum is organized on the initiative of the President of the Republic (France), Parliament (Austria, Lithuania, Luxembourg), a certain number of parliamentarians (Denmark, Greece) and the parliamentary majority of both Houses (Ireland). In Portugal, the President decides on the Parliament / Government's proposal to organize the extraordinary legislative referendum.

The ordinary legislative referendum is regulated in Hungary and Lithuania. In these countries, the referendum is suspensive. The suspensive legislative referendum (veto referendum) is being organized to challenge a law recently passed by the parliament, which has not yet been promulgated.

The Swiss Minister of Finance has today called on the population to allow the federal government to levy taxes for another 15 years when it will be deciding by a referendum on a new tax law.

The referendum took place on 4 March 2018. Under the direct democracy system operating in Switzerland, voters will be able to comment on the federal government's right to levy taxes such as income tax and value added tax.

3. Conventional referendum. It is being organized to approve or reject international agreements / treaties. It is a particular case of a legislative referendum, as authorization of ratification of a treaty is usually the responsibility of the parliament. This is mandatory when joining international organizations involving transfer of competencies (Lithuania and, under certain conditions, Denmark).

A conventional referendum on EU membership was held in Latvia. b) depending on the nature of the referendum it may be:

1. Mandatory referendum. In general, the mandatory referendum is organized for constitutional reviews. The mandatory referendum is organized for texts that can not be adopted / enter into force without the explicit consent of the people; its vote and its positive result is a condition for the validity of the legal norm. The result of a mandatory referendum is accepted by parliament and government, and they will take appropriate measures according to the outcome of the referendum. In Romania, the Referendum Law and the Constitution establish a binding legal power in the case of two referendums. The first is the referendum on the dismissal of the president, the other is the referendum on the amendment of the Constitution. As we saw in the case of the referendum initiated by the President, it did not have legal consequences. If a referendum does not have a binding legal power, then it is basically not a referendum, it is a poll conducted on a broad sample. Parliament, if it deems it necessary, applies the result of the referendum, if not ignore it. This situation, legal regulation, seems to me abnormal, because the law then is law if it has binding force. The law must be clear, unequivocal.

2 optional referendum, its result has no binding value, the last word belonging to parliament or government. It is regulated in Austria, Greece, Portugal and Hungary.

3. Referendum organized at the request of a state authority (extraordinary referendum). - In France, at the proposal of the Government or on the joint proposal of the two Legislative Chambers (published in the Official Journal), the President may submit to the referendum any draft law on the organization of public powers, reforms to the nation's economic and social policy and related public services , or authorizing the ratification of a treaty that, although not in contradiction with the Constitution, could influence the functioning of state institutions. If the referendum is organized at the proposal of the

Government, it has the obligation to make within each Legislative Chamber a statement that is followed by debates. - in Portugal, the agreement between the President and the Parliament or between the President and the Government is necessary to hold a referendum.

- in Ireland, the President of the Republic may convene a legislative referendum on the joint proposal of the two Chambers (in the Senate, the proposal must be adopted by a majority of votes, and at least 1/3 of the Deputies in the Chamber of Deputies).

- In Poland, the referendum may be convened by the Chamber of Deputies or, with the consent of the Senate, by the President of the Republic.

- in Estonia, Finland, Lithuania, Luxembourg, Malta, Sweden, Parliament is the only authority that has the competence to convene a referendum.

- In Belgium, the referendum - which is not constitutionally / legally constituted - can be organized on the basis of a specific decision / laws passed by Parliament.

- In Austria, the National Council decides on the legislative referendum and the consultative referendum on issues of national importance; 1/3 of the members of Parliament may decide to hold a referendum on the partial revision of the Constitution. - In Bulgaria, Parliament decides on the convening of the referendum. The proposal may be made by 1/4 of the deputies, the Council of Ministers or the President of the Republic.

- In Hungary, at the proposal of the President of the Republic, the Government, one third of the number of MPs or 100,000 voters, Parliament decides on the organization of the optional referendum. (It is also the Parliament that decides on the decision-making or advisory nature of the optional referendum.) The mandatory referendum is organized at the request of more than 200,000 citizens with the right to vote.

- In Spain, the consultative referendum on a matter of particular importance is convened by the King, at the proposal of the Prime Minister, approved by the Congress of Deputies.

- in Greece, the President makes formal use of the referendum, the decision to hold a referendum is taken by Parliament (by majority vote), on the proposal of the Government (for "crucial" national issues) or 3/5 of the MPs (for laws on important social issues).

- In Italy, the referendum can be convened at the request of five regions.

- In only a few states, the Legislature may convene a referendum on the dismissal of the Government, or the Executive for the Dissolution of the Legislature. In Austria, the National Council may convene a referendum (by a 2/3 majority) to dismiss the President of the Republic; in Latvia, the President may convene a referendum on the dissolution of Parliament. 4. Referendum organized at the request of a certain number of citizens with the right to vote The referendum organized at the request of a certain number of voters can be classified into two categories: ordinary voluntary referendum and popular initiative (in a narrow sense). The ordinary facultative referendum is organized to challenge a text already approved by a state organ, while the popular initiative allows a faction of the electoral body to propose a text that has not been approved by a state authority. In Lithuania, 300,000 signatures are required to hold a referendum; in Latvia, 10% of the total number of voters may request the holding of a referendum if, at the request of a third of the parliamentarians, the President suspends the promulgation of a law, and within 10 days of its adoption, Parliament does not revoke the law, and not adopt by a majority of 3/4.

In Italy, the optional constitutional referendum and the abrogative legislative referendum can be organized at the initiative of a faction of the electoral body (500,000 signatures). Parliament has the possibility to avoid holding a referendum, reviewing the basic principles and the content of the normative text in question. In Hungary, 100,000 signatures (but not more than 200,000) are required to organize an ordinary voluntary

referendum. Some states have regulated a form of limited popular initiative, which consists in submitting to a state organ, by a certain number of voters, a proposal to hold a referendum. It is a form of extraordinary referendum organized at the request of a faction in the electoral body. In Poland, 500,000 voters may request the Chamber of Deputies to convene a referendum; In Portugal, such a request can be submitted to the Parliament by 750,000 citizens with the right to vote. In Malta, according to the Law on referendums, if Parliament repeals the law challenged by a faction of the electoral body, the referendum requested for this purpose is no longer organized. c) Depending on the text to be put to the vote: - a referendum on a draft law (France, Denmark, Ireland) or on a concrete proposal not in the form of a draft law (Portugal). - Referendum organized to repeal a text in force (Italy). - organized referendum on a matter of principle.

The national law of the Member States defines in various ways "the issues of principle". In Greece, these concern "crucial" national issues and important social issues. The President of the Republic has the power to convene (by decree) a referendum on national issues of special, crucial importance. It is worth noting that the role of the head of state in referendum matters can not be exercised discretionary or exclusive. Article 44, paragraph 2 of the Constitution provides for a complex procedure in which three public authorities interfere and condition each other: the Government, the Parliament and the President of the Republic. This interweaving of duties is aimed at guaranteeing the democratic character of the political regime and preventing Parliament from subordinating the Executive. The constitutional text stipulates that after the decision passed by the Parliament by an absolute majority, at the proposal of the Government, the President of the Republic convenes a consultative referendum on a matter of national interest of crucial importance.

In Spain, a national consultative referendum is organized for political decisions of particular importance. d) according to the effects it produces: - decision making; - Advisory. Referendum decision: It can be normative confirmatory, when it is aimed at adopting a normative act, or abrogated, when it aims to repeal a law. The results of the referendum are legally required by the authorities and the population. In the case of the advisory referendum, the authorities have no obligation to follow suit. Some states (Ireland, France, Italy) have only regulated the decision-making referendum. In Denmark, the decision-making referendum is the rule, but the consultative referendum is not excluded either. In Hungary, a referendum on a law or convocation at the request of 200,000 citizens with voting rights is always decision-making; in the event of a voluntary referendum, it is Parliament that decides whether it will be decision-making or consultative. In Spain, the national consultative referendum organizes political decisions of particular importance. In Romania, it should be underlined that, according to the Constitution and Law no. 3/2000, national sovereignty belongs to the Romanian people, exercising it through its representative bodies and by referendum<sup>1</sup>.

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<sup>1</sup>Law no.3 / 2000 on the organization and conduct of the referendum, published in the Official Gazette no.84 / 24.02.2000, modified by GEO no.92 / 2003 published in the Official Gazette no.716 / 14.10.2003, by the Law no.51 / 2003 published in the Official Gazette no.922 / 22.12.2003, by GEO no. 99/2005 published in the Official Gazette no. 643 / 20.07.2005, by GEO no.27 / 2007 published in M .Of.nr.278 / 25.04.2007, by Law no.129 / 2007 published in the Official Gazette no.300 / 05.05.2007, by GEO no.34 / 2007 published in the Official Gazette no.317 / 11.05 .2007, GEO no.103 / 2009, Law no.62 / 2012, GEO no.41 / 2012, Law no.131 / 2012, Law no.153 / 2012, Law no.76 / 2012, 2012, Law no. 411/2013.

Art.152 of the Romanian Constitution

(1) The provisions of this Constitution regarding the national, independent, unitary and indivisible character of the Romanian state, the republican form of government, the integrity of the territory, the independence of the judiciary, the political pluralism and the official language can not be the object of the revision.

The law limits to the maximum the possibility of organizing constitutional referendums, although art.2 of the law stipulates that the national referendum is the form and the means of direct consultation and expression of the sovereign will of the Romanian people regarding:

- a) revision of the Constitution;
- b) the dismissal of the President of Romania;
- c) problems of national interest.

Problems that, according to art. 152 of the Constitution, can not be subject to review can not be the object of the referendum.

The referendum is valid if at least 30% of the number of people on permanent voter lists participate in it.

The result of the referendum is validated if the validly expressed options represent at least 25% of those on the permanent electoral lists.

DEX - Explanatory Dictionary of Romanian Language, 3rd edition, revised and added, Univers Enciclopedic Publishing House, Bucharest, 2009.

Plebiscite - Prior consultation of citizens, which is to decide "yes" or "no" on a bill or state act of particular importance. (in Roman antiquity) Law adopted at a plebean assembly. Form of consultation by vote of the will of the people in a matter of general importance.

The difference between the plebiscite and the referendum is barely perceptible, if a referendum concerns the adoption or rejection of a text, the plebiscite refers to a man. In the Roman law the plebiscite expressed the people's vote at the end of the Roman republic, the plebiscite had become a formula by which the power of some leaders such as Cesar was granted. Later the plebiscite became, with the Empire, a mere formality by which the Emperor was invested.

1. In Romania the plebiscite was used by Alexandru Ioan Cuza, who, on the French model of Napoleon III, resorted to the plebiscite for the development status of the Paris Convention in May 1864. The Senate was introduced into the Romanian legislation in 1866 when the Weighted Body was called the Senate and which was introduced by the plebiscite of May 10-14, 1864, when the Developmental Statute of Paris was approved at the proposal of the prince Alexandru Ioan Cuza (1859-1866). The Paris Convention was held between 7-19 August 1858, and Prince Alexandru Ioan Cuza approved the Development Statute on 3-15 July 1864. By the Statute of the Developer, the attributions of the Lord have been defined, and the simultaneous transition from the unicameral system provided by the Organic Regulation of 1831 to the bicameral system, in which the legislative power is exercised collectively by the Lord, the Elective Assembly (also called the Lower Chamber) Senate (which was then called the Weighted Body).

2. The plebiscite was used on April 2-8, 1866, approving the coming of the throne of Carol I as a ruler, having the role of legitimizing an authoritarian policy. Against the background of Ioan Cuza's abdication, in February 1866 a domineering lieutenant was formed, consisting of General Nicolae Golescu, Lascăr Catargiu and Colonel N. Haralambie. The three are initially proposed to the throne by Filip de Flandra, but as the offer is declined, lieutenant proposes Carol-Ludovic de Hohenzollern and calls on the nation to express its adhesion through the plebiscite.

3. On February 24, 1938, Carol II subjected to plebiscit the Constitution of Romania, also called the "Carolian Constitution", adopted at the initiative of King Carol II.

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(2) No revision may also be made if it results in the suppression of citizens' fundamental rights and freedoms or of their safeguards.

(3) The Constitution can not be revised during the siege or emergency state or in wartime.

Thus, the Constitution of 1923 was repealed and the "royal dictatorship" was established. According to official figures, only 0.13% of the plebiscite participants opposed the royal project. The new Constitution was promulgated on February 27 and published on February 28, 1938.

4. On March 2-5, 1941, the plebiscite on the approval of General Ion Antonescu's policy came as a result of the legionary rebellion of January 21-23, 1941. The theme of the plebiscite, organized by Ion Antonescu, was Romania's internal policy, with 90% voting for the policy of the Antonescu government and against the legionnaires.

5. The plebiscite of 9-16 November 1941 for the approval of Marshal Ion Antonescu's policy.

6. On November 23, 1986, President Ceausescu held the Peace Referendum – approving the 5 per cent reduction of armaments, troops and military spending by RSR.

7. The 1989 referendum initiated by President Ceausescu for amending the Constitution of Romania on the introduction of an article banning foreign loans.

8. On December 8, 1991, the Constitution of Romania was adopted by the referendum. The new Constitution was approved with a percentage of 77.3% of the participants. Upon the entry into force of the new constitution, the Constitution of 21 August 1965 was entirely abrogated (Article 149 of the Constitution).

9. The referendum of November 18-19, 2003, approved the revision of the Romanian Constitution, it was the first time the referendum had problems in the sense that it was running with the mobile urn through village resorts so that the referendum was valid because the voters did not want to come to vote. The most important news brought to the Fundamental Law was the harmonization of the Romanian legislation with the European Union and the North Atlantic Treaty Organization, for the joint exercise of competences with the two international bodies. In this respect, two articles included in the title "Euro-Atlantic Integration" (Articles 148 and 149). Amendments to the Constitution of 1991 include the appointment of the President of the country to five years to four years (Article 83, paragraph 1) and the insertion of a new paragraph stating that the President can not revoke the Prime Minister Article 107, paragraph 2).

10. The referendum on 19 May 2007 concerned the dismissal of the President of Romania. Citizens entitled to vote are asked whether they agree or not with the dismissal of Traian Basescu, the country's suspended president. The steps to suspend the president began on January 18, 2007, when the PSD claimed Traian Basescu's violations of the Constitution. In the April 17 opinion, the Constitutional Court voiced its objection to the suspension, arguing that the alleged crimes did not violate the Constitution. However, in the joint sitting of 19 April 2007, Parliament voted to suspend Traian Basescu by 322 votes in favor, 108 against and 10 abstentions. Suspension became effective on April 20, 2007, after the Constitutional Court took note of the decision of the Romanian Parliament. 44.45% of the eligible citizens voted, with 74.48% of them voting against the dismissal of Traian Basescu.

11. The referendum of 25 November 2007 concerned the introduction of the uninominal vote. The referendum was held on October 25, 2007, after President Traian Basescu signed the decree on the organization of the referendum on the introduction of the uninominal vote, along with the elections for the European Parliament two days before. Thus, Romanians with the right to vote have been called upon to answer "yes" or "no" to the question: "You agree that, starting with the first elections to be organized for the Parliament of Romania, all deputies and senators will be elected in constituencies uninominal, based on a majority vote in two rounds? ". Traian Basescu said that at the referendum he will go on the simplest option, ie the uninominal vote in two rounds, as at

the election of the mayors. According to Traian Basescu, one of the objectives of organizing the referendum for the uninominal vote was the reform of the Romanian political class. Voting across the country was 26.51%. Out of voters, 81.36% voted YES, 16.17% voted NO, and 2.46% voted null.

The centralization of the final results revealed that 4,851,470 voters participated in the referendum. On November 29, 2007, the Constitutional Court found that "of the total number of 18,296,459 persons registered in the referendum list, 4,851,470 people participated in the vote, insufficient for the referendum to be declared valid, in accordance with the provisions of Article 5 paragraph (2) of Law no.3 / 2000 on the organization and conduct of the referendum, as subsequently amended and supplemented ". In order for the referendum to be validated, it would have been necessary to have a half vote plus one of the total number of voters.

12. Referendum of 22 November 2009 on the unicameral parliament and reduction of the number of parliamentarians initiated by the President of Romania.

On November 22, 2009, the 5th National Referendum since 1989 for the transition from the bicameral parliament (137 senators and 334 deputies) to a unicameral parliament (up to 300 MPs) was organized. At the referendum held in parallel with the legislative elections, 9,320,240 of the total number of 18,293,277 citizens with voting rights, ie 50.95%, were presented. According to the BEC, 77.78% of the voters responded with YES to move to a unicameral Parliament and 22.22% with NO. At the same time, 88.84% of Romanians responded with YES to reduce the number of MPs to a maximum of 300 and 11.16% to NU. Thus, the referendum was validated.

13. The next referendum (the sixth after 1989) took place on July 29, 2012 and aimed at the dismissal of President Traian Basescu. Asked to answer the question 'Do you agree with the dismissal of the President of Romania, Mr. Traian Băseșcu?', 87.52% of the citizens voted for dismissal, while 11.15% against the dismissal. As the 50% + 1 quorum did not meet, only 46.24% of the citizens enrolled in the electoral rolls were present at the referendum, the referendum was invalidated by the Constitutional Court on 21 August 2012.

The Council of Europe's Recommendation No. 1112/1997 recommended in Article 9 that the referendum "presents the risk of becoming plebiscite when used by the executive to strengthen its own power" And art.10 "this risk exists in time-strengthened democracies, especially in countries with an important demographic weight, and consequently more difficult to govern than small countries. It is even greater in new democracies and, therefore, more fragile than previous ones. " By Recommendation 1704/2005, the Council of Europe in Article 5 states that "the recourse to the referendum as a means of firmly anchoring the democratic legitimacy of political processes" "The referendums will not become an alternative to parliamentary democracy and not be abused to mitigate the legitimacy and primacy of parliaments as legislative bodies"

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Faculty of Finance-Accounting of Pitesti  
Center of Financial-Accounting Research of Pitesti

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