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ESTABLISHING STANDARD PRODUCTION COST USING ANOVA PARAMETRIC METHOD IN WOOD PROCESSING INDUSTRY

Assoc. Professor Ion CUCUI
Valahia University of Târgoviște, Romania
Email: ioncucui50@gmail.com
Ph.D. Student Aurelia GHEORGHE (DAMIAN)
Valahia University of Târgoviște, Romania
Email: aura_ghe@yahoo.com
Ph.D. Student Dorian-Florin DAMIAN
Valahia University of Târgoviște, Romania
Email: dorian_dam@yahoo.com

Abstract: The effective capacity of the informations extracted from accounting, to represent the financial position of an economic entity, gives future or not to the current activity conducted in that entity. Therefore the major interest in establishing the economic performances of an entity is the reability of the information. Thus, looking from an objective prespective, the persoective of mathematics, we can accord a high degree of confidence of the information taken into account. This paper is intended to obtain a valid result, that shoud fit in the threshold value used in the ANOVA parametric method to determine a standard cost over a period of time. Capitalizing on information obtained from registrations give certainty to both management accounting as well as those of financial accounting.
Key-words: standard cost; ANOVA parametric method; significance threshold.
JEL Classification: D24, C14.

1. Introduction

Starting from the necessity of calculating and determining a standard production cost on the basis of which records will be recorded in the accounting and financial and accounting data will be established as a source of information used in the decision-making process, this paper wishes to choose a standard cost for a product made in an economic entity in the large-scale wood-cell manufacturing industry. The standard cost is calculated using the ANOVA parametric method, the dispersion analysis method, for a predetermined time period.

In our scientific research we chose for the analysis of the opportunity and effectiveness of determining the standard cost through the ANOVA method, taking into account the following considerations:

a) The type of organization of the economic entity;
b) Cost elements that can be incorporated into the unit cost of the product;
c) Steps of the production process;
d) Production volume and production organization;
e) Selection of the distribution base for indirect costs and allocation of indirect costs by activities;
f) Determining the cost of production as a sum of direct costs and indirect costs;
g) Correlation of Cost Elements in Management Accounting and Financial Accounting.

It is thus desirable to establish a real standard cost that leads to a real financial accounting result that can provide summary information for the management of the economic entity.

2. Scientific research methodology

Parametric methods applied especially in statistics succeed successfully in economics or accounting, and the results obtained have a consistent and viable relevance. The methodology of scientific research in this paper is based on the direct observation of

the reality, of the data provided by the production centres. Data collection is a representative sample type, where the sample type represented by the four production sections differs from the other production sections by the volume of activity volume.

In the present case, by the ANOVA method, the single-factorial dispersion analysis determines the degree of significance of the differences between the independent and dependent variables. A first step in the application of the parametric methods in this paper is the qualitative scientific research necessary for the understanding and interpretation of the data to be analyzed.

The focus on applied research is justified by the desire to find the most efficient solution for calculating the cost of production as a benchmark of records in management accounts. Descriptive scientific research allows correlation of data already obtained from production activity with data used in statistics.

By combining applied and descriptive qualitative research with quantitative research, it is desirable to find a practical model as a source of information in management accounting.

3. Using the single-factorial dispersion ANOVA method to determine the standard production cost

3.1. Stages taken in the scientific research

In order to carry out the scientific approach, the following stages were necessary:

a) *The determination the information to be analyzed*

This step of determinate of the information to be analyzed was based on the consideration listed above. From the multitude of information provided in the production process through the management accounting, the information that is connected and leads to the accomplishment of the purpose of the work is kept as follows:

- The economic entity is organized in several production sections, of which 4 sections produce the largest volume of the analyzed product, namely: Italian style corner sofa bed;
- The production flow is weekly, by lot;
- The reference period is January 2017, the month in which 5 lots are obtained: Lot 700, 701, 702, 703, 704.

b) *Choosing parametric method*

The single-factorial dispersion ANOVA method uses independent and dependent variables, and will establish the correlation between them.

b.1. Defining information: production costs obtained on the sections - as independent variables, and production costs obtained on batches as dependent variables

b.2 Setting measurement scale for variables - measuring scale = monetary units (m.u.)

b.3. Applying the parametric model, obtaining the results and interpreting them

3.2. Determination of standard production cost

The determination of the standard production cost by applying the ANOVA single-factor dispersive parametric method was performed according to the following steps:

a) Cost analysis of each production unit and determining the amount of costs per section;
b) Analysis of production costs by lots;
c) Establishment of the average cost per section;
d) Establishment of average cost in January 2017;
   Valorisation of results and application of the method by using parametric calculus formulas;

e.1 Calculation of the random factor (sum of squares within the batches SP$_{WITHIN}$);
e.2 Calculate the systematic factor (sum of squares between sections SP$_{BETWEEN}$);
e.3 Calculating the sum of squares SP$_{TOTAL}$;
e.4 Calculation of degrees of freedom (d.f.);
e.5 Calculate the average squares.
f) Transposing the results in the Dispersion Analysis Panel (ANOVA);
g) Applying the F test and comparing with the significance threshold.
The calculation is highlighted in accordance with the steps in Table no. 1.

Table no. 1. Determination of standard production cost of *Italian style corner sofa bed*

No.	Indicator	Measure unit	Section 1	Section 2	Section 3	Section 4
0	1	2	3	4	5	6
1	Cost of production on 11.01.2017 (lot 700)	m.u.	2,520	2,522	2,531	2,527
2	Cost of production on 16.01.17 (lot 701)	m.u.	2,527	2,522	2,514	2,519
3	Cost of production on 20.01.17 (lot 702)	m.u.	2,530	2,533	2,536	2,528
4	Cost of production on 26.01.17 (lot 703)	m.u.	2,520	2,540	2,525	2,532
5	Cost of production on 31.01.17 (lot 704)	m.u.	2,524	2,537	2,530	2,541
6	Number of batches (l)	m.u.	5	5	5	5
7	Cost per unit cost	m.u.	12,621	12,654	12,636	12,647
8	Average cost per unit	m.u.	2,524.2	2,530.8	2,527.2	2,529.4
9	Average cost in January 2017	m.u.	**2,527.9**			

The calculation formula for the sum of squares within the batches is:

$$SP_{WITHIN} = \Sigma \, (x - average \,_s)^2 \qquad\qquad (1)$$

The formula for the Sum of squares between sections is:

$$SP_{BETWEEN} = \Sigma \, l \, (average \,_s - average \,_{total})^2 \qquad\qquad (2)$$

Table no. 2. Assistance calculation for the sum of squares within the batches

No.	Indicator	Xmed$_{s1}$	Xmed$_{s2}$	Xmed$_{s3}$	Xmed$_{s4}$	(Xmed$_{s1}$)^2	(Xmed$_{S2}$)^2	(Xmed$_{s3}$)^2	(Xmed$_{S4}$)^2
1	L700	-4.2	-8,8	3.8	-2.4	17.64	77.44	14.44	5.76
2	L701	2.8	-8.8	-13.2	-13.2	7.84	77.44	174.24	108.16
3	L702	5.8	2.2	8.8	8.8	33.64	4.84	77.44	1.96
4	L703	-4.2	9.2	-2.2	-2.2	17.64	84.64	4.84	6.76
5	L704	-0.2	6.2	1.8	1.8	0.04	38.44	3.24	134.56
6	Total					76.8	282.8	274.2	257.2

$SP_{WITHIN} = 76.8 + 282.8 + 274.2 + 257.2 = 891$

$SP_{BETWEEN}$ = $5(2,524.2 - 2,527.9)^2$ + $5(2,530.8 - 2,527.9)^2$ + $5(2,527.2 - 2,527.9)^2$ + $5(2,529.4 - 2,527.9)^2$ = 5*13.69 + 5*8.41 + 5*0.49 +5*2.25 = 68.45 + 42.05 + 2.45 + 11.25 = 124.2

SP_{TOTAL} = 891 + 124.2 = 1,015.2

N = 20 (number of costs)

s = 4 (number of sections)

N – s = 16

N – 1 = 19

Average squares = Sum of squares / df (Degree of freedom)

Table no. 3. Single-Factor Dispersion Analysis (ANOVA)

Factor / Rezult	Sum of squares	df(The degree of freedom)	Average squares
$SP_{BETWEEN}$ (the systematic factor)	124.2	s – 1 = 3	41.4
SP_{WITHIN} (the random factor)	891	N – s = 20 – 4 =16	55.69
SP_{TOTAL}	1,015.2	N – 1 = 19	53.43

Test F

(average $SP_{BETWEEN}$) / (average SP_{WITHIN}) = 41.4 / 55.59 = 0.7434

0.7434 / 100 = 0.007 < 0.05 (the threshold of significance)

4. Conclusions and contributions

By adapting ANOVA as a costing method, it can be seen that it can be successfully applied as a modern management method with a positive impact and a high degree of confidence about the results achieved. The requirement of representativeness of the standard production cost as the standard cost is given by the limitation of the materiality threshold.

Applying the ANOVA parameter method, the single-factor dispersion method results in a score of 0.007. The significance threshold is 0.05. The result obtained falls below the materiality threshold, which leads us to the decision to accept as standard the standard production cost of 2,527.9 m.u. for batches manufactured between January 1st and 31st, 2017 in the article ***Italian style corner sofa bed***.

The results of this research lead us to the conclusion that this analysis can easily be extended to the other products of the economic unit taken as a model, and can also be successfully used in the management accounting approach, in general.

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STABILIREA COSTULUI STANDARD DE PRODUCŢIE CU AJUTORUL METODEI PARAMETRICE ANOVA ÎN INDUSTRIA PRELUCRĂRII LEMNULUI

Prof. univ. dr. Ion CUCUI
Universitatea Valahia din Târgovişte, România
Email: ioncucui50@gmail.com
Drd. Aurelia GHEORGHE (DAMIAN)
Universitatea Valahia din Târgovişte, România
Email: aura_ghe@yahoo.com
Drd. Dorian-Florin DAMIAN
Universitatea Valahia din Târgovişte, România
Email: dorian_dam@yahoo.com

Rezumat: Capacitatea efectivă a informaţiilor, extrase din contabilitate, de a reprezenta situaţia financiară a unei entităţi dă viitor sau nu activităţii desfăşurate în acea entitate. De aceea, interesul major în stabilirea performanţelor economice ale unei entităţi, îl constituie credibilitatea informaţiilor. Analizând dintr-o perspectivă obiectivă, perspectiva matematică, se poate acorda un grad ridicat de încredere asupra informaţiilor luate în calcul. În prezenta lucrare se doreşte obţinerea unui rezultat valid, rezultat ce trebuie să se încadreze în pragul de semnificaţie utilizat în metoda parametrică ANOVA pentru a determina un cost etalon – cost standard de producţie, într-o perioadă de timp dată. Valorificarea informaţiilor obţinute dau certitudine atât înregistrărilor din contabilitatea de gestiune, cât şi celor din contabilitatea financiară.
Cuvinte-cheie: cost etalon, cost standard, ANOVA, prag de semnificaţie, parametrice.
Clasificare JEL: D24, C14.

1. Introducere

Pornind de la necesitatea calculării şi determinării unui cost standard de producţie, pe baza căruia se vor face înregistrări în contabilitatea de gestiune şi se vor stabili date financiar-contabile ca sursă de informaţii valorificate în procesul decizional, prin prezenta lucrare se doreşte alegerea unui cost etalon pentru un produs realizat într-o entitate economică din industria prelucrării lemnului –mobilei, de serie mare. Costul etalon se calculează prin intermediul metodei parametrice ANOVA, metoda analizei dispersionale, pentru o perioadă de timp prestabilită.

În cercetarea noastră ştiinţifică am ales, pentru analiza oportunităţii şi eficacităţii determinării costului standard, metoda ANOVA, având în vedere următoarele considerente:
   a) Modul de organizare a entităţii economice;
   b) Elementele de cost incorporabile în costul unitar al produsului realizat;
   c) Etapele procesului de producţie;
   d) Volumul producţiei şi organizarea producţiei;
   e) Alegerea bazei de repartizare pentru cheltuielile indirecte şi repartizarea cheltuielilor indirecte pe activităţi;
   f) Stabilirea costului de producţie ca sumă de costuri directe şi costuri indirecte;
   g) Corelarea elementelor de cost din contabilitatea de gestiune şi contabilitatea financiară.

Se doreşte, astfel, stabilirea unui cost standard real, care să conducă la un rezultat financiar-contabil real, ce poate oferi informaţii de sinteză pentru conducerea entităţii economice.

2. Metodologia cercetării ştiinţifice

Metodele parametrice aplicate, în special, în statistică reuşesc a fi adaptate cu succes şi în economie sau contabilitate, rezultatele obţinute având o relevanţă consistentă şi

viabilă. Metodologia cercetării științifice din lucrarea de față se bazează pe observarea directă a realității, a datelor furnizate din centrele (secțiile) de producție. Culegerea datelor este de tip eșantion reprezentativ. Tipul de eșantion – cele 4 secții de producție - se diferențiază față de celelalte secții de producție prin mărimea volumului de activitate.

În cazul de față, metoda ANOVA, analiza dispersională unifactorială, determină gradul de semnificație a diferențelor dintre mediile variabilelor independente și cele dependente. Un prim pas în aplicarea metodelor parametrice din lucrarea de față îl constituie cercetarea științifică calitativă, necesară în înțelegerea și interpretarea datelor de analizat. Orientarea spre cercetarea aplicată se justifică prin dorința de a descoperi cea mai eficientă soluție pentru calculul costului de producție ca etalon al înregistrărilor din contabilitatea de gestiune. Cercetarea științifică descriptivă permite corelarea datelor deja obținute din activitatea de producție cu datele utilizate în statistică.

Combinând cercetarea calitativă aplicată și descriptivă cu cercetarea cantitativă se dorește găsirea unui model practic, constituit ca sursă de informații în contabilitatea de gestiune.

3. Utilizarea metodei ANOVA dispersionale unifactoriale pentru determinarea costului standard de producție

3.1. Parcurgerea etapelor

În vederea demarării cercetării stiințifice dorite, a fost necesară parcurgerea următoarelor etape:

a) Stabilirea informațiilor de analizat

Stabilirea informațiilor de analizat s-a realizat în funcție de considerentele enumerate mai sus. Din multitudinea informațiilor puse la dispoziție în cadrul procesului de producție, prin intermediul contabilității de gestiune, se păstrează acele informații care au legătură și conduc spre realizarea scopului lucrării, după cum urmează: entitatea economică este organizată în mai multe secții de producție; dintre acestea, 4 secții produc cel mai mare volum din produsul analizat, și anume: colțar stil italian; fluxul de producție este săptămânal, pe loturi; perioada de referință este luna ianuarie 2017, lună în care se obțin 5 loturi : lotul 700, 701, 702, 703, 704.

b) Alegerea metodei parametrice

Metoda ANOVA dispersională unifactorială utilizează variabile independente și variabile dependente, urmând a stabili corelația dintre acestea.

b.1 Definirea informațiilor. Ca variabile independente – costurile de producție obținute pe secții, ca variabile dependente – costurile de producție obținute pe loturi.

b.2 Stabilirea scalei de măsurare pentru varibile – scala de măsurare = unități monetare (u.m.)

b.3. Aplicarea modelului parametric, obținerea rezultatelor și interpretarea acestora.

3.2. Stabilirea costului standard de producție

Stabilirea costului standard de producție, prin aplicarea metodei parametrice dispersionale unifactoriale ANOVA, s-a realizat conform următoarelor etape:

a) Analiza costurilor din fiecare secție de producție și stabilirea sumei costurilor pe secție;

b) Analiza costurilor de producție pe loturi;

c) Stabilirea mediei costului pe secție;

d) Stabilirea mediei costului în luna ianuarie 2017;

e) Valorificarea rezultatelor și aplicarea metodei prin utilizarea formulelor de calcul parametrice;

e.1 Calculul factorului aleator (suma pătratelor din interiorul loturilor SP_{WITHIN});

e.2 Calculul factorului sistematic (suma pătratelor dintre secţii $SP_{BETWEEN}$);

e.3 Calculul sumei pătratelor SP_{TOTAL};

e.4 Calculul gradelor de libertate (df);

e.5 Calculul mediei pătratelor.

f) Transpunerea rezultatelor in Tabloul analizei dispersionale (ANOVA);

g) Aplicarea testului F şi compararea cu pragul de semnificaţie.

Calculaţia este evidenţiată corespunzător etapelor în Tabelul nr. 1.

Tabel nr. 1. Stabilirea costului standard de producţie pentru produsul *Colţar stil italian*

Nr. crt.	Indicator	Unitate măsură	Secţia 1	Secţia 2	Secţia 3	Secţia 4
0	1	2	3	4	5	6
1	Cost de producţie în data de 11.01.17 (lot 700)	u.m.	2520	2522	2531	2527
2	Cost de producţie în data de 16.01.17 (lot 701)	u.m.	2527	2522	2514	2519
3	Cost de producţie în data de 20.01.17 (lot 702)	u.m.	2530	2533	2536	2528
4	Cost de producţie în data de 26.01.17 (lot 703)	u.m.	2520	2540	2525	2532
5	Cost de producţie în data de 31.01.17 (lot 704)	u.m.	2524	2537	2530	2541
6	Număr loturi (l)	u.m.	5	5	5	5
7	Suma costurilor pe secţie	u.m.	12621	12654	12636	12647
8	Media costului pe secţie	u.m.	2524,20	2530,80	2527,20	2529,40
9	Media costului in luna ianuarie 2017	**u.m.**	**2527,90**			

Formula de calcul pentru Suma pătratelor din interiorul loturilor este:

$$SP_{WITHIN} = \Sigma \, (x - media_s)^2 \qquad (1)$$

Formula de calcul pentru Suma pătratelor dintre secţii este:

$$SP_{BETWEEN} = \Sigma \, l \, (media_s - media_{total})^2 \qquad (2)$$

Tabelul nr. 2. Calcul ajutător pentru Suma pătratelor din interiorul loturilor

Nr crt.	Indicator	$Xmed_{s1}$	$Xmed_{s2}$	$Xmed_{s3}$	$Xmed_{s4}$	$(Xmed_{s1})^2$	$(Xmed_{S2})^2$	$(Xmed_{s3})^2$	$(Xme_{S4})^2$
1	L700	-4,2	-8,8	3,8	-2,4	17,64	77,44	14,44	5,76
2	L701	2,8	-8,8	-13,2	-13,2	7,84	77,44	174,24	108,16
3	L702	5,8	2,2	8,8	8,8	33,64	4,84	77,44	1,96
4	L703	-4,2	9,2	-2,2	-2,2	17,64	84,64	4,84	6,76
5	L704	-0,2	6,2	1,8	1,8	0,04	38,44	3,24	134,56
6	Total					76,8	282,8	274,2	257,2

$SP_{WITHIN} = 76,8 + 282,8 + 274,2 + 257,2 = 891$

$SP_{BETWEEN} = 5(2524,2 - 2527,9)^2 + 5(2530,8 - 2527,9)^2 + 5(2527,2 - 2527,9)^2 + 5(2529,4 - 2527,9)^2 = 5*13,69 + 5*8,41 + 5*0,49 + 5*2,25 = 68,45 + 42,05 + 2,45 + 11,25 = 124,2$

$SP_{TOTAL} = 891 + 124,2 = 1015,2$

N = 20 (număr costuri)

s = 4 (număr secţii)

N – s = 16

N – 1 = 19

Media pătratelor = Suma pătratelor / df (Gradul de libertate)

Tabelul nr. 3. Tabloul analizei dispersionale (ANOVA) unifactoriale

Factorul \ Rezultatul	Suma pătratelor	df(Gradul de libertate)	Media pătratelor
(factorul sistematic) $SP_{BETWEEN}$	124,2	s – 1 = 3	41,4
(factorul aleator) SP_{WITHIN}	891	N – s = 20 – 4 = 16	55,69
SP_{TOTAL}	1015,2	N – 1 = 19	53,43

Testul F

(media $SP_{BETWEEN}$) / (media SP_{WITHIN}) = 41,4 / 55,59 = 0,7434

0,7434 / 100 = 0,007 < 0,05 (pragul de semnificaţie)

4. Concluzii şi contribuţii

Prin adaptarea metodei parametrice ANOVA, ca metodă de calcul a costurilor, se poate observa că aceasta poate fi aplicată cu succes ca metodă modernă de gestiune, cu impact pozitiv şi grad ridicat de încredere cu privire la rezultatele obţinute. Cerinţa de reprezentativitate a costului standard de producţie, ca şi cost etalon, este dată de limitarea pragului de semnificaţie.

Aplicând metoda parametrică ANOVA, metoda dispersională unifactorială se ajunge la un rezultat de 0,007. Pragul de semnificaţie este de 0,05. Rezultatul obţinut se încadrează sub pragul de semnificaţie, ceea ce ne conduce la decizia de a accepta ca referinţă costul standard de producţie la valoarea de 2527,9 u.m. pentru loturile fabricate în perioada 01-31 ianuarie 2017, la articolul "Colţar stil italian".

Rezultatul prezentei cercetări ştiinţifice ne conduce la concluzia că această metodă de analiză unifactorială, ANOVA, poate fi utilizată cu succes și pentru celelalte produse

ale entităţii economice luate ca model şi, în acelaşi timp, aplicată, după caz, în contabilitatea managerială, în general.

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ECONOMETRIC ANALYSIS OF DIFFERENTIAL TRADE PREFERENCES IN THE ECONOMIC SOCIETY OF WEST AFRICAN COUNTRIES

Lecturer Ph.D. Moses A. ERHI
Benson Idahosa University, Nigeria
Associate Professor Ph.D. David UMORU
Edo University, Nigeria
Email: david.umoru@edouniversity.edu.ng

Abstract: This study is an econometric exploration of the impact of differential trade preferences on the Economic Society of West African Countries with focus on the Cotonou Agreement period of 2001 to 2013. The aim was to empirically evaluate using panel least squares regression method the degree to which the preferential trade agreement between EU and ECOWAS has affected intra-ECOWAS integration. Given a significant interactive effect, we accept the supposition that EU exceptional trade agreements with ECOWAS countries have not significantly enhanced intra-ECOWAS trade. Accordingly, the study found that the adverse effect of ECOWAS openness to the EU on ECOWAS intra-trade is instituted on intermittent differentials of favored treatments to different ECOWAS member countries. There is need for the consistency of the special treatment of ECOWAS by the EU.
Keywords: Trade, Preferences, Economic Society, African Countries.
JEL Classiffication: C58, F13, F17.

1. Introduction

The trade link between the European community and West African countries has taken different dimensions and characteristics in issues of country groups/communities and product coverage as well as rule of origin. Before the formation of Economic Community of West Africa States in 1975, two major forms of preferential trade agreements with the European Community involved West African countries. These agreements were the two Yaounde Conventions of 1963 to 1975, which involved only French West African countries among other non-West African former French colonies.

The preferential trade agreement between the sub-region of ECOWAS and that of the EU is the Contonou Agreement. Between 2008 and 2013, Cote d'Ivoire and Ghana operated under the EPA interim agreements, while Nigeria operated under the Generalized Special Preferential (GSP) initiative. The foundation of ECOWAS since 1975 has increased intra-trade as one of its main objectives. The explanation is that scale economics that can result from improved intra-trade can enhance the international competitiveness of export products of the sub-region. This condition is exceedingly applicable for ECOWAS whose individual countries constitute small markets on their own. The countries also rely on a few primary products for exports which expose them to fluctuations in the international commodity prices with resultant development problems such as unemployment and social unrest or conflicts.

Efforts to stimulate intra-trade among ECOWAS member countries seem not to have yielded good results. Many reasons beyond the trade theory underpinning have been given. These have formed sources of research studies. The major factor that has been hypothesized to be linked with low intra-trade in ECOWAS is the EU trade link with ECOWAS. Trade link in terms of openness to the EU has been considered to be associated with the special trade contract between the two associations. This factor has gained miniature or no empirical verification. This study is meant to attend to this gap.

The relevant research question is *has the preferential trade regime between the ECOWAS nations and the EU enhanced intra-WAEMU trade?* Also have the EU preferential trade agreements with ECOWAS countries been pro intra-WAMZ trade? The study hypothesized that EU preferential trade agreements with ECOWAS countries have

not significantly enhanced intra-ECOWAS trade. The study so seeks to assess the degree to which the preferential trade agreement between EU and ECOWAS has affected intra-ECOWAS integration. Following this introduction is the empirical literature review, thereafter; we have the theoretical framework and model specification which is followed by estimation results and conclusion.

2. Succinct Review of Previous Studies

The provision of preferential trading arrangement offered to developing counties is of late a common issue in emerging countries. Besides the EU that has championed the course, US, Canada, Japan and China, have offered improved access to their markets for African goods. A good example of this is the African Growth and Opportunity Act (AGOA) offered by US to African countries, since 2000. EU exceptional trade programmes have taken different forms.

To Gamberoni (2007), the traditional GSP is least favorable and the ACP agreements most favorable to the developing countries. According to Balogun (2010), there are three types of cumulation: The first is bilateral cumulation. This is mainly applicable to a Free Trade Area. As the name goes, this is connected with two countries. Under this arrangement, country (I) can use inputs from country (II), if they form a Free Trade Area without affecting the originating status.

Next, is the diagonal cumulation which is connected with the EU as it allows countries covered by the same agreements, the use of intermediate materials that originate in any one of them. This assumes that materials originate in the country where the final processing is done. Last of all, we have Full cumulation. This differs from diagonal cumulation by being more relaxed. The value-added in countries of final processing may be very minute, but yet it is still considered to have the originating status to the final good.

3. Theory, Framework & Model

The theoretical framework of the study derives from the pareto-optimum theorem due to Lipsey and Lancaster (1956) that intra-industry trade is a materialization of product differentiation, and that product differentiation highlights the position of economies of scale in trade. In view of the Pareto-optimum of Lipsey and Lancaster (1956), we specify the model as follows:

$$G\ (Z_1, Z_2, ..., Z_n) \qquad (3.1)$$

Where G is a utility function and Zi is the quantity of commodity i which is consumed. The maximization of F is confined to:

$$t\ddot{o}\ (Z_1, Z_2, ..., Z_n) = 0 \qquad (3.2)$$

($\ddot{o}$ being a production possibilities constraint. Invoking the presumptuous that the solution can be found at the interior position, then it will be illustrated by the conditions that maximize the Lagrangian function:

$$L = Z\ (Z_1, Z_2, ..., Z_n) - \ddot{e}\ddot{o}\ (Z_1, Z_2, ..., Z_n \qquad (3..3)$$

where λ is a Langrangian multiplier. The paretian optimal conditions are given by the n first order conditions

$$F_i - \ddot{e}\ddot{o}i = 0\text{-}(3.3),\ i = 1,\ 2...,n \qquad (3.4)$$

where the subscript i denotes the partial derivatives with respect to the ith variable. Further expression of these conditions is as follows:

$$Z_1/\ddot{o}_1 = Z_2/\ddot{o}_2 = ... \frac{Fn}{\ddot{o}n} \qquad (3.5)$$

This is obtained from

$$Zi - \ddot{e}\ddot{o}i = 0,\ Z_1 = \ddot{e}\ddot{o}_1 \qquad (3.6)$$

and from

$$Z_2 - ëö_2 = 0, Z_2 = ëö_2. \tag{3.7}$$

The solution for λ in $\lambda = Z_1/\varphi_1$ and $\lambda = \frac{Z2}{\varphi 2}$ implies that:

$$Z_1/\varphi_1 = \frac{Z2}{\varphi 2} = \dots = \frac{Zn}{\varphi n}. \tag{3.8}$$

If a condition is not meant, assuming
Z_1/φ_1 so that $\frac{Z1}{\varphi 1} = K \frac{Z2}{\varphi 2}$; $K \neq 1$ such that

$$\frac{Z1}{\varphi 1} - K \frac{Z2}{\varphi 2} = 0 \tag{3.9}$$

is an additional constraint. This requires the reformulation of the optimum problem in the form:

$$Max\ G(Z_1, Z_2, \dots, Z_n)$$
Subject to $\varphi\ (X_1, X_2, \dots, X_n) = 0,$

and $\quad Z_1/Z_2 - K \frac{\varphi 1}{\varphi 2} = 0 \tag{3.10}$

Maximize the langrangian function:

$$L = G\ (Z_1, Z_2, \dots, Z_n)\ -\lambda^1 \varphi\ (Z_1, Z_2, \dots, Z_n) - \mathcal{y}\ (Z_1/Z_2 - K \frac{\varphi 1}{\varphi 2}) \tag{3.11}$$

Employing the partial derivatives and noting that du_1 and du_2 require the application of quotient rule, we obtain the new optimum conditions as follows:

$$Zi - \lambda^1 \varphi_1 - \mu \frac{Z_2 Z_1 i - Z_1 Z_2 i}{Z^2_2} - K \frac{\varphi_2 \varphi_1 i - \varphi_1 \varphi_2 i}{\varphi^2_2} = 0,\ i = 1,2 \dots,n \tag{3.12}$$

The question now is whether the conditions for the second best optimum, is the same, as the first best Pareto optimum in equation (3.11). The two equations are comparable if and only if, the following two conditions hold such that (i) $\mu = 0$ (ii) $\mu \neq 0$, but the expression in (the parentheses) in equation (3.12) is zero for all *i*.

That the condition for the second best optimum, given any additional constraint will be different from the corresponding conditions for the pareto optimum. The empirical model in log form is:

$$LnT_{(ij)t} = f_0 + f_1 LnY_{it} + f_2 LnY_{jt} + f_3 LnN_{it} +$$

$$f_4 LnN_{jt} + f_5 LnM_{it} + f_6 LnM_{jt} + f_7 LnT_{(ij)t-1} + e_{ijt} \tag{3.13}$$

Variables: Different studies have adopted different specifications of variables capturing trade creation and trade diversion in a gravity model. The measurement of trade has taken basically three forms. It has been (i) average trade, (ii) exports and (iii) imports "mirroring" exports. Considering the size of informal trade within the ECOWAS region, where official data underestimates the true magnitude of both inter-country and intra-regional trade, the need to use imports becomes necessary. The equations estimated in this research work include interaction variables such as the exporter and importer countries openness to the EU.

The issue of openness to EU as a measure of the effect of the preferential trade agreements on ECOWAS intra-trade helps to avoid different measures and appropriateness of preference values. These measures include the preference margin (a difference between the MFN tariff and the preference tariff rate), the coverage rate of the preferential treatment (dutiable imports for preferential treatment), utility rate (dutiable imports entered with preferences and lastly the utilization rate (the measure of the degree to which

preference-eligible dutiable imports enter under preferential-rather than the MFN-tariffs (Plummer, Cheong and Hamanaka, 2010).

Although this advantage claimed has the serious assumption that all trade are carried out under preference legibility. The study utilized the fixed effects estimator. The fixed effects estimator was adopted in this study in light of the Hausman test. In the fixed effects framework, the intercept varies across the time period T and/or the N cross-sectional units.

Table no. 1: Definition of Variables and Data Sources

Variables	Units	Explanation	Sources of Data
$T{i}^{j}$	US$	Import of country i from country j	UN comtrade
LnY_i	US$	Importer country real GDP	World Development Indicators of the World Bank
LnY_j	US$	Log of exporter Country real GDP	World Development Indicators of the World Bank
LnM_i	%	ECOWAS' individual country's export to and imports from EU as a % of the respective country's GDP (importer countries)	UN comtrade and author's computation
LnM_j	%	ECOWAS's individual country's exports to and imports from EU as a % of the respective country's GDP (exporter countries)	UN comtrade data and author's computation
$LnN{i}$	Million	Importer Country's population	World Development Indicators
LnN^{j}	Million	Exporter country's population	World Development Indicators
$LnT(i{j})_{t-1}$		One period lag of $T{i}^{j}$	Author's computation

4. Econometrics Results

From Table no. 2, the constant term, though significant at 5%, does not make much economic sense with the negative sign. In line with the apriori, expectation the coefficient of the importer and exporter GDPs are correctly signed. They are both significant at 10% level of significance. The importer country GDP (GDPi) indicated that a 1% increase in GDP was associated with 38.6% increase in demand for imports.

Furthermore, a 1% increase in openness of the exporter country resulted in about 0.24% increase in intra-trade at 5% level. The interaction effect linking the importer and exporter openness to EU has a negative sign and significant at 10%, all things been equal. The F-statistic is highly significant even at 1% level of confidence. This shows the $R^2 \neq 0$.

The GDP of the importer country (GDPi) indicated that a 1% increase in GDP stimulated about 38.6% increase in demand for imports. Similarly, a 1% rise in the GDP stimulates about 38.7% increase in export supply within the ECOWAS nations.

The coefficients of population are significantly different from zero at 10% level of significance and as such enhance intra-ECOWAS trade. Distinctively, the coefficient of Ni shows that a 1% increase in population would induce about 0.43% increase in imports.

A 1% increase in population of the exporter country, about 0.40% increase in supply of exports is generated. The coefficients of the variables of openness of ECOWAS

to the EU, Mì and Mj are both significant and directly related to intra-ECOWAS trade. A 1% increase in the import generates 0.57% increase in the intra-trade.

Table no. 2: Panel Least Squares

Dependent Variable Tij

Regressors	Fixed Effect
Constant	*-8.243***
	(-2.288)
	{0.522}
LnYì	*38.637****
	(1.725)
	{0.084}
LnY$_j$	*38.732****
	(1.7345)
	{0.836}
LnNì	*0.4274***
	(2.328)
	{0.0207}
LnNj	*0.480***
	(2.3689)
	{0.014}
LnMì	*0.5670**
	(4.5791)
	{0.000}
LnMj	*0.23572****
	(1.966)
	{0.052}
LnT(ì)$_{t-1}$	*1.4562****
	(18.376)
	{0.000}
R^2	*0.8573*
S.E of Reg.	*1.3264*
F-ratio	*66.935*
Durbin Watson	*1.366772*

P-value in bracket,
t-stat in parenthesis, significant at 1%,
***significant at 5% and*
****significant at 10%.*
Source: *Author's Results*

Results of the Test of Hypothesis

Testing the stated hypothesis based on estimated results, we found an overwhelming negative and significant interactive effect. We so accept the hypothesis that EU preferential trade agreements with ECOWAS countries have not significantly enhanced intra-ECOWAS trade.

5. Concluding Remarks

The study evaluated the consequences of the differential trade preferences on ECOWAS member countries. The unfavorable effect of ECOWAS openness to the EU on

ECOWAS intra-trade is instituted on intermittent differentials of favored treatments to different ECOWAS member countries. Consistency of the preferential treatment of ECOWAS by the EU is needed. Also, there is a necessity to have full cumulation. This will enable products with imported intermediates from outside qualifying for the preferential treatment.

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ORGANIZATIONAL JUSTICE BASED CULTURE AND ITS IMPLICATIONS

Associate Professor Ph.D. Cristina GĂNESCU
"Constantin Brâncoveanu" University of Pitești, Romania
Email: cristina_ganescu@yahoo.com

Abstract: Over the last five decades, the concept of organizational justice has been a topic of interest for human resource management, industrial organizational psychology and organizational behavior alike. Current research set out the many practical implications of organizational justice, defined specific theories and models in relation to ethics, law, and equity. The current paper aims to explain the concept of organizational justice, the existing models and theories, as well as the consequences of its practical use. The paper also presents a new concept, that of a culture based on organizational justice and its role in companies.
Key-words: organizational justice, culture based on organizational justice, ethics, equity.
JEL Classification: D63, O15.

1. Introduction

Over the last five decades, the concept of organizational justice has been a topic of interest for human resource management, industrial organizational psychology and organizational behaviour alike.

Justice has become "the major interest of organizations and employees" (Săucan and Micle, 2011, p.291). Thus, organizations and managers do not want organizational events to be perceived as unfair and to lead to negative attitudes and behaviors, such as theft, sabotage, bribery, and abuse. The perception of fairness generates positive attitudes and behaviors of employees, increasing performance at work and more engagement in organizational change.

Current research sets out the many practical implications of organizational justice, defines specific theories and models in relation to ethics, law, and equity. Moreover, there is a need to create a culture of organizational justice, which is the basis for defining the identity of the organization and its relations with interest holders.

This paper aims to explain the concept of organizational justice, to present its forms, as well as its implications for organizations. It defines the concept of culture based on organizational justice and establishes its role within an organization.

2. The concept of organizational justice and its forms. Theories and models

For Jerald Greenberg (Greenberg, Bies și Eskew, 1991), the creator of the concept, organizational justice explains "the role of fairness in analyzing the workplace." The author believes that organizational justice refers to the ways in which employees determine whether they have been properly treated and the ways in which other work-related variables are influenced.

"Organizational justice is based on an individual's perception of the fairness of treatment received from an organization, and their behavioral reactions to such perceptions" (Tran, 2016).

The theories of organizational justice are differentiated according to the elements they highlight, depending on the rules being applied and the components being evaluated.

The definition of the concept of distributive justice is attributed to Homans (1961), who felt that "the sense of justice or injustice is determined by the exchange relationship generated by the profits/ investments ratio, this theoretical model being applied not only in

cases of two actors in a direct relationship, but also in cases where a third party intervenes, such as the employer of the first two" (Iluț, 2015, p.6).

Distributive justice was also defined by Deutsch (1969), who studied the correctness of the allocation of results obtained by employees. The rules underlying this form of organizational justice are: equity, equality and needs. Equity corresponds to individuals' perceptions of results that commensurate with their contribution. For example, performance rewarding is a method of distributing equity: employees who work harder are more productive and want to receive more than those who do not get involved in the same way. Applying equality is considered fair when team members are rewarded based on the results of the whole group. Employees sometimes appreciate that the distribution of reward according to needs is fair when everyone receives an equal share of the benefits employees need (Grover, 1991).

The concept of *procedural justice*, created by authors Thibaut and Walker (1975), refers to the study of correctness of the resource allocation process at organizational level. Leventhal's theory (1980) identifies eight aspects of the fairness process: "consistent, beyond person and time, error-free, based on correct information, easily corrected, representative of employee preoccupations, based on moral standards."

Research reveals that distributive justice is more important after a decision to hire a person has been taken, while procedural justice is more important during the recruitment and selection process (Bauer et al., 2001).

Interpersonal and informational justice was defined by Greenberg (1993). Interpersonal justice represents interpersonal equity or interpersonal treatment of individuals. People treated with dignity and respect are perceived as being approached in an equitable interpersonal manner (Săucan and Micle, 2011, p. 296). Managers who want to behave correctly should take into account: the views of employees, the perception of neutrality and consistent application of rules, timely use of answers, proper use of explanations, and treating people with dignity and respect (Greenberg, Bies and Eskew, 1991).

Informational justice refers to the quantity, nature, centering and synchronization of information provided to an individual or group. When individuals receive more credible information in a trial, they will perceive informational justice as fairer.

Authors Colquitt, Greenberg and Zapata-Phelan (2005) created a staging of models and theories on organizational justice in four periods: the stage of distributional justice (equity, equality and need); the stage of procedural justice (consistency, lack of bias, accuracy, representation of all concerned, correction and ethics); the stage of interactional justice (interpersonal justice, informational justice); the integrative stage.

The theoretical model of organizational justice is the theory of equity, created by Adams (1965). According to this theory, people tend to identify the consequences of inequity, to compare these consequences to one's own with the consequences to another person, and to restore equity.

Folger (1986) founded referent cognitions theory, stating that judgments on justice are triggered by comparing a real personal experience with a hypothetical one. Thus, people can make mental scenarios and claim that if a decision-maker acted otherwise, the result would have been beneficial to him.

The fairness theory, created by Folger and Cropanzano (2001), claims that the person who holds responsibility can make judgments about fairness. The following conditions must be met: the occurrence of unfavorable conditions and the responsible person, the occurrence of a consequence due to actions committed by the responsible person and the violation of ethical principles.

The model of group value (Lind and Tyler, 1988) considers that the perception of justice, respect and fairness influences not only the results obtained, but also the values of the group (neutrality or suppression of differences in decision-making, trust or benevolence, recognition of status within the group.

The fairness heuristic theory, founded by Lind (2001), states that social and organizational relationships are created on the basis of repeated encounters with a "fundamental social dilemma": either people obtain results or benefits by identifying with the authority, or become exploitable and compelled to comply with the authority's requirements. The consequences of applying this theory may be: the effect of primordiality (the most accessible information is the one underlying the judgment); the effect of substitutability (if information about correctness is missing, people use other types of fairness to form their own judgments).

Perhaps the most comprehensive of theories is the theory of uncertainty management (Van den Bos, 2002), according to which managers use correctness to manage situations of uncertainty. Applying fairness when there is a difference between one's own knowledge and experience creates a sense of security for individuals in relation to the social environment. Sometimes, when there is no information to issue judgments about how fair they are being treated, individuals take information from others and rely on it, even if it is not complete and verifiable (Beugre, 2007).

Moliner, Cropanzano and Martinez-Tur (2017, p.4) differentiated among three roads to organizational justice:

a) Instrumental models in which individuals care about justice in order to achieve personal benefits;
b) Interpersonal models in which justice permits the creation of close relations among actors;
c) Moral principles in which justice is important to humans in its own right.

3. Implications of organizational justice

Scholarly literature shows that organizational justice plays an important role in the efficient functioning of an entity (Virgolino, Coelho and Ribeiro, 2017; Rastgar and Pourebrahimi, 2013). Hundreds of studies note the relationship between the perception of organizational justice or injustice and the actions of managers, but also the positive or negative impact on the beliefs, actions and results of an organization. Moreover, there are studies according to which employees decide to become more or less involved in an organization, or become part of the organization, depending on the perception of organizational justice. Thus, organizational justice becomes an indicator of the respect that organizations display towards their own employees (Bakhshi, Kumar and Rani, 2009), but also to other interest holders. Organizational justice also positively influences employee engagement, knowledge sharing and innovation-based behavior (Kim and Park, 2017).

According to Cropanzano, Bowen and Gilliland (2007, p. 6), organizational justice has the following consequences:

- impacts workplace performance and interpersonal relationships; thus, if managers apply interpersonal justice, they create strong relationships with subordinates, motivating them to achieve high performance;
- creates positive organizational behaviors; people who are treated fairly are more tempted to follow the rules of the workplace, to help others and to surround themselves with the right people;
- provides customer satisfaction and creates attachment and loyalty; thus, organizational justice contributes to the creation of good internal and external relations;

•it lies at the core of the organizational values system and of the management philosophy, and creates a culture of organizational justice.

Organizational justice also has implications in work motivation (Cropanzano and Rupp, 2003, p.83). When individuals think they are being treated properly, they tend to record high performance and show organizational citizenship behavior, rejecting conflicts. Interpersonal relationships are seen as social exchanges between employees and leaders.

The implications of organizational justice are evident in all essential activities of human resources management (Săucan and Micle, 2011, pp. 297-298):

•in decisions regarding the selection of human resources, the main rule of distributive justice is equity, so its violation is perceived as unfair;

•in selection decisions, procedural justice decreases in importance, following the feedback of the employment decision;

•interpersonal justice becomes more important during the interview, and informational justice is most important after a negative decision;

•for performance evaluation, the most powerful rule of distributive justice is equity, and its violation is perceived as unfair;

•for the allocation of compensation, distribution based on fairness or equality will be considered fair, although the effect is relative, depending on the characteristics of the situation, the allocation of the decision and the individual differences;

•for compensation, information aspects are more important than interpersonal issues in generating perceptions of fairness of remuneration;

•the allocation of benefits will be perceived even more correctly to the extent that it will be made on the basis of equality, provided that the need is based on the granting of family benefits;

•equity is the most important distributive principle in making a decision to dismiss or promote, and equality is more important when assessing the severity of redundancy packages;

•the dimensions of interpersonal and informational justice are important in redundancy and promotion situations.

The perception of individuals on the role of leaders in organizational justice is important when it comes to creating and maintaining good working relations, trust, respect and mutual obligations. For some authors (Erdogan and Liden, 2006, p. 3), collectivism is a moderator of the employee-leader relationship, based on maintaining harmonious relations.

For Hosmer and Kiewitz, organizational justice is related to "attitudinal changes in job satisfaction, organizational commitment and managerial trust beliefs; behavioral changes in task performance activities and ancillary extra-task efforts to assist group members and improve group methods; numerical changes in the quantity, quality and efficiency of divisional outputs and, though this is far more tentative, eventual changes in the competitive advantage and finacial performance of the full organization" (Hosmer and Kiewitz, 2005, p.67.).

The theory of equity explains motivation, emphasizing individual perception of the correctness of a situation and how inequity causes certain behaviors. If an employee perceives that he/ she is not treated fairly compared to other colleagues, he/ she will react in one of the following ways: he/ she will try to adjust the effort to the reward, will ask to be paid after the work is done, will try to change his/ her perception, will leave the organization. Other studies highlight the consequences of organizational injustice: negative

behaviors such as loss of confidence, labor dissatisfaction, increased business intentions and absenteeism (Deery, Iverson and Walsh, 2006; Montes and Irving, 2008).

4. Culture based on organizational justice - a source of competitive advantage

A culture based on organizational justice is a form of positive organizational culture, representing the set of values, norms and behaviors that ensure correct organizational relationships based on trust, respect and tolerance.

Some empirical studies establish the correlation between organizational justice and organizational culture as a mediator of the exchange relationship between leaders and employees (Erdogan, Liden and Kraimer, 2006, pp. 395-406). Others believe that the perception of organizational justice and organizational culture influences organizational commitment (Yavuz, 2010, pp. 695-701).

The elements of a culture based on organizational justice are: organizational values oriented towards the correct treatment of employees; behavioral rules aimed at observing equity/ equal treatment; accepted and expected behaviors, based on mutual understanding and agreement. The particularly important role of leaders must be emphasized as they direct the other managers towards following the specific values of a culture based on organizational justice.

A culture based on organizational justice can exercise within the firm four main functions (Adler, 1986, p.145):

a) employee integration within the organization (organizational justice helps new employees create the perception that the organization is interested in providing equal chances, respect and good working conditions, favoring rapid integration and high performance);

b) helps employees achieve their objectives (a culture based on organizational justice generates trust, attachment and involvement from employees in response to leaders' behaviors and decisions);

c) protection of employees against potential threats from the external environment (a culture based on organizational justice will allow the proper treatment of conflicts and the highlighting of slippages from its values);

d) preserving and sharing the values and traditions of the organization (fairness, equality, equity, mutual respect are essential values specific to culture based on organizational justice).

In our opinion, knowledge of these functions and the development of a culture based on organizational justice leads to the successful accomplishment of the organization's objectives and strategy. Such an organizational culture allows the prevention and combating of incorrect behaviors, and the identification of employees/ managers with illicit practices. Under these conditions, the prerequisites for achieving some outstanding performance are met. Understood and accepted, the specific values of a culture based on organizational justice constitute an engine that stimulates the continuous growth of results. Companies that have a culture based on organizational justice thus have a competitive edge.

The advantages of a culture based on organizational justice are worthy of consideration. Perceptions of justice correlate negatively with destructive deviance. When employees see that they have been treated incorrectly, there is a greater likelihood of them violating organizational rules and engaging in unwanted actions directed at the organization or other individuals. Through a culture based on organizational justice, counter-productive behaviors are prevented (Pitariu, Sulea, Zaborilă and Maicuțoiu, 2008).

5. Conclusions

Organizational justice explains why fairness is important at work, referring to the ways in which employees determine whether they have been properly treated and the ways in which other labor-related variables are influenced.

The culture based on organizational justice is a new concept, a form of organizational culture characterized by values such as fairness, mutual respect, equality, and equity. Organizational justice positively influences employee engagement, knowledge sharing and innovation-based behavior. Developing an organizational culture based on organizational justice becomes a necessity because its benefits are irrefutable.

Organizational justice based culture helps increase employee involvement, citizen behavior and, of course, helps achieve superior results and competitive advantage.

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CULTURA BAZATĂ PE JUSTIȚIA ORGANIZAȚIONALĂ ȘI IMPLICAȚIILE ACESTEIA

Conf. univ. dr. Cristina GĂNESCU
Universitatea "Constantin Brâncoveanu" din Pitești, România
Email: cristina_ganescu@yahoo.com

Rezumat: În ultimele cinci decade, conceptul de justiție organizațională a reprezentat, deopotrivă, o problematică de interes pentru managementul resurselor umane, psihologia organizațională industrială sau comportamentul organizațional. Cercetările actuale stabilesc numeroasele implicații practice ale justiției organizaționale, definesc teorii și modele specifice, în legătură cu etica, legea și echitatea. Lucrarea de față își propune să explice conceptul de justiție organizațională, modelele și teoriile existente, precum și consecințele aplicării acesteia. De asemenea, lucrarea prezintă un nou concept, acela de cultură bazată pe justiția organizațională și rolul acesteia în cadrul companiilor.
Cuvinte-cheie: justiția organizațională, cultura bazată pe justiția organizațională, etica, echitatea.
Clasificare JEL: D63, O15.

1. Introducere

În ultimele cinci decenii, conceptul de justiție organizațională a reprezentat, deopotrivă, o problematică de interes pentru managementul resurselor umane, psihologia organizațională industrială sau comportamentul organizațional.

Justiția a devenit "interesul major al organizațiilor și angajaților" (Săucan și Micle, 2011, p.291). Astfel, organizațiile și managerii nu doresc ca evenimentele organizaționale percepute ca fiind incorecte să conducă la atitudini și comportamente negative, precum furtul, sabotajul, luarea și darea de mită, abuzul. Percepția corectitudinii generează atitudini și comportamente pozitive ale salariaților, creșterea performanțelor în muncă și a implicării în schimbările organizaționale.

Cercetările actuale stabilesc numeroasele implicații practice ale justiției organizaționale, definesc teorii și modele specifice, în legătură cu etica, legea și echitatea. Mai mult, se apreciază că este nevoie de crearea unei culturi a justiției organizaționale, care să stea la baza definirii identității organizației și a raporturilor sale cu deținătorii de interese.

Lucrarea de față își propune să explice conceptul de justiție organizațională, să prezinte formele acesteia, precum și implicațiile asupra organizațiilor. Se definește conceptul de cultură bazată pe justiția organizațională și se stabilește rolul acesteia în cadrul unei organizații.

2. Conceptul de justiție organizațională și formele acesteia. Teorii și modele

Pentru Jerald Greenberg (Greenberg, Bies și Eskew, 1991), creatorul conceptului, justiția organizațională explică "rolul corectitudinii în analiza locului de muncă". Autorul consideră că justiția organizațională se referă la căile pe baza cărora angajații stabilesc dacă au fost corect tratați și la căile prin care se influențează alte variabile legate de muncă.

"Justiția organizațională se bazează pe percepția individului asupra corectitudinii tratamentului primit din partea organizației și pe reacțiile comportamentale la aceste percepții" (Tran, 2016).

Teoriile privind justiția organizațională se diferențiază în funcție de elementele pe care le evidențiază, în funcție de regulile aplicate și de componentele evaluate.

Se consideră că definirea conceptului de justiție distributivă se datorează lui Homans (1961), care aprecia că "sentimentul de dreptate sau de nedreptate este determinat de relația de schimb generată de raporturile dintre profituri și investiții, acest model

teoretic neaplicându-se numai în cazurile a doi actori aflați într-o relație directă, ci și în cazurile în care intervine o a treia parte, cum ar fi angajatorul primilor doi" (Iluț, 2015, p.6).

Justiția distributivă a fost definită și de Deutsch (1969), care a studiat corectitudinea alocării rezultatelor obținute de salariați. Regulile care stau la baza acestei forme de justiție organizațională sunt: echitatea, egalitatea și nevoile. Echitatea corespunde percepției indivizilor asupra rezultatelor, care sunt proporționale cu contribuția lor. Spre exemplu, recompensarea în funcție de performanță este o metodă a distribuirii echității: salariații care muncesc mai mult, sunt mai productivi și doresc să primească mai mult decât cei care nu se implică în aceeași măsură. Aplicarea egalității este considerată corectă atunci când se recompensează membrii unei echipe, pe baza rezultatelor întregului grup. Uneori, salariații apreciază că distribuirea recompenselor în funcție de nevoi este justă atunci când fiecare primește o parte egală din beneficiile de care angajații au nevoie (Grover, 1991).

Conceptul de *justiție procedurală*, creat de autorii Thibaut și Walker (1975), se referă la studiul corectitudinii procesului de alocare a resurselor la nivel organizațional. Teoria lui Leventhal (1980) identifică opt aspecte ale procesului de corectitudine: "consistent, dincolo de persoană și dincolo de timp, nesupus erorii, bazat pe informații corecte, posibil de corectat, reprezentativ pentru preocupările salariaților, bazat pe standarde morale".

Cercetările evidențiază că justiția distributivă este mai importantă după ce decizia de angajare a unei persoane a fost luată, iar justiția procedurală este mai importantă în timpul procesului de recrutare și selecție (Bauer et al., 2001).

Justiția interpersonală și informațională au fost definite de Greenberg (1993). Astfel, justiția interpersonală reprezintă echitatea interpersonală sau tratamentul interpersonal al indivizilor. Persoanele tratate cu demnitate și respect sunt percepute ca fiind abordate într-o manieră interpersonală echitabilă (Săucan și Micle, 2011, p.296). Managerii care doresc să aibă un comportament corect trebuie să urmărească: luarea în considerare a punctelor de vedere ale angajaților, impresia de neutralitate și aplicarea consecventă a regulilor, utilizarea la timp a răspunsului, utilizarea adecvată a explicațiilor și tratarea cu demnitate și respect (Greenberg, Bies și Eskew, 1991).

Justiția informațională vizează cantitatea, natura, centrarea și sincronizarea informației asigurate unui individ sau unui grup. Atunci când indivizii primesc informație credibilă mai repede, în cadrul unui proces, ei vor percepe justiția informațională ca fiind mai echitabilă.

Autorii Colquitt, Greenberg și Zapata-Phelan (2005) au creat o etapizare a modelelor și teoriilor privind justiția organizațională în patru perioade: etapa justiției distributive (echitate, egalitate și nevoie); etapa justiției procedurale (coerență, lipsă de părtinire, acuratețe, reprezentarea tuturor persoanelor implicate, corectare, etică); etapa justiției interacționale (justiție interpersonală, justiție informațională); etapa integrativă.

Modelul teoretic al justiției organizaționale este teoria echității, creată de Adams (1965). Potrivit acestei teorii, oamenii au tendința de a identifica consecințele inechității constatate, de a compara aceste consecințe asupra propriei persoane cu consecințele asupra altei persoane și de a restabili echitatea.

Autorul Folger (1986) a fundamentat teoria cognițiilor, apreciind că judecățile privind justiția sunt declanșate de compararea unei experiențe personale reale cu una ipotetică. Astfel, oamenii pot realiza scenarii mentale și pot susține că, dacă un decident ar fi acționat altfel, rezultatul ar fi fost avantajos pentru el.

Teoria corectitudinii, creată de Folger și Cropanzano (2001) susține că persoana ce deține responsabilitate poste face judecăți privind corectitudinea. Trebuie îndeplinite următoarele condiții: apariția unor condiții nefavorabile și a persoanei responsabile,

apariția unei consecințe ce se datorează unor acțiuni săvârșite de persoana responsabilă și încălcarea unor principii etice.

Modelul valorii grupului (Lind și Tyler, 1988) consideră că perceperea justiției, a respectului și corectitudinii influențează nu numai rezultatele obținute, ci și valorile grupului (neutralitatea sau reprimarea diferendelor în luarea deciziilor, încrederea sau bunăvoința, recunoașterea statutului în cadrul grupului.

Teoria euristică a corectitudinii, fundamentată de Lind (2001), stabilește faptul că relațiile sociale și organizaționale se creează pe baza întâlnirilor repetate cu ”dilema socială fundamentală”: fie oamenii obțin rezultate sau beneficii prin identificarea cu autoritatea, fie devin exploatabili și nevoiți să se supună cerințelor autorității. Consecințele aplicării acestei teorii pot fi: efectul primordialității (informația cea mai accesibilă este cea care stă la baza judecății); efectul substituibilității (dacă informația privind corectitudinea lipsește, oamenii folosesc alte tipuri de corectitudine în a-și forma propriile judecăți).

Poate, cea mai cuprinzătoare dintre teorii, este teoria managementului incertitudinii (Van den Bos, 2002), potrivit căreia managerii utilizează corectitudinea pentru a gestiona situațiile de incertitudine. Aplicarea corectitudinii atunci când se constată diferențe între propriile cunoștințe și experiențe creează indivizilor sentimentul de securitate în raport cu mediul social. Uneori, când nu există informații pentru a emite judecăți privind corectitudinea cu care sunt tratați, indivizii preiau informații de la alții și se bazează pe acestea, chiar dacă nu sunt complete și verificabile (Beugre, 2007).

Moliner, Cropanzano și Martinez-Tur (2017, p.4) au diferențiat trei căi ale justiției organizaționale:

a) Modele personale, în care persoanele se ocupă de justiție pentru a obține beneficii personale;
b) Modele interpersonale, în care justiția permite crearea unor relații strânse între actori;
c) Principii morale, în care justiția este importantă pentru oameni în sine.

3. Implicațiile justiției organizaționale

Literatura de specialitate arată că justiția organizațională joacă un rol important în funcționarea eficientă a unei entități (Virgolino, Coelho și Ribeiro, 2017; Rastgar și Pourebrahimi, 2013). Sute de studii observă relația dintre percepția asupra justiției sau injustiției organizaționale și acțiunile managerilor, dar și impactul pozitiv sau negativ asupra credințelor, acțiunilor și rezultatelor unei organizații. Mai mult decât atât, există studii potrivit cărora salariații decid să se implice mai mult sau mai puțin într-o organizație sau să devină sau nu parte a organizației în funcție de percepția privind justiția organizațională. Astfel, justiția organizațională devine un indicator al respectului pe care organizațiile îl manifestă față de proprii angajați (Bakhshi, Kumar și Rani, 2009), dar și față de ceilalți deținători de interese. De asemenea, justiția organizațională influențează pozitiv angajamentul în muncă al salariaților, schimbul de cunoștințe și comportamentul bazat pe inovare (Kim și Park, 2017).

Potrivit autorilor Cropanzano, Bowen și Gilliland (2007, p.6), justiția organizațională are următoarele consecințe:

- influențează performanța la locul de muncă și relațiile interpersonale; astfel, dacă managerii aplică justiția interpersonală, creează relații puternice cu subordonații, ceea ce conduce la motivarea acestora pentru a obține performanțe ridicate;
- creează comportamente organizaționale pozitive; astfel, oamenii care sunt tratați corect sunt mai tentați să respecte regulile de la locul de muncă, să îi ajute pe ceilalți și să se înconjoare de oameni corecți;

- oferă satisfacție clienților și creează atașament și loialitate; astfel, justiția organizațională contribuie la crearea unor bune relații interne și externe;
- stă la baza sistemului de valori organizaționale, a filosofiei de management și creează cultura justiției organizaționale.

De asemenea, justiția organizațională are implicații asupra motivației în muncă (Cropanzano și Rupp, 2003, p.83). Atunci când indivizii cred că sunt tratați corect, tind să înregistreze performanțe ridicate și să manifeste comportament cetățenesc organizațional, respingând conflictele. Relațiile interpersonale sunt văzute ca fiind relații sociale de schimb între angajați și lideri.

Implicațiile justiției organizaționale sunt evidente în toate activitățile esențiale ale managementului resurselor umane (Săucan și Micle, 2011, pp.297-298):

- în deciziile privind selecția resurselor umane, regula principală a justiției distributive este echitatea, astfel încât încălcarea acesteia este percepută ca nedreptate;
- în deciziile de selecție, justiția procedurală scade în importanță, urmând feedback-ul deciziei de angajare;
- justiția interpersonală devine mai importantă în timpul interviului, iar cea informațională este cea mai importantă după o decizie negativă;
- pentru evaluarea performanței, regula cea mai puternică de justiție distributivă este echitatea, încălcarea ei fiind percepută ca nedreaptă;
- pentru alocarea compensației, distribuirea bazată pe echitate sau egalitate va fi considerată corectă, deși efectul este relativ, depinzând de caracteristicile situației, alocarea deciziei și diferențele individuale;
- pentru compensație, aspectele informaționale sunt mai importante decât aspectele interpersonale în generarea percepțiilor asupra echității remunerației;
- alocarea beneficiilor va fi percepută cu atât mai corect în măsura în care se va face pe baza egalității, cu condiția ca nevoia să stea la baza acordării unor beneficii legate de familie;
- echitatea este cel mai important principiu distributiv în luarea unei decizii de concediere sau promovare, iar egalitatea este mai importantă când se face evaluarea severității pachetelor de concediere;
- dimensiunile justiției interpersonale și informaționale sunt importante în situații de concediere și promovare.

Percepția indivizilor privind rolul liderilor în asigurarea justiției organizaționale devine importantă atunci când se urmărește crearea și menținerea unor bune relații de muncă, a încrederii, respectului și obligațiilor reciproce. Pentru unii autori (Erdogan și Liden, 2006, p.3), colectivismul este un moderator al relației angajați – lideri, bazat pe menținerea unor relații armonioase.

Pentru Hosmer și Kiewitz, justiția organizațională se referă la "schimbările de atitudini privind satisfacția la locul de muncă, încrederea în organizație și manageri; schimbările comportamentale pentru obținerea performanțelor, eforturile auxiliare de sprijinire a membrilor grupului și îmbunătățirea metodelor de grup; schimbări în ceea ce privește cantitatea, calitatea și eficiența rezultatelor și eventualele schimbări privind avantajul competitiv și performanța financiară a întregii organizații" (Hosmer și Kiewitz, 2005, p.67.).

Teoria echității explică motivația, punând accentul pe percepția individuală asupra corectitudinii unei situații și a modului în care inechitatea cauzează anumite

comportamente. În situația în care un angajat percepe că nu a fost tratat corect în comparație cu ceilalți colegi, va reacționa în unul din următoarele moduri: va încerca să ajusteze efortul cu recompensa, va cere să fie plătit după munca prestată, va încerca să își schimbe percepția, va părăsi organizația. Alte studii evidențiază consecințele injustiției organizaționale: comportamentele negative, precum pierderea încrederii, insatisfacția în muncă, creșterea intențiilor de afaceri și absenteismul (Deery, Iverson și Walsh, 2006; Montes și Irving, 2008).

4. Cultura bazată pe justiția organizațională – sursă de avantaj competitiv

Cultura bazată pe justiția organizațională este o formă a culturii organizaționale pozitive, reprezentând ansamblul valorilor, normelor și comportamentelor care asigură relații organizaționale corecte, bazate pe încredere, respect și toleranță.

Unele studii empirice stabilesc corelația dintre justiția organizațională și cultura organizațională, ca mediator al relației de schimb dintre lideri și salariați (Erdogan, Liden și Kraimer, 2006, pp.395-406). Altele consideră că percepția asupra justiției organizaționale și cultura organizațională influențează angajamentul organizațional (Yavuz, 2010, pp.695-701).

Elementele culturii bazate pe justiția organizațională sunt: valorile organizaționale orientate spre tratamentul corect al angajaților; normele de comportament orientate spre respectarea echității/egalității de tratament; comportamentele acceptate și așteptate, bazate pe înțelegere și acord reciproc. Rolul deosebit de important al liderilor trebuie subliniat deoarece aceștia îi orientează pe ceilalți manageri, în direcția respectării valorilor specifice culturii bazate pe justiția organizațională.

Cultura bazată pe justiție organizațională poate exercita în cadrul firmei patru funcții principale (Adler, 1986, p.145):

e) integrarea salariaților în cadrul organizației (justiția organizațională creează noilor salariați percepția că organizația este interesată de asigurarea șanselor egale, a respectului și a unor bune condiții de lucru, care să favorizeze integrarea rapidă și obținerea unor performanțe ridicate);

f) direcționarea salariaților către realizarea obiectivelor urmărite (cultura bazată pe justiție organizațională generează încredere, atașament și implicare din partea angajaților, ca răspuns la comportamentul și deciziile liderilor);

g) protecția salariaților față de amenințările potențiale ale mediului extern (cultura bazată pe justiția organizațională va permite tratarea corespunzătoare a conflictelor și evidențierea derapajelor de la valorile sale);

h) păstrarea și transmiterea valorilor și tradițiilor organizației (corectitudinea, egalitatea, echitatea, respectul reciproc sunt valori esențiale, specifice culturii bazate pe justiția organizațională).

În opinia noastră, cunoașterea acestor funcții și dezvoltarea culturii bazate pe justiția organizațională conduce la îndeplinirea cu succes a obiectivelor organizației, a strategiei stabilite. O astfel de cultură organizațională permite prevenirea și combaterea comportamentelor incorecte, identificarea angajaților/managerilor cu practici ilicite. În aceste condiții, există premisele obținerii unor performanțe deosebite. Înțelese și acceptare, valorile specifice culturii bazate pe justiție organizațională se constituie într-un motor care impulsionează creșterea continuă a rezultatelor. Firmele care dețin o cultură bazată pe justiție organizațională dețin, astfel, un avantaj competitiv.

Avantajele acestei culturi bazate pe justiție organizațională sunt demne de luat în considerare. Percepțiile asupra justiției corelează negativ cu devianța destructivă. Atunci când angajații percep că au fost tratați incorect, va exista o mai mare probabilitate ca aceștia să încalce regulile organizaționale și de a se implica în acțiuni nedorite, îndreptate

spre organizație sau spre alți indivizi. Printr-o cultură bazată pe justiție organizațională se previn comportamentele contraproductive (Pitariu, Sulea, Zaborilă și Maicuțoiu, 2008).

5. Concluzii

Justiția organizațională explică de ce corectitudinea este importantă la locul de muncă, referindu-se la căile pe baza cărora angajații stabilesc dacă au fost corect tratați și la căile prin care se influențează alte variabile legate de muncă.

Cultura bazată pe justiție organizațională reprezintă un concept nou, o formă a culturii organizaționale, caracterizată de valori, precum corectitudine, respect reciproc, egalitate, echitate. Justiția organizațională influențează pozitiv angajamentul în muncă al salariaților, schimbul de cunoștințe și comportamentul bazat pe inovare. Dezvoltarea unei culturi organizaționale bazate pe justiție organizațională devine o necesitate deoarece beneficiile acesteia sunt incontestabile.

Cultura bazată pe justiție organizațională contribuie la creșterea implicării salariaților, a comportamentului cetățenesc și, bineînțeles, la obținerea unor rezultate superioare și a avantajului competitiv.

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QUANTIFYING THE COMPARATIVE ADVANTAGE OF DOMESTIC GOODS ON THE INTERNAL MARKET

Lecturer Ph.D. Tatiana GUTIUM
Academy of Economic Studies of Moldova, Republic of Moldova
Email: gutium.tatiana1@gmail.com

Abstract. This article focuses on the development of indicators to assess the comparative advantages of the product. Using synthetic indicator developed by the author, there was calculated the competitiveness of domestic goods on the internal market and the results are used for development of proposals to increase competitiveness. In addition, the article analyzes the dynamics of the digital economy development in the Republic of Moldova and correlation between competitiveness and digital economy. At the end of this article, the author has shown the impact of competitiveness and the digital economy on the sustainable development of the national economy.

Keywords: competitiveness; advantages; disadvantages; digital economy; sustainability.
JEL Classification: O10, O33, F14.

1. Introduction

The people of any country want to increase their welfare, quality of life. The most people are mainly consumers. Commodities can be purchased not only in the classical way, in the market, in shopping centers, but also via the Internet. Day by day the digital economy is better introduced into our lives. Meanwhile the well-being of the people depends on incomes, on the growth rates of the economy and on its stability, which in turn depend on the competitiveness of manufactured goods on both domestic and foreign markets, as well as on the competitiveness of enterprises and the economy as a whole.

Taking into account all the above, the main purposes in this article are, firstly, to develop an indicator that would allow us to assess the competitiveness of domestic goods, and secondly, to investigate the relationship between the level of competitiveness and the development of the digital economy, as well as their impact on the stable economic development.

The assessment of competitiveness is a starting point for the production and economic activities of enterprises in a competitive environment, in conditions of market economy. At the same time, it is necessary to evaluate systematically not only the competitiveness of the products produced by the enterprise, but also the competitiveness of the enterprise and its personnel. The importance of assessing the competitiveness of economic goods is caused by the following circumstances:

➢ the degree of openness of the national economy;
➢ the high level of competition;
➢ the need to reduce the cost of goods and services;
➢ the need to develop measures to improve the competitiveness of products;
➢ the preparation of marketing programs for the promotion of goods both to domestic and foreign markets;
➢ the need to attract investor funds to organize competitive production.

2. Quantifying the comparative advantage of domestic goods

An evaluation of product competitiveness can be carried out using the competitiveness integral index or the comparative advantage index. In the case of an integral index, a pre-designed algorithm is used.

2.1. Algorithm for assessing the competitiveness of economic goods

Moseiko et al. (2015) have elaborated "the algorithm of providing the system's competitiveness, targeted at implementing 4 main qualities: functionality, system,

proactiveness and organicity". The author of this article suggested the following algorithm for assessing the competitiveness of products, which differs from algorithms developed by other scientists. Stages of the product life cycle are taken into account in the new algorithm. This algorithm makes it possible to find solutions to increase competitiveness, to evaluate the effectiveness of rationalization proposals which have been implemented, and to calculate the growth of comparative advantages (fig. no. 1).
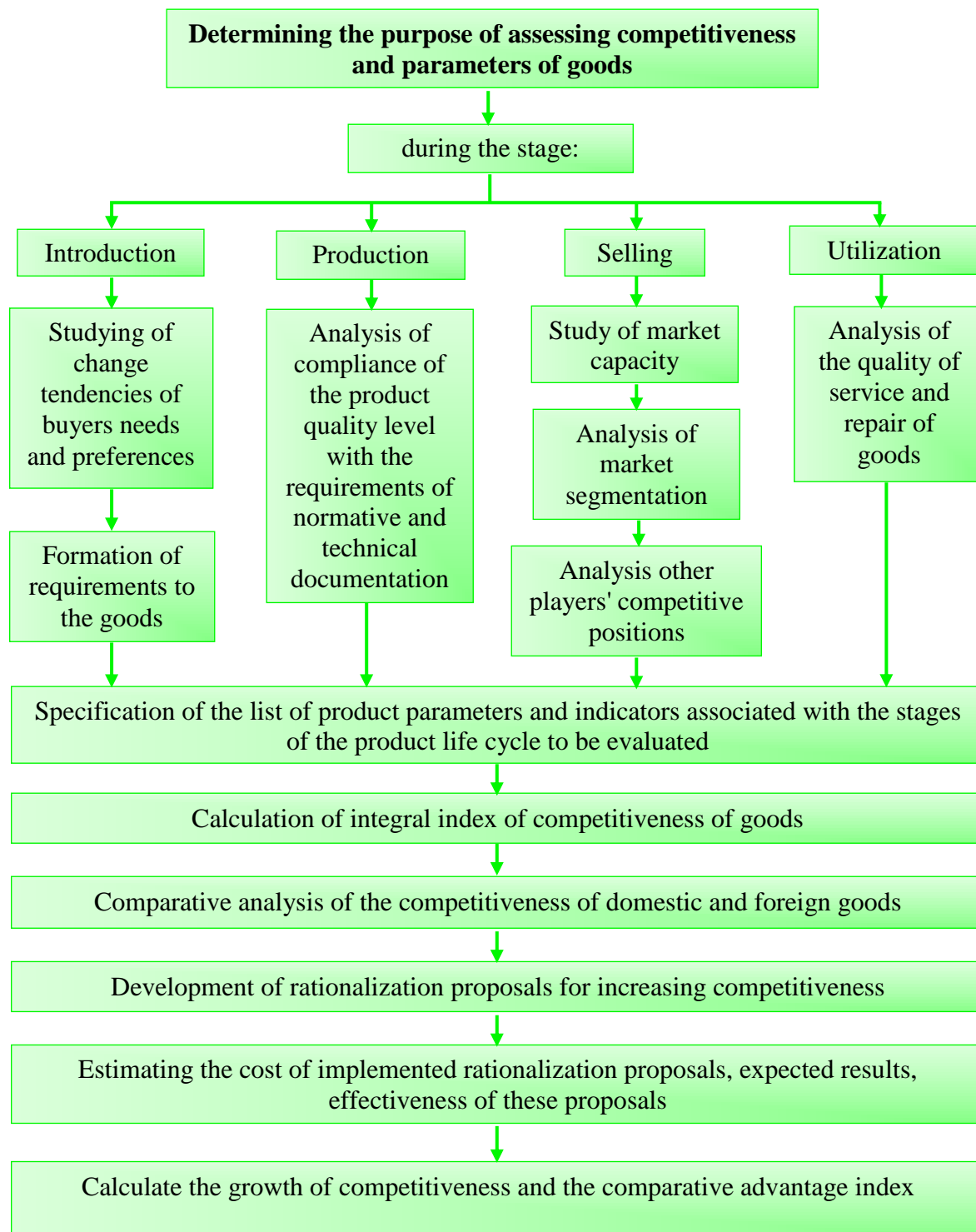
Figure no. 1. The algorithm for assessing the competitiveness of goods
Source: author's elaboration

The price is on the first place in the list of parameters of the domestic product subject to evaluation. Today in the Republic of Moldova, consumers prefer cheap and low-quality product and not one expensive and high quality. The causes of this trend in preferences are decrease of population's solvency, theft in banking system, currency devaluation, inflation, withholding wage, wage gap.

According to the National Bureau of Statistics of the Republic of Moldova in 2016 year the subsistence minimum in Moldova was 1799.2, and the average monthly household disposable income per person was 2060.2 lei (National Bureau of Statistics, 2016), during the reporting period. A disposable income was higher than subsistence minimum with 261 lei, or 13.1 US dollars. Solvency of the most part of population is very low; therefore, the price is the main parameter of evaluation.

Domestic enterprises, which tend to promote economic goods in foreign markets take into account national, regional standards and international standards like ISO, IEC and others. At the stage of assessing the parameters of the competitiveness of industrial products, the conformity of product parameters with mandatory regulations and standards that determine the level and boundaries of these parameters is established. If at least one of the parameters does not correspond to the mandatory level, which is prescribed by the current norms and standards, the goods cannot be considered as competitive, regardless of the result of the comparison by other parameters. First, should be carried out the study of compliance with the norms and standards in force in a particular country, and only in case of identifying a conformity, the assessment of the competitiveness of goods can be continued.

Organizational and commercial indicators reflecting real or potential conditions of sale of goods should also be taken into account in assessing the competitiveness of goods. The last is very important because, the presence of a large number of intermediaries leads to a considerable increase in the price. The increasing price of electricity, natural gas and other mineral resources leads to raise prices of all final goods, as a result a lot of goods become uncompetitive compared with analogical imported goods.

Managers take decision about enterprise's policy based on the result of the calculation of integral index of competitiveness of goods and analysis of organizational and commercial indicators. In the case when the parameters of the standard samples exceed the indicators of the evaluated commodity, managers should elaborate rationalization proposals for increasing competitiveness. In the case when the indicators of the evaluated commodity exceed the parameters of the standard samples, managers will decide to promote policy in accordance with the stated objectives in design, production and promotion goods on the domestic and external markets.

2.2. Comparative advantage index of domestic goods on the internal market

All revealed comparative advantage (RCA) figures cited in the literature assess the comparative advantages of goods in general on the domestic and foreign markets (Balassa, 1965; Dalum et al., 1998; Yu et al., 2009; Costinot et al., 2012), and not separately only on the domestic market. The author has developed the indicators for estimating the competitiveness of groups of domestic goods on the domestic market (Gutium, 2013; 2014). The author has improved previously developed indicators, which could use especially in case when goods are manufactured using raw of clients (Gutium, 2017).

The use of the above indicators in estimating the competitiveness of domestic goods has shown that the results obtained with some goods are erroneous. This situation can be explained by the presence in the economy of elements of the shadow economy, such as illegal imports, illegal exports and underground production. The indicator that was elaborated in 2013 uses data in a value terms, but we know that prices of exports and prices

of imports of the same goods are different, so the author has set an aim to develop another indicator. It would be calculated based on data in physical terms, and would take into account illegal exports, illegal imports or underground production, in case of their existence.

The author adapted the model of inter-branch balance in such a way as to assess the elements of the shadow economy at the level of microeconomics and obtain the necessary information in order to correctly estimate the competitiveness of domestic goods on the internal market. In the process of developing the adapted model, the methodology of elaborating the goods and services account and the Leontief's model were combined and used.

The goods and services account was adapted for the use at the level of microeconomics. In the process of adaptation, the following two features were taken into account:

- ➢ the output at purchaser prices includes output at basic prices and the value of taxes minus subsidies on products,
- ➢ the volume of finished goods sold on the domestic market includes goods purchased for final consumption and goods purchased by resident units for later use in the process of production.

The adjusted account represents the microeconomic balance between uses and resources of goods (Table no. 1).

Table no.1. The goods account

Uses	Resources

Intermediate consumption;
 Volume of finished goods traded on the domestic market:
      Goods purchased for final consumption;
      Goods purchased by resident units for later use in the process production;
 Changes in inventories of goods (Inventories of goods at the end of the year minus Inventories of goods at the beginning of the year);
 Exports.
	Output at purchaser prices;
	 Imports at purchaser prices.

Source: author's adaption

Based on the goods account, the model of natural inter-branch balance (Ganciucov, Gutium, 2015) was further adapted. The adapted input-output model (Table 2) allows estimating both elements of the shadow economy and the competitiveness of domestic goods on the internal market.

In the case of the most goods, total resources are equal to total uses. In such cases, it is necessary to use net symmetrical comparative advantage index of goods on the domestic market to calculate the competitiveness index (Gutium, 2017).

If total uses are higher than total resources, an underground production or illegal imports take place. In the case where total resources are higher than uses, illegal exports take place. For such cases, the author has developed the following indicators to calculate the competitiveness of domestic goods on the internal market in comparison with the foreign goods sold on the internal market and exported domestic goods:

$CAID_i^{SE}$ – Comparative advantage index of goods i on the domestic market, taking into account the shadow economy;

$SCAID_i^{SE}$ – Symmetrical comparative advantage index of goods i on the domestic market, taking into account the shadow economy.

Table no.2. The adapted input-output model

Goods	Uses							Resources				
	Intermediate consumption	Finished goods traded on the domestic market		Inventories of goods at the end of the year	Exports	Other outputs (loss of goods)	Total uses	Output (domestic product)	inclusive	Imports	Inventories of goods at the beginning of the year	Total resources
		Goods purchased for final consumption	Goods purchased for later use in the process production						Domestic product manufactured with the customer's material			
A	1	2	3	4	5	6	7	8	9	10	11	12

Source: author's adaption

$$CAID_i^{SE} = \frac{\left[(Q_i + Q_i^{UP}) - Q_i^{RC} - (X_i + X_i^I) - CI_i - L_i\right] \div \left[(Q_i + Q_i^{UP}) + (M_i + M_i^I)\right]}{\sum_{i=1}^{n}\left[(Q_i + Q_i^{UP}) - Q_i^{RC} - (X_i + X_i^I) - CI_i - L_i\right] \div \sum_{i=1}^{n}\left[(Q_i + Q_i^{UP}) + (M_i + M_i^I)\right]} \quad (1)$$

$$SCAID_i^{SE} = \frac{CAD_i^{SE} - 1}{CAD_i^{SE} + 1} \times 100\% \quad (2)$$

where Q_i – Domestic product i;

Q_i^{UP} – Underground production goods i;

Q_i^{RC} – Domestic product i manufactured using raw of clients;

X_i – Export of goods i, taking into account the illegal exports;

X_i^I – Illegal exports of goods i;

CI_i – Changes in inventories of domestic goods i;

L_i – Other outputs (loss of goods i);

M_i – Import of goods i;

M_i^I – Illegal imports of goods i.

For example, in the case of the "walnuts", the adapted input-output model elaborated for 2016 showed that the uses were higher than resources with 11.3085 thousand tons. According to the data of the Customs Control Department in 2016, twelve thousand eight hundred and sixty nine tons of "walnuts" were exported, but only four thousand seven hundred and forty two tons were produced this year. Consequently, an underground production of "walnuts" has occurred.

If we would use official data to calculate the symmetrical comparative advantage index, without taking into account the elements of the shadow economy, we would have obtained the following result SCA = 232.23%, which is erroneous, since this indicator can have a range from -100 to +100. Recalculation of this indicator, taking into account the underground production, gave a different result, namely -18.28%.

Taking into account that the Republic of Moldova is an agricultural country, the author estimated competitiveness of goods from agro-industrial complex. Results of calculation are presented in Table 3. The most competitive domestic food products on the

internal market are bread and milk, followed by eggs and grapes. The demand for these two goods is high, as the welfare level of the population is still low and these two goods are the main food goods. In 2016, average monthly disposable income per person reached 103.4 US dollars, and monthly average consumer spending totalled 106.2 US dollars. The biggest share in the expenditure structure is the food consumption - 42.6%. If real income level is decreasing then the share of superior goods decreases and the share of inferior goods increases.

Table no.3. Symmetrical comparative advantage index of some goods of agro-industrial complex of the Republic of Moldova on the domestic market, taking into account the shadow economy, 2016 year

Goods	$SCAID_i^{SE}$, %
Fresh bread	48.98
Milk	48.74
Birds' eggs, in shell, fresh, preserved or cooked	45.86
Grapes, fresh or dried	45.61
Bread, pastry, cakes, biscuits and other bakers' wares	43.00
Sugar confectionery (including white chocolate), not containing cocoa	38.49
Beer made from malt	36.35
Meat, edible meat offal nes, fresh, chilled or frozen	35.25
Waters, including mineral waters and aerated waters	34.22
Sparkling wine of fresh grapes	32.51
Butter and other fats and oils derived from milk; dairy spreads	32.30
Pasta, whether or not cooked or stuffed	16.43
Wheat or meslin flour	16.20
Prepared or preserved meat, meat offal and blood, nes	-22.93
Fish, fresh or chilled, frozen,	-25.77
Groats	-75.74
Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs	-81.97
Margarine	-82.45

Source: author's calculation

Although domestic milk is competitive on the internal market, margarine is not competitive; 13.53 thousand tons of margarine was imported in 2016. The domestic market is loaded with imported margarine, but resident producers can produce this kind of goods. The symmetrical comparative advantage index of meat is 35,25% and the level of this index for preserved meat is negative, i.e. this product has a comparative disadvantage, despite the fact that Moldova has the raw material necessary for the production of preserved meat. *In conclusion, in the case of some food products, Moldova needs to regain its own market.*

3. Correlation between competitiveness and the digital economy and their impact on the sustainable development of the national economy

The competitiveness of the national economy is assessed using the Global Competitiveness Index. In order to research the correlation between competitiveness and the digital economy, we should analyze the evolution of this index and of indicators of the sub-pillar "Use of Information and Communication Technologies". This sub-pillar includes four indicators (Table 4).

The Global Competitiveness Index (GCI) recorded a cyclical evolution during the period 2013-2017. There was a direct correlation between the GCI and the share of Internet users. The impact of this indicator on the GCI is significant. Fixed-broadband Internet subscriptions and mobile-broadband subscriptions were increasing during analyze period. The evolution of these two indicators does not significantly affect the competitiveness of the national economy.

Table no.4. Evolution of the Global Competitiveness Index and of indicators of the sub-pillar "Use of Information and Communication Technologies" of the Republic of Moldova

	2013-2014 (out of 148)		2014-2015 (out of 144)		2015-2016 (out of 140)		2016-2017 (out of 138)		2017-2018 (out of 137)	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Global Competitiveness Index (GCI)										
GCI	89	3.94	82	4.03	84	4.00	100	3.86	89	3.99
Sub-pillar "Use of Information and Communication Technologies"										
Internet users, % pop.	77	43.4	70	48.8	74	46.6	79	49.8	49	71.0
Fixed-broadband Internet subscriptions, /100 pop.	52	11.9	52	13.4	52	14.7	56	15.5	54	16.3
Internet bandwidth, kb/s/user	23	94.0	23	115.8	18	152.4	16	194.9	34	144.1
Mobile-broadband subscriptions, /100 pop.	97	5.1	42	47.2	59	49.4	70	51.9	75	55.5

Source: The Global Competitiveness Report 2017-2018, World Economic Forum

In conclusion, namely the qualitative indicator (share of Internet users) of the sub-pillar "Use of Information and Communication Technologies" has a direct impact on the Global Competitiveness Index.

The huge potential of the digital economy is still not fully exploited in the Republic of Moldova by economic agents, and by the public administration. The digital economy creates new business opportunities, diminishing the shadow economy. Now that the unemployment rate among young people is high, the digital economy allows young specialists to reduce the amount of time they need to become employed in labour market.

4. Conclusions

The digital economy contributes to the sustainable growth of the national economy, creation of new jobs, diminishing of corruption and reducing of unnoticed economy.

Moldavian enterprises do not take full advantage of the opportunities offered by the digital economy. They could increase their turnover by actively using the internet to get in touch with raw material suppliers and buyers.

A competitive economy is based on the high-skill employees, high-efficiency technologies, a high degree of diversification of entrepreneurial activity, and is taking place when entrepreneurs, consumers, government employees, bank wage-earners, functionaries of ministries and departments have digital competences.

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ASPECTS OF COOPERATION BETWEEN VOCATIONAL TRAINING PROVIDERS AND MICRO-ENTREPRENEURS IN ROMANIA

Professor Mihaela DIACONU, Ph.D.
University of Pitești, Romania
Email: diaconu_m2005@yahoo.com,
mihaela.diaconu@upit.ro
Associate Professor Amalia DUȚU
University of Pitești, Romania
Email: pandelica.amalia@yahoo.com

Abstract: The paper highlights the relationship between vocational training providers and the micro-enterprise community in the context of the Strategy for Education and Vocational Training in Romania for the period 2016-2020 and that of the Europe Strategy 2020 that promotes smart growth through major investments in education. The research underlying this paper was carried out within an European project called ME2ME - Micro-Enterprise Learning Partnerships. The aim of the paper is to identify the current state of collaboration between Romanian VET providers and micro-business owners focusing on the following issues: the continuing availability of training providers to support entrepreneurial training or business development, the current relationship between VET providers and the micro-enterprise community. The main conclusions are: there are some barriers in providing training in the business field; VET representatives consider the following content as important in the training offer: problem solving, performance management, human resource management, communication, and IT; they see as very useful the training sessions, the small group meetings and peer-to-peer learning activities for which VET providers consider that there is great potential in learning among micro-enterprises owners; there is a certain difference between the perceptions of the two groups regarding the learning methods used.

Key words: vocational training providers, microenterprise community, the learning methods, peer-to-peer learning.

JEL Classification: A20, D90, M53.

1. Introduction – Romanian context of the research

In Romania, vocational training in formal learning contexts is ensured by two complementary systems: the initial vocational training system and the continuous vocational training system. Through initial vocational training, human resources acquire a job-based qualification and then, through continuous professional development, the expansion of career in the course of life, in line with the requirements of the labor market, constantly developing, and with personal aspirations.

The initial vocational training provided through professional and technical education, is governed by the Law of National Education no. 1/2011. Continuous vocational training takes place on two dimensions: a) vocational training through qualification, initiation, training, specialization programs organized by authorized vocational training providers, according to the law and, respectively, on-the-job training, organized by employers for their own staff; b) skills assessment obtained by other means than formal, by assessment centre competences acquired in other ways than formal legally authorized.

Vocational training programs are organized by vocational training providers: occupations, trades, specializations and professions, included in the Occupation Classification from Romania – O.C.R., respectively the Qualifications Nomenclature – Q.N. and for professional skills shared by several occupations (entrepreneurial skills, social and civic competences, language skills).

Vocational training providers may organize vocational training programs with the cumulative fulfilment of four conditions: (1) to provide in the status or, as the case may be, in the authorization for self-employment and training activities (*CAEN code 8559*), (2) to be authorized under the law, (3) to meet the obligations to pay taxes, duties and

contributions provided by the law, (4) to pay the authorization fee. Employers can organize training programs for their own employees and can only issue graduation certificates recognized within their respective units. These certificates are nationally recognized only if employers are authorized as training providers. Vocational training providers are registered in the National Registry of Authorized Vocational Training Providers (RNFPA), which is on the following website: www.anc.edu.ro.

The training and evaluation of adult vocational training results are funded from the following sources: employers' own funds; the unemployment insurance budget; sponsorships, donations, attracted external sources; fees from persons participating in vocational training programs.

The legal framework for adult vocational training consists of: (1) Government Ordinance no. 129/2000 regarding the vocational training of adults, republished; (2); 279/2005, on apprenticeship at the workplace, republished; (3) Government Emergency Ordinance no. 49/2014 on the establishment of measures in the field of education, scientific research and for the amendment of some normative acts; (4) National Education Law no. 1/2011, as amended and supplemented, (5) Government Decision no. 918/2013 on the approval of the National Qualifications Framework, as further amended and supplemented, which provides the organization on 8 levels of qualifications of the National Qualifications Framework, and these levels of qualification can be acquired through the formal 20 education and training system in Romania and by recognizing the learning outcomes learned through non-formal and informal learning from the perspective of lifelong learning.

The main Romanian actors in the training system are*: (1) The National Authority for Qualifications* that develops the National Qualifications Framework based on the European Qualifications Framework, manages the National Qualifications Register and the National Register of Adult Vocational Training Providers. This institution coordinates the authorization of providers of continuing vocational training at national level and the activities of the sartorial committees, *(2) The Ministry of National Education and the Ministry of Labor* have responsibilities in the field of lifelong learning as follow: developing national policies and strategies on adult vocational training; the regulation of on-the-job training and apprenticeship training at the workplace; *(3) The National Agency for Employment* (NAE) has as main attributions in the field of lifelong learning, *(4) The National Institute of Statistics* periodically draws up the Survey of vocational training in enterprises (FORPRO), (5) *The National Centre for the Development of Vocational and Technical Education* (NCDVTE) which provides professional coordination and scientific advice for national, regional and local authors and trainers from the vocational and technical education network.

For vocational training, SMEs in Romania allocate an average percentage of 1.96% of the turnover per firm, a rather unfavourable situation, which shows that Romanian entrepreneurs invest relatively little in human resources training, given that the training of staff is a stringent necessity, a requirement for sustainable development of activities. In this context, it was conducted the field research with the purpose to asses different aspect of the micro-enterprises' need and demands concerning education and training.

2. Methodology

In Romania the research was conducted during December 2017, by collecting the data using the National Research Report Questionnaire for VET providers developed within the ME2ME project. For the linguistic equivalence insurance the double translation process was conducted, using two independent professional English translators. The respondents were chosen from the professional networking and University partners. The

data were collected from a sample consisting of 17 VET providers representatives (29.4% of the respondents had the ownership status while 70.6% were trainers being employed within the VET institutions). The empirical data were collected by using on-line network (self administered questionnaire) and by conducting one-to-one interviews by telephone. For measurement purpose, the following were used: a five point Likert scale, open-ended questions and multiple response questions. The reliability of the National Research Report Questionnaire for VET providers, in Romanian context, was assessed for 61 items and Cronbach's alpha achieved a value of 0.764. The statistical analysis procedures: for statistical analysis purpose the SPSS was used and a uni-variated analysis was conducted. The descriptive statistics results are presented as Frequencies, Mean values and Graphics.

3. Results
3.1. General Information

Description of the research sample: the characteristics of the VET institutions selected in the research sample were as follows: only 17.6% were set up before 2000, while most of them started their activity after 2000 (5.9% - 2002, 41.2% - 2003, 5.9% - 2007, 23.5% - 2011, 5.9% - 2012). It should also be mentioned all the VET institutions, included within the research sample, have over 5 years of experience, thus neither of these were into the Start-Up Stage. 17.6% of the vet institutions have 3 educators (trainers), 35.3% - 5 trainers, 11.8% - 6 trainers, 29.4% - 10 trainers, 5.9% - 20 trainers. The VET providers within the sample were operated within domains like: communication and linguistic consultancy, vocational training for students and unemployed, skills validation courses, qualification courses, introductory courses, business training etc. Thus, within the sample there were included VET institutions with different experience backgrounds for collecting representative data in Romanian contexts. The survey unit was the VET institutions' representatives, 29.4% of the respondents had the ownership status while 70.6% were trainers being employed within the VET institutions.

3.2. Provision of Business Management Skills

According to the research results, the importance of the different business management skills in VET representatives' perception, in the Romanian contexts, the top 3 skills are: communication skills (M=5.00), entrepreneurial skills (M=4.93), human resource management skills (M=4.76). On the other hand respondents consider less important the following skills: accounting skills (M=3.33), financial skills (M=3.82), import and export management skills (M=3.85), production/supply chain management (M=3.86). Still all the assessed business management skills reached mean values over 3 underlining that all these skills are somehow important for a successful business according to respondents' evaluation (graph. no.1).
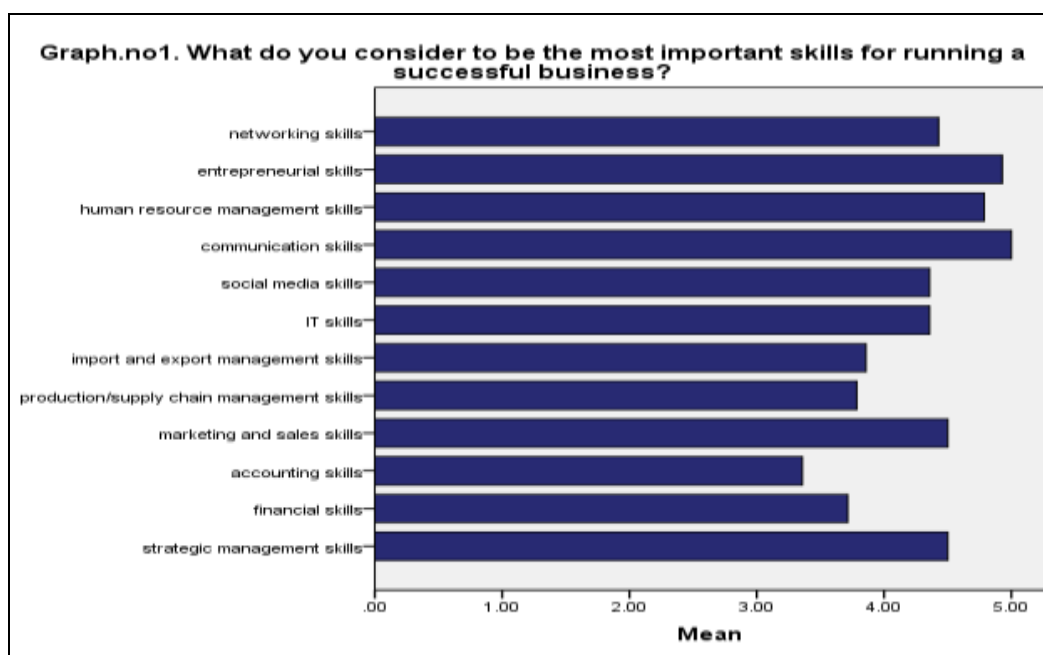
Source: Data processed by the authors

Regarding the skills included in the training courses taught in VET institutions, in Romanian CONTEXT, research results emphasized that most of these have in their training offer programs focused on the development of different business management skills. Still the most common developed skills through the provided VET programs are: (1) communication skills (94.1%), (2) entrepreneurial skills (82.4%), (3) strategic management skills (76.5%), marketing and sales skills (76.5), (4) IT skills (76.5%), and (5) human resource management skills (76.5%). The least encountered skills in training programs were: import and export management skills (only in 11.8% VET institutions), networking skills (only in 17.6% VET institutions), production/supply chain management skills (in 41.2% VET institutions), and accounting skills (47.1% in 41.2% VET institutions).
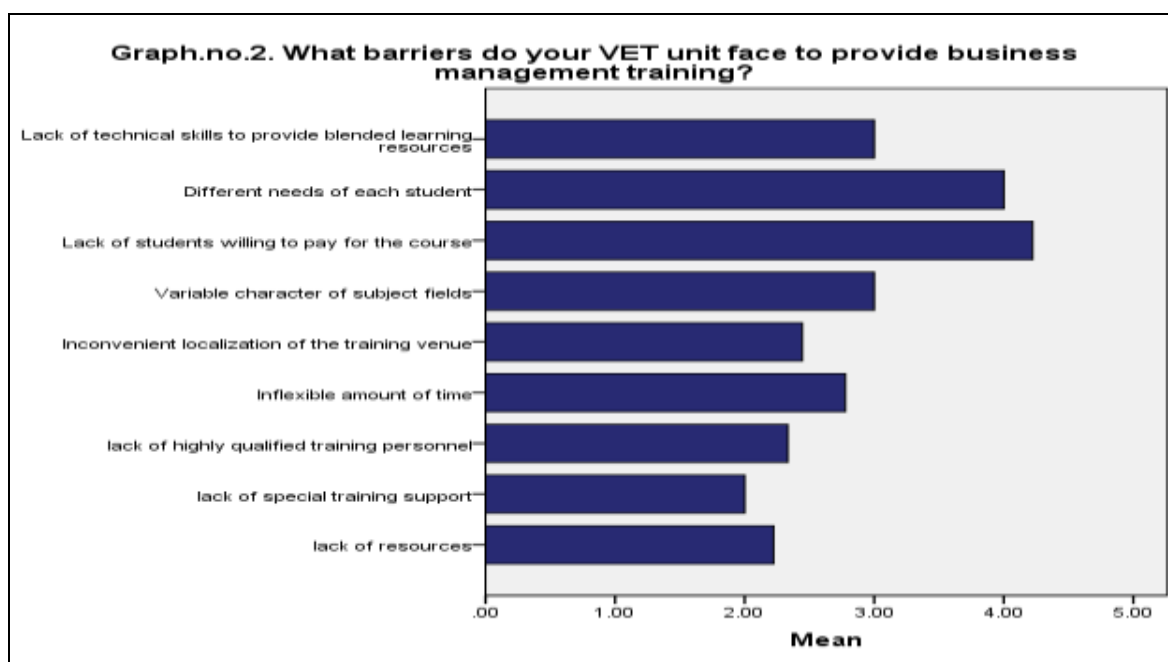
Source: Data processed by the authors

The most important barriers faced by VET to provide business management training are as follow: (1) lack of students willing to pay for the course (M=4.36), (2) different needs of each student (M=4.18), while the other items were assessed only to a smaller extent as barriers faced in providing business management training (graph.no.2).

Within the offer of the VET institutions the most common forms of the training are: (1) courses held in places of business (M=4.29), (2) theoretical tutorial (4.23), (3) courses held in places of business (M=4.23). The online courses are less used for training delivery (M=3.80).
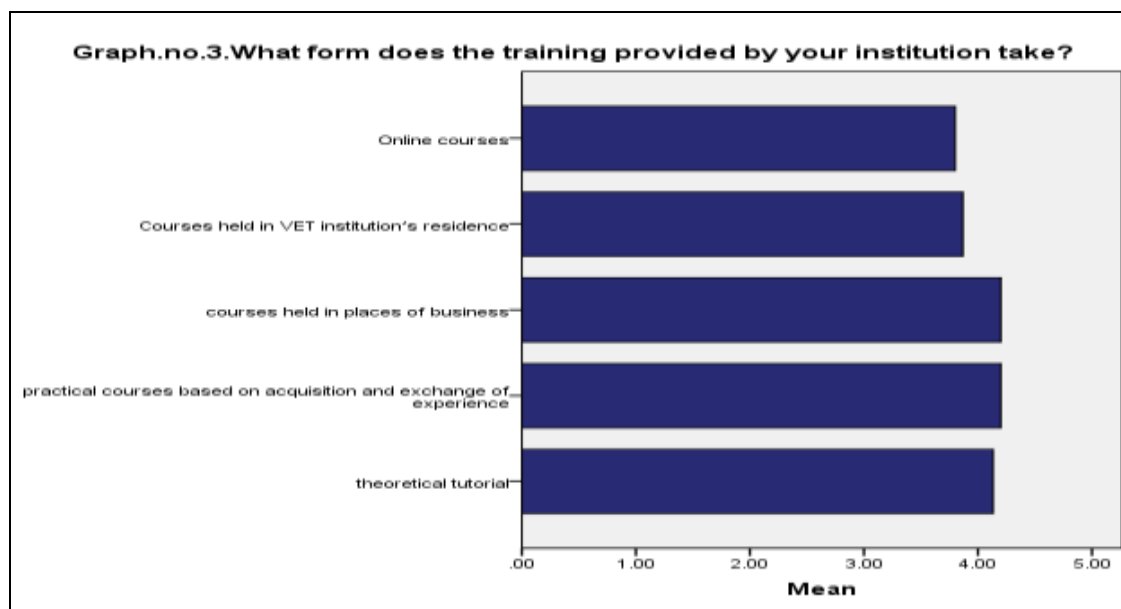
Source: Data processed by the authors

58.8% of the respondents acknowledge that they share knowledge and experience within different education providers' network that they belong in, while 41.2% are not engaged in sharing knowledge and experience.

3.3. Demand for business management training

The VET institutions' representatives assessed the knowledge of their students as follow: information technology (8.43), communication and networking (8.23), marketing and sales (7.12), strategic management (7.06), problem solving (7.06), performance management (6.87), finance (6.43), accounting (6.06).

If new training resources will be developed, VET institution' representatives are taking into consideration to expand or add to their training offer the following contents: (1) problem solving (M=4.93), (2) performance management (4.88), (3) human resource management (M=4.52), communication (M=4.52), (4) IT (M=4.47), (5) entrepreneurship (M=4.46), (6) marketing and sales (M=4.43), (7) strategic management (M=4.13), (8) accounting (M=3.80),(9) imports and exports (M=3.78), (10) Finances (M=3.73).

Graph.4. What learning content would you like to expand or add to your training offer if the new training resources were being developed?
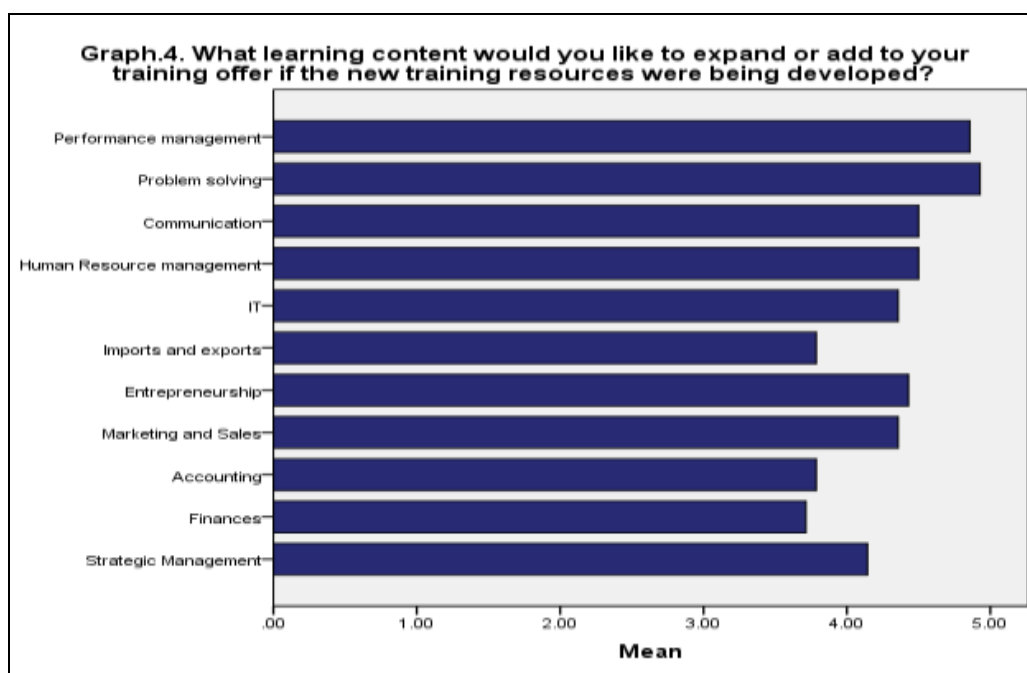
Source: Data processed by the authors

Regarding the learning methods used in order to provide these new training resources, the respondents put a great emphasis on case studies (88.2%) and workshops (82.4%). Still, all the assessed methods were taken into consideration: online courses (76.5%), peer to peer learning (76.5%), videos podcasts interactive (64.7%). These results underline the relative high potential of the peer-to-peer learning. Most of the respondents (52.9%) argued that the training course should take 5 hours and more each week in order to be manageable for education provider.

3.4. Potential of peer-to-peer learning

Graph.no.5.Do you agree with the statements below?
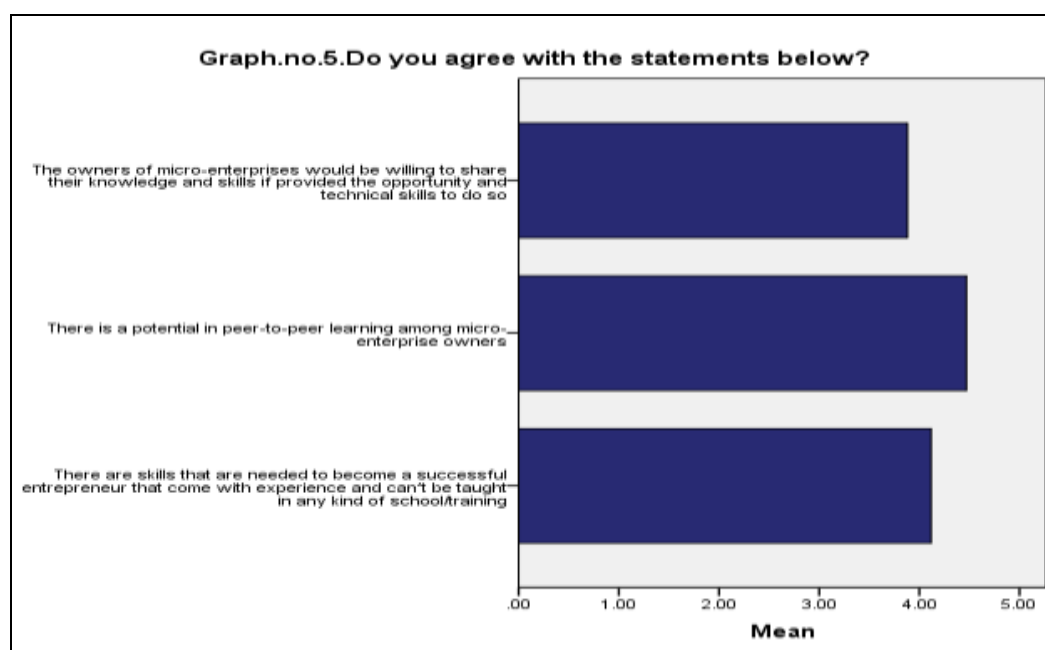
Source: Data processed by the authors

According to the mean values, the VET institutions representatives consider that there is a high potential in peer-to-peer learning among micro-enterprise owners (M=4.47). Also, they appreciated that there are skills that come with experience and cannot be taught in any kind of school/training for a successful entrepreneur on a high extent (M=4.11). Regarding knowledge and skills sharing between owners of micro-enterprises based on the provided opportunity and technical skills, VET representatives appreciate this aspect on a relatively high extent (M=3.88).

In respondents' perception the specific knowledge/skills/expertise considered the most important and effective for students to receive from other micro enterprise owners in peer-to-peer learning, were: (1) problem solving knowledge/skills/expertise (M=4.93), (2) performance management knowledge/skills/expertise (M=4.81), (3) entrepreneurship knowledge/skills/expertise (M=4.76), communication knowledge/skills/expertise (M=4.76), (4) human resource management knowledge/skills/expertise (M=4.58), (5) IT knowledge/skills/expertise (M=4.50), (6) strategic management knowledge/skills/expertise (M=4.35), (7) marketing and sales knowledge/skills/expertise (M=4.35), (8) production/supply chain management knowledge/skills/expertise (M=4.06), (9) imports and exports knowledge/skills/expertise (M=3.81), (10) finances knowledge/skills/expertise (M=3.64), (11) accounting knowledge/skills/expertise (M=3.41).
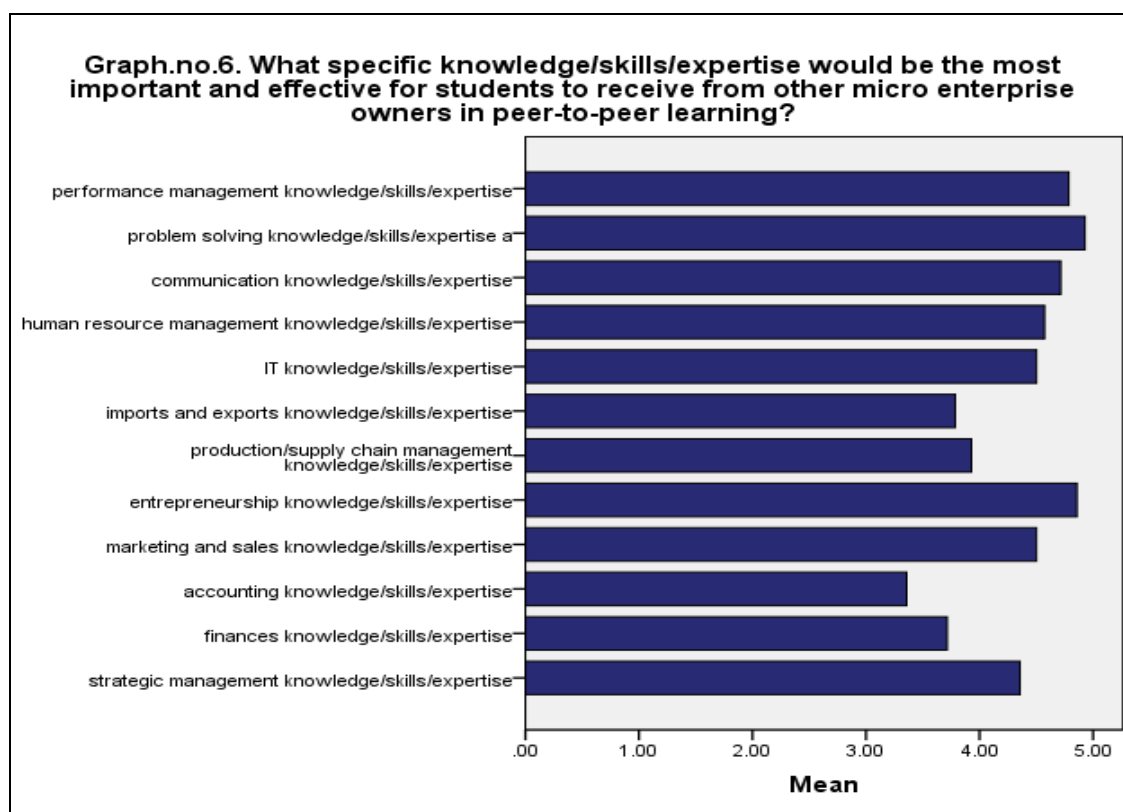
Source: Data processed by the authors

According to the VET representatives the most effective approaches in peer-to-peer learning were as follow: (1) training sessions (82.4%), (2) small group meetings (82.4%), (3) joint peer activities (58.8%), online networking (58.8%), (4) peer produced knowledge products (47.1%), (5) virtual engagements (29.4%), (6) large meeting groups (17.6%), (7) paired engagements (17.6).

4. Summary

Within Romania, according to the VET providers' representatives, the most important businesses management skills are: communication skills, entrepreneurial skills and human resource management skills. They considerate less important accounting skills, financial skills, import and export management skills and production/supply chain management. Thus, there are some certain business management skills that are important for both assessed groups – VET providers and micro-enterprise - **communication skills and human resource management skills**. Also, there are certain skills that are less important for both categories - **accounting skills import and export management skills, production/supply chain management**.

Regarding the skills included into the training offer of the Romanian VET providers, as the research results emphasis, the most common skills were: (1) communication skills, (2) entrepreneurial skills, (3) strategic management skills. The less encountered skills were: import and export management skills, networking skills, production/supply chain management skills, and accounting skills. Thus, there is a certain correlation between the importance degree of the business management skills and these skills inclusion within VET providers offer. Most of the Romanian VET providers' representatives emphasized some certain barriers in providing business management training as lack of students willing to pay for the course and different needs of each student. The most used forms of the training by the VET providers are: courses held in places of business and theoretical tutorials, while the on-line courses are less used for training delivery. On the other group side (micro-enterprise), even if on-line courses had a high fervency, this method was on the forth position in the micro-enterprise representatives' preference. 58.8% of the VET providers' representatives acknowledge that they share knowledge and experience within different education providers' network.

In a new training resources development scenario, VET institution' representatives considerate the most five important contents in order to be expand or add to their training offer, as follow: (1) problem solving, performance management, human resource management, communication, and IT. Less important were considerate accounting, imports and exports, and finances. From this perspective there is certain gab between the perceptions of the two groups - VET institutions and micro-enterprises. Regarding the learning methods used in order to provide these new training resources, VET respondents put a great emphasis on case studies and workshops. Most of the respondents argued that the training course should take 5 hours and more each week in order to be manageable for education provider.

Romanian VET providers consider that there is a high potential in peer-to-peer learning among micro-enterprise owners and they appreciated that there are certain skills that come with experience and can't be taught in any kind of school/training for a successful entrepreneur. VET providers pointed out the problem solving, the performance management, the entrepreneurship, the communication and the human resource management as the five most important and effective specific knowledge/skills/expertise for students to be received from other micro enterprise owners in peer-to-peer learning. Also, they appreciate training sessions, small group meetings and joint peer activities asthe most effective approaches in peer-to-peer learning.

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CASE STUDY: THE POLAR MINE: VICTIM OF POORLY PLANNED ORGANIZATIONAL CHANGE

Student Jennifer DE BONDY
Université of Québec in Abitibi-Témiscamingue, Québec, Canada
E-mail: jennifer.debondy@uqat.ca (student)
Student Sophie DUMAS
Université of Québec in Abitibi-Témiscamingue, Québec, Canada
E-mail: sophie.dumas@uqat.ca (student)
Professor Doina MUREȘANU, Ph.D.
Université of Québec in Abitibi-Témiscamingue, Québec, Canada
E-mail: doina.muresanu@uqat.ca

Abstract: The case presents the situation of a mining company in the northern part of the province of Quebec, Canada, which, like most companies operating in this sector, should at some point in their operation seek funding to continue their activities. The Polaire mine has some seniority in nickel mining, but these activities can not be developed without the initiation of partnerships with other mines acting as investors. Thus, an interesting offer of purchase was made at the Polar mine by the Arctic mine. The latter comes with money, but with a lot of questions from employees. They are going through a period of transition after the merger, which does not seem very well managed by the company: the leaders are not informed about the evolution of the partnership, and do not inform their subordinates in turn. They have concerns for which they do not find answers, which makes them unmotivated and even likely to change jobs. The case address to the management students, who are asked to describe the experiences of participants and to propose solutions to the company in order to facilitate the process of change and increase employee motivation.
Key words: mining industry, mergers and acquisitions, change management, employee motivation
JEL Classification: M12 Personnel Management

1. Presentation of the case

Polaire mine began operations in 1935 and it operates some metals, but mainly nickel. From 1935 to 1985, 5.7 million ounces of nickel were extracted from the Chapaisian soil. From 1985 to 2001, operations ceased due to certain economic and social constraints. In 2002, Georges Ladouceur, a geologist, and his team of Henri Larichesse and Bob Lafortune, the leaders, were interested in a mining camp that was thought exhausted. In 2005, exploration work was conducted in urban areas to determine the potential for development. The operations began gradually and the more the years passed, the more nickel was discovered there. It is a mine with great potential where it will be exploited for many years to come.

In 2007, the Polaire mine made a massive hiring and prioritized people from the surrounding population of Chapais. At the level of the workforce, she is non-unionized. The organization has approximately 84 employees and about a dozen subcontractors. The workforce distribution is 91% for men, compared to 9% for women, as of February 28, 2007. More than 70% of the workforce is between the ages of 30 and 49, while 9% is of it is under 30 years old. In terms of education, 53% of employees hold a diploma and the others have none. The entire site has equipment tailored to meet the needs of this little mine.

In 2011, leaders Henri Larichesse and Bob Lafortune found themselves in a financial pit. The working capital required for mine operations was largely insufficient. They had to proceed reluctantly to the announcement of cuts. As the mine is the main economic activity in this northern region, many low-educated employees will find themselves unemployed. Such an announcement completely shattered the population of

Chapais. Given the situation, very few alternatives were possible for the leaders. On May 2, 2012, the Arctic mine made an offer to purchase that was accepted by Polar Mining. These offered $ 502.5 million for the entire Chapais mine site. This represents a value of $ 2.60 per share at the Polaire mine, they obtained a premium of 4% more than the market value indicated at the time of the transaction. The transfer of ownership was well received by the population, since the Arctic mine would save the economy of the region. It is a recognized and relatively accepted company in this region.

This mining giant enjoys a certain notoriety, but these modes of management and its organizational structure are largely distinguished from the Polar mine. In this perspective, the situation requires a certain period of adaptation. This is why the new leaders accompanied by Ginette, the director of human resources, reached a consensus and decided that no change would take place for the next four months. In order to present the upcoming changes, they have organized an important meeting. In it, the director of human resources presented the main reasons for the change. Several items were on the agenda, such as the presentation of new leaders, a precise timetable for the future action plan that will probably affect work schedules, staffing and the possible arrival of new equipment. Then, the names of the resource persons to consult were clearly explained as well as the support methods offered to the employees. This period was also intended to facilitate the acceptance and adaptation of employees faced with the change of ownership. Unfortunately, this meeting had the opposite effect, a wave of panic and anxiety settled within the organization.

Jean-Paul, the general foreman enters a determined step in the office of Ginette.

- "Ginette, do you realize the impact of these announcements in the eyes of employees? Everyone is talking about that, nobody works! What should I do to motivate my gang if myself I am not sure of continuing to work here? I think it's silly this period, apart from stressing us, it does not bring anything good. "

- "I understand your situation and also that of your colleagues. Do not worry, this transition period is not implemented without reason. The process of change must not happen too quickly. When we are able to inform you more, we will not hesitate to do so. For the moment, I am, mi to concerned about the events because I am also in uncertainty. "

Following the announcement, several workers expressed some fears about the change. During their working hours, two miners discussed the situation.

☐ Eric: "I'm really scared of losing my job. What do you think, Fernand, about this change of ownership and the transition period? "

☐ Fernand: "I think we did not really have a choice, it was that or nothing ... Me, at my age, I can not start anywhere else. I do not know what I'm going to do. "

☐ Eric: "I understand you, me with my three children, I can not afford to lose my job. I have just two years of seniority here and my wife also works as a mine guard. I can not wait anymore, this transition period is unsustainable. I have to know what is waiting for me, we have a family to support. "

Meanwhile, Andrew, a foreman, interrupts them in their conversation:

☐ Andrew: "That's enough, go back to work! What is the problem, why are not you working?

☐ Fernand: "The transition period is anything! I do not know what to do or not to do. I'm afraid of doing something wrong, I can not afford to lose my job. This has made even the mechanics no longer want to repair my drill. Everyone just thinks of them and the work climate is unbearable! I'm no longer able to endure that "

Andrew could not find the right words to reassure Fernand and left.

☐ Fernand: "Hey Eric, I'm wondering what Mathieu did yesterday, it seems that nothing has progressed! Even the service guy did not come to deliver our stock. Everything is wrong since the announcement, no one knows they are the tasks to do. It looks like priorities do not follow each other anymore "

☐ Eric: "Put it on, it's true that it's depressing. Before, we were like a family, there is nothing! No one speaks, everyone is in competition. I may have been able the work climate is really crappy. I really liked that, I even liked to come to work. I wake up in the morning and it's a corvee. "

☐ Fernand: "It's true, I feel the same way too. Even my wife noticed my demotivation, she also advised me to buy a smile! In addition, before it was fun, everyone helped each other and now it's every man for himself. I'm even more interested in doing overtime, the less time I spend here, the better I wear. "

The employees are very powerless and many of them regularly come to Ginette to ask questions, either in person or by telephone, which has the effect of reducing productivity and greatly affecting the work climate. The stress is palpable within the organization.

Following the conversation between Fernand and Eric:

☐ Fernand: "I can not believe that I should change my workplace, I want to finish my career here."

☐ Éric: "I know, I too want to stay here, we are a great team. "

In the following weeks, Ginette noticed that the percentage of absenteeism increased and the number of departures also. Afterwards, she was able to observe the appearance of other problems.

☐ Fernand: "Since the announcement, I have the impression that I come to work, but that I do nothing. "

☐ Eric: "It's true, I too feel like that. I do not stop thinking about the events, I went to question Ginette again about my bonus, it should not that the mine cut me. She could not even answer my questions. "

Following this situation, Ginette met some employees to clarify their discontent, but also to explain to them the reasons why she was not able to answer all their questions in the scenario proposed by the leaders. In addition, managers noted that employees seemed less motivated, following monthly analysis of performance reports.

As the transition period is still not over, everyone is immersed in an endless waiting period.

Questions:

1. What is the nature of change?

2. Identify the actors in the case of the Polar Mine and describe their reactions to the changes.

3. According to Collerette (2007), identify the steps of the change approach in this case.

4. Do you perceive phases of concern? If so, which are they?

5. Could the change have been made in a different manner? If you think it could have been made differently, how would this be?

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SOCIAL MEDIA - AN INTEGRAL PART OF DAILY LIFE

Associate Professor Delia TESELIOS, Ph.D.
"Constantin Brancoveanu" University of Pitești, Romania
Associate Professor Mihaela SAVU, Ph.D.
"Constantin Brancoveanu" University of Pitești, Romania
Email: ioneci_mihaela@yahoo.com

Abstract: In a world in which the number of Internet users is steadily increasing, Social Media has become a phenomenon, being an integral part of modern society. Starting from the fact that online activities that have earned percentages in the last 5 years include the use of social networks, making simple or video phone calls and sending / receiving emails, this paper aims to present a series of Social Media issues and the impact it has on society.
Keywords: Social media, Internet, smartphone, Facebook.
JEL Classification: L82, L86.

1. Introduction

Due to the rapid evolution of web-based technologies, to the fact that users have switched from being passive readers to active Word Wide Web development, we can not talk about a commonly accepted definition of "social media".

In his work (Mayfield, 2008), Mayfield defines Social Media as a group of online media types that have some or all of the following:

> ➢ Participation: social media encourages contributions and feedback from anyone interested;
> ➢ Opening: comments, voting and information sharing are encouraged;
> ➢ Conversation: compared to traditional media where "broadcasting" means broadcast or distributed content to an audience, Social Media is seen as a two-way conversation;
> ➢ Community: social media allows the rapid formation of communities sharing common interests and rapid communication within them;
> ➢ Connection: provides the link between different resources, people, sites.

Succint, "social media" is an "umbrella" expression under which "people, technology, communication, ideas" gather (Lake, 2009).

Social Media includes a number of applications with different functions, communication formats and basic structures, a possible grouping of Social Media platforms (Bădău, 2011):

- Communication: *blogs* (weblogs: www.wordpress.com, www.blogger.com), *microblogs* (some blogs where only short texts of up to 200 characters can be posted: https://twitter.com/?lang=ro), *podcasts* (audio files distributed over the internet, downloadable and played on PC, laptop or mobile devices: http://florinrosoga.ro/blog/category/podcast/), *vodcast* (video podcasts), *social networks* (https://www.facebook.com/, https://www.linkedin.com/), *forums* (http://forum.portal.edu.ro/), *discussion groups* (communication systems through which people with various concerns and passions, exchange information, discuss on topics of general or particular interest: https://groups.yahoo.com/neo, https://groups.google.com), *instant messaging* (WhatsApp, Skype, Yahoo! Messenger), *events* (http://metropotam.ro/evenimente/).

- Collaboration: *Online encyclopedias* (users can participate in content writing: Wikipedia), *Q & A* (question and answer: http://www.answers.com/), *favorite sites* (http://digg.com/).

- Multimedia: *audio (*http://romanticfm.ro/live*), video (*https://www.youtube.com*), photo (*https://www.instagram.com/, https://www.flickr.com/*), live streaming* (live broadcasts - video or audio files open and run in real-time while uploading)

- Entertainment: *online games, virtual worlds (*http://secondlife.com/*).*

2. Internet and Social Media in today's society

The number of Internet users is steadily rising, due to both web technology and mobile technology (Internet World Stats, 2017), thus making the transition to the Internet on mobile devices, making it easier to access the Internet.

A worldwide evolution during 2010-2017 of the number of users is presented in (Figure no. 1). There is an increase in the number of users by 23% over the period presented, in June 2017 being over 3 billion Internet users, representing 51.7% of the total population.
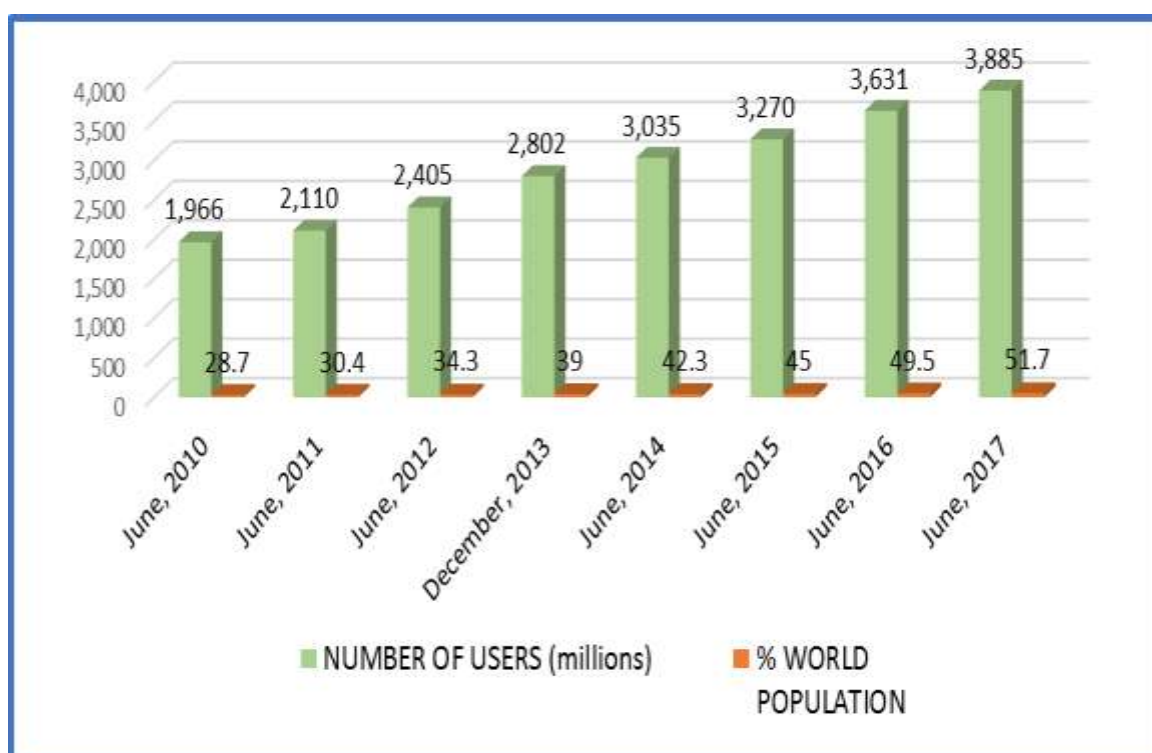
Figure no. 1. Evolution of the number of Internet users during 2010-2017
Source: Internet World Stats, 2017. *Statistic Data.* [online] Available at:
<http://www.internetworldstats.com/> [Accesed 2 October 2017].

Because Internet connection is the necessary condition for using Social Media, we are further presenting the situation of the number of Internet users on geographic regions. Thus, according to data provided by Internet World Stats, on June 30, 2017, the first place in terms of Internet users was occupied by Asia, accounting for 49.7% of the total number of users, followed by Europe with 17% total users (Table no. 1, Figure no. 2).

Table no. 1. Worldwide use of the Internet by geographic regions

World Regions	Population (2017 Est.)	Population % of World	Internet Users (30 June 2017)	Penetration Rate (% Pop.)	Internet Users %
Africa	1,246,504,865	16.60%	**388,376,491**	31.20%	10.00%
Asia	4,148,177,672	55.20%	**1,938,075,631**	46.70%	49.70%
Europe	822,710,362	10.90%	**659,634,487**	80.20%	17.00%
Latin America / Caribbean	647,604,645	8.60%	**404,269,163**	62.40%	10.40%
Middle East	250,327,574	3.30%	**146,972,123**	58.70%	3.80%
North America	363,224,006	4.80%	**320,059,368**	88.10%	8.20%
Oceania / Australia	40,479,846	0.50%	**28,180,356**	69.60%	0.70%
WORLD TOTAL	**7,519,028,970**	**100.00%**	**3,885,567,619**	**51.70%**	**100.00%**

Source: Internet World Stats, 2017. *Internet Users and 2017 Population in North America*. [online] Available at: <http://www.internetworldstats.com/stats14.htm#north> [Accesed 2 October 2017].
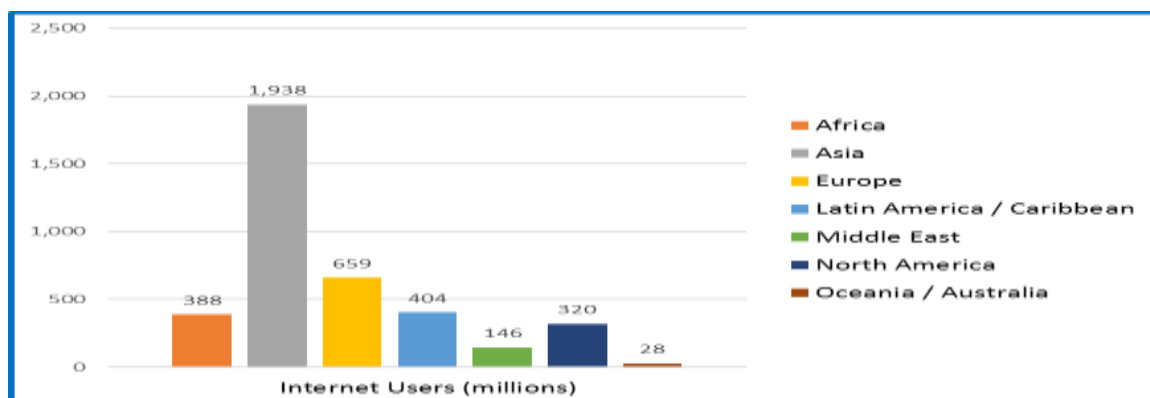
Figure no. 2. Internet users (millions of users)
Source: Made by the authors based on the data from Table no. 1.

The highest penetration rate of the Internet is present in North America (88.1%), due both to the penetration rate of smartphones among the population (78.7% in 2016, following that by 2019 to reach at 86.1%, as expected (Frederick and O'Malley, 2015) and increasingly affordable mobile internet services. Europe ranks second with 80.2% Internet users of the total population (Figure no. 3).
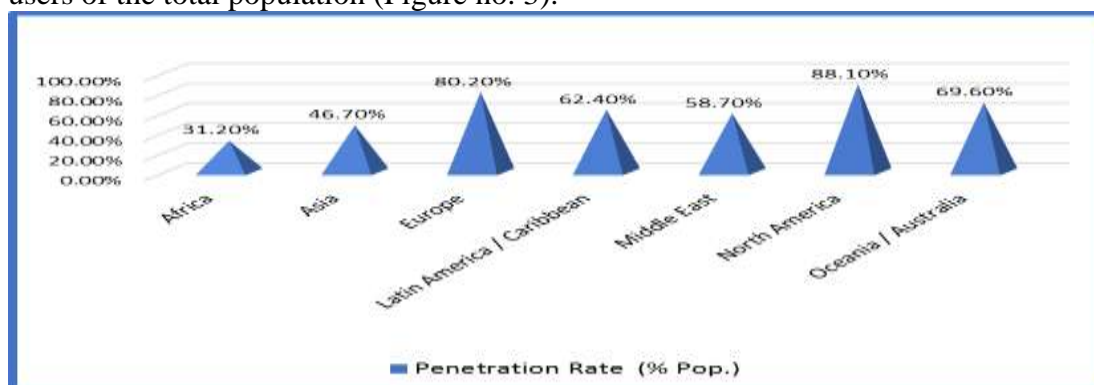
Figure no. 3. Penetration rate of the Internet (% population)
Source: Made by the authors based on the data from Table no. 1.

At the European Union level, Luxembourg (97.5%) ranked first in terms of Internet penetration rate, followed by Denmark (96.9%) and the Netherlands (94.8%). Romania ranks the penultimate place with 62.8%, with a difference of 3% from the last place occupied by Bulgaria.

Table no. 2. Internet users in the European Union

EUROPEAN UNION	Population (2017 Est.)	Internet Users 30-June-2017	Penetration (% Population)	Internet Users %
Austria	8,592,400	7,273,168	84.60%	1.70%
Belgium	11,443,830	10,060,745	87.90%	2.30%
Bulgaria	7,045,259	4,213,065	59.80%	1.00%
Croatia	4,209,815	3,133,485	74.40%	0.70%
Cyprus	1,187,575	901,369	75.90%	0.20%
Czech Republic	10,555,130	9,323,428	88.30%	2.10%
Denmark	5,711,837	5,534,770	96.90%	1.30%
Estonia	1,305,755	1,196,521	91.60%	0.30%
Finland	5,541,274	5,125,678	92.50%	1.20%
France	64,938,716	56,367,330	86.80%	13.00%
Germany	80,636,124	72,290,285	89.60%	16.70%
Greece	10,892,931	7,525,926	69.10%	1.70%
Hungary	9,787,905	7,874,733	80.50%	1.80%
Ireland	4,749,153	4,453,436	93.80%	1.00%
Italy	59,797,978	51,836,798	86.70%	12.00%
Latvia	1,944,565	1,663,739	85.60%	0.40%
Lithuania	2,830,582	2,399,678	84.80%	0.60%
Luxembourg	584,103	569,442	97.50%	0.10%
Malta	420,521	334,056	79.40%	0.10%
Netherlands	17,032,845	16,143,879	94.80%	3.70%
Poland	38,563,573	28,267,099	73.30%	6.50%
Portugal	10,264,797	7,430,762	72.40%	1.70%
Romania	19,237,513	12,082,186	62.80%	2.80%
Slovakia	5,432,157	4,629,641	85.20%	1.10%
Slovenia	2,071,252	1,563,795	75.50%	0.40%
Spain	46,070,146	40,148,353	87.10%	9.30%
Sweden	9,920,624	9,216,226	92.90%	2.10%
United Kingdom	65,511,098	62,091,419	94.80%	14.30%
Total	**506,279,458**	**433,651,012**	**85.7 %**	**100.0 %**

Source: Internet World Stats, 2017. *Internet Users and 2017 Population in North America*. [online] Available at: <http://www.internetworldstats.com/stats14.htm#north> [Accesed 2 October 2017].

Regarding the number of Internet users at the level of the European Union, Romania ranks on the 10th place with a share of 2.80% of the total number of users, with a difference of 13.9% compared to Germany which ranks the first.
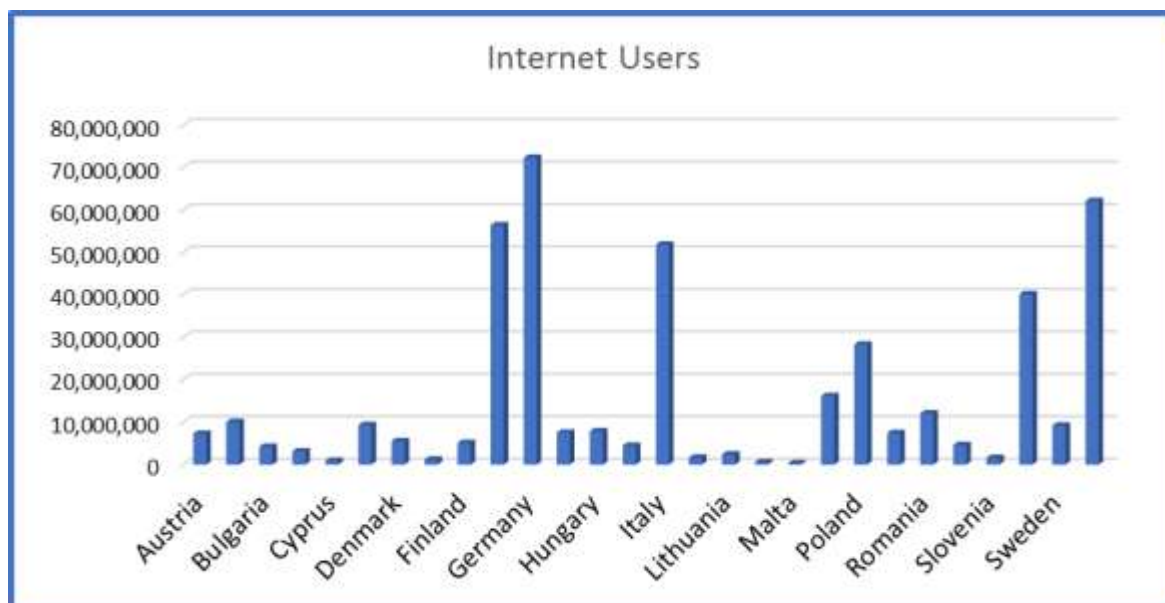
Figure no. 4. Internet users in the European Union - EU28
Source: Made by the authors based on the data from Table no. 2.

According to data provided by Eurostat (Eurostat, 2017) on 26.04.2017, at EU-28 level, the most common online activity was that of sending / receiving emails (86% of Internet users in the last 3 months), followed by finding information on goods and services (80%), reading online news (70%) and social networking (63%). Of the online activities that have earned percentages over the past 5 years, we mention: the use of social networks and making simple or video phone calls, both with a 10% increase between 2011-2016 and the use of Internet banking with an increase from 52% in 2011 to 59% in 2016.

It can be seen from Figure no. 5 that preferred activities of Internet users aged 16-24 years are represented by participation in social networks and sending / receiving emails (both with 88%) followed by tracking video content distributed by various services (e.g. YouTube, Netflix) (81%).

Sending / receiving emails is the main activity of both Internet users aged 25-54 (86%) and 55-74 years old (83%), followed to find information on goods and services, 81% being the percentage of Internet users aged 25-54 and 77% of Internet users aged 55-74 years.

Participation in social networks ranks fourth in the top preferences of Internet users aged 25-54 (64%) and the 5th in the top preferences of Internet users aged 55-74 (32%).
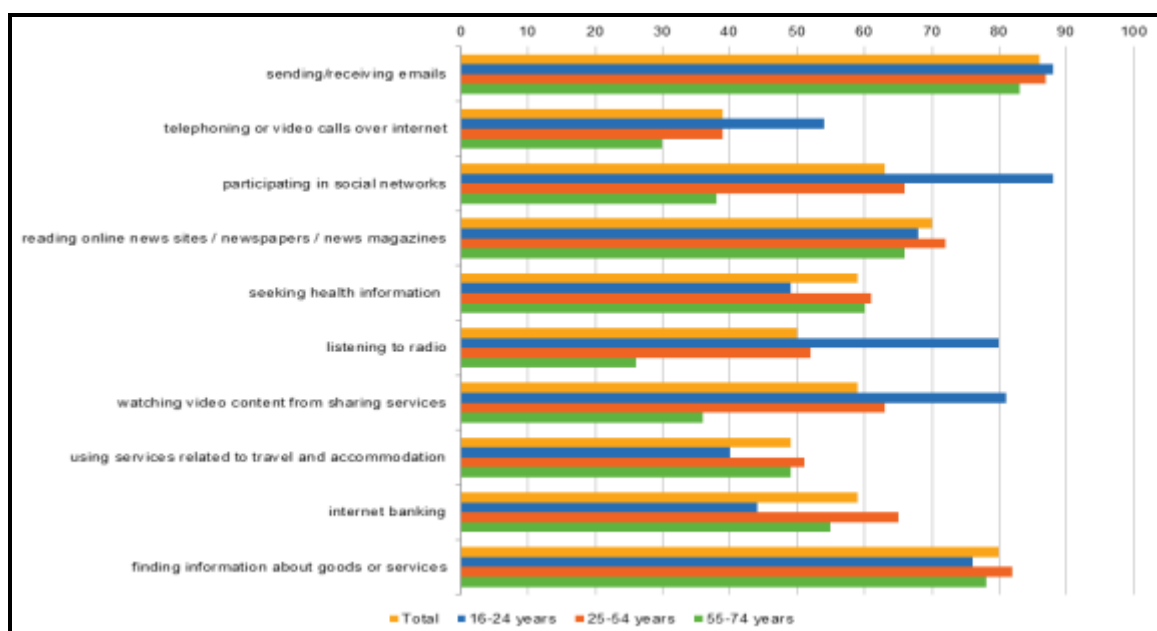
Figure no. 5. Internet activities in the past three months by age group EU-28, 2016 (% of internet users)

Source: Eurostat, 2017. *Statistics Explained. Internet access and use statistics_- _households and individuals.* [online] Available at: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Internet_access_and_use_statistics_-_households_and_individuals> [Accesed 2 October 2017].

The preferences of Internet users in Romania are shown in Table no. 3. It is noticed that the percentage of those who access the social networks is 74%, 11% above the European average, representing the preferred activity in the online environment of the Romanians. The biggest difference (51%), compared to the European average (59%), is recorded by the use of Internet banking.

The second place in the preferences of the Romanian Internet users is receiving / sending messages (70%), followed by finding information on goods and services (59%).

Table no. 3. Web activities in the last three months, April 2017 (% of internet users)

	Preferințele utilizatorilor de internet	România	EU-28
1			
2	Urmarea unui curs online	4	8
3	Primirea/trimiterea mesaje	70	86
4	Realizarea de apeluri telefonice sau video	45	39
5	Participarea în rețelele sociale	74	63
6	Creare website-uri sau blog-uri	6	6
7	Încărcarea conținutului auto-creat pe orice website, în scopul distribuirii	31	34
8	Găsirea informațiilor despre bunuri și servicii	59	80
9	Utilizare internet banking	8	59
10	Călătorie și cazare	22	49
11	Vânzare bunuri și servicii	5	22
12	Căutare informații legate de sănătate	48	59
13	Materiale de învățare online	16	16
14	Comunicare cu instructori sau studenți folosind website-uri/portaluri educaționale	7	9
15	Jucând sau descărcând jocuri	40	34
16	Ascultare muzică	48	50
17	Urmărire conținut video distribuit de diverse servicii	25	59
18	Gestionarea unui cont de plată pentru (eventual) plata bunurilor sau serviciilor achiziționate prin internet	1	35

Source: Made by the authors based on the data available at http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do [Accesed 2 October 2017].

As a result of the interest shown by users in finding online information on goods and services, companies have increased their presence on the Internet by creating websites and by using Social Media channels to disseminate various information and / or marketing campaigns . Thus, the EU-28 average of companies (without the financial sector, with a minimum of 10 employees) that have their website and use Social Media was 41% in 2016.

The top three places are occupied by Malta with 67%, the Netherlands with 63% and Denmark with 62%. Romania ranks last with 21% (% of companies).
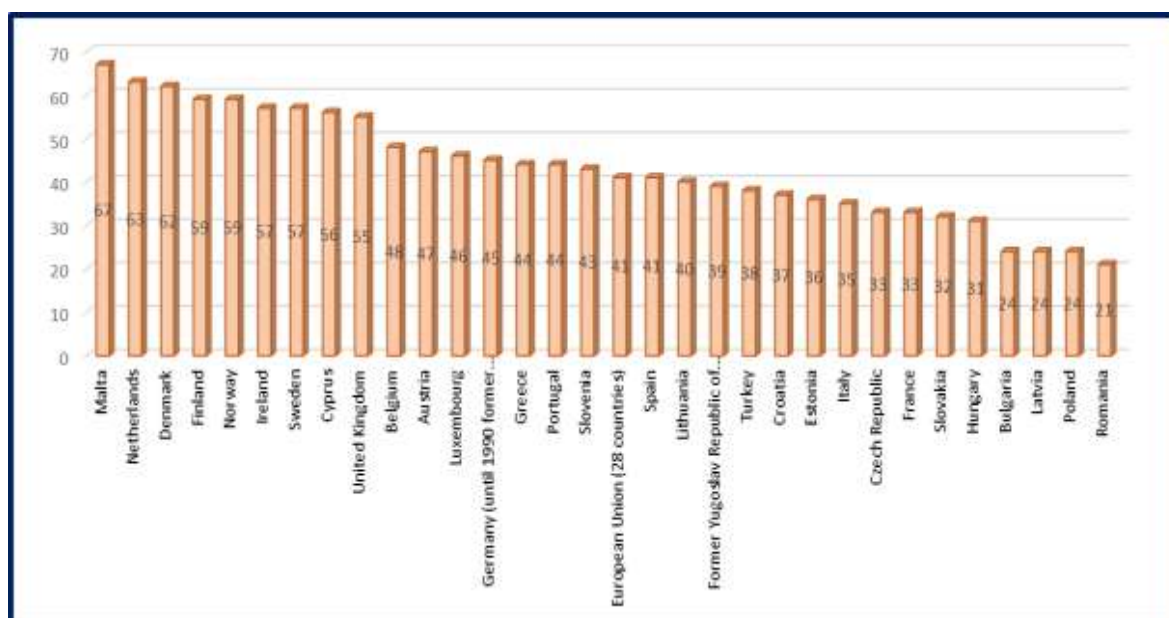
Figure no. 6. Enterprises that have website and use any type of Social Media, 2016, (% of enterprises)

Source: Eurostat, 2017. *Statistics Explained. Digital economy and society statistics_- enterprises.* [online] Available at: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Digital_economy_and_society_statistics_-_enterprises> [Accesed 2 October 2017].

In the year 2016, the number of newly registered Social Media users was that of 482 million (Kemp, 2017), the total number of users, globally ,being of 2.28 billion, and in 2021, according to estimations would reach 3.02 billion (Statista, 2017).

Among the social media platforms, the most used social network is Facebook with more than 2 billion active users per month (September 2017) (Figure no. 7), to this increase in the number of users contributing the launch of the Facebook Live feature in April 2016 accessible to all mobile device users. From 2017, Facebook Live is also available on your desktop or laptop.

Purchased by Facebook Inc. in February 2015, WhatsApp instant messaging service is ranked 3rd in the rankings of the most widely used Social Media platforms, with a difference of 200 million active users to the second place ranking YouTube.

On a par with WhatsApp, in terms of the number of active users, there is Facebook Messenger, followed by Instagram (a platform acquired by Facebook Inc. in April 2012).
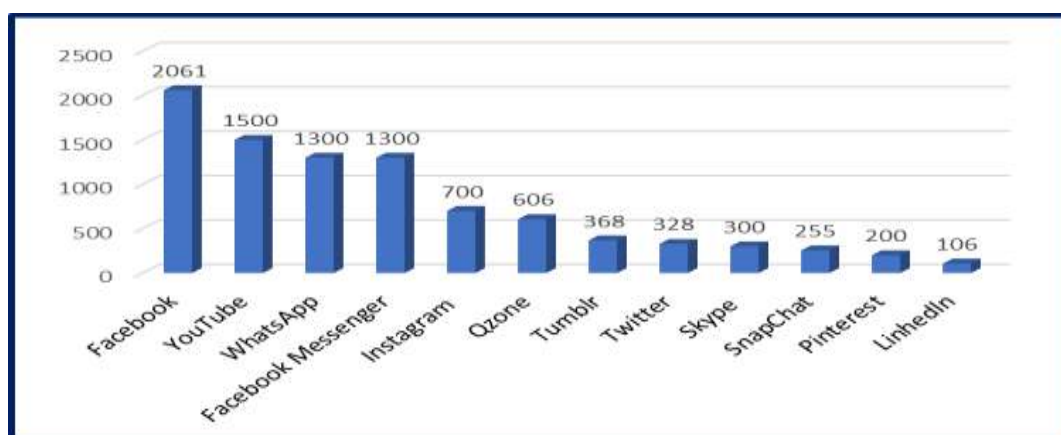
Figure no. 7. Social Media Platforms ranked by number of active users (in millions), September 2017

Source: Statista, 2017. *The Statistics Portal.* [online] Disponibil la: <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/> [Accesat 2 octombrie 2017].

If until a few years ago accessing the Internet was mainly on the desktop or laptop, increasing sales of smartphones (due to their downsizing) led to an increase in the number of users accessing the Internet via mobile devices. Thus, if the Internet use through smartphones was 68% worldwide in 2016, it is projected to reach 79% by 2018 (Pirvu, 2016). According to data provided by Eurostat, at EU-28 level, 79% of Internet users preferred to use their smartphone for navigation, 64% preferred the laptop or the notebook, 54% preferred the computer and 44 % preferred to use the tablet (Eurostat,2017).

Globally, the number of Facebook users accessing this platform on mobile devices is estimated to reach 75.1% in 2018 (Statista, 2017).

As a result, companies, NGOs and governments everywhere see themselves compelled to optimize their mobile site, thus staying in permanent contact with the target audience.

And in Romania, Internet users prefer smartphones to the detriment of their computer or tablet for certain online activities. Thus, social networks are accessed in the ratio of 47% on the smartphone compared to 40% access on the computer. Email verification is done on the same percentage on the smartphone and computer (34%), while search engines are 44% on the computer, compared to 42% on the smartphone (Figure no. 8).
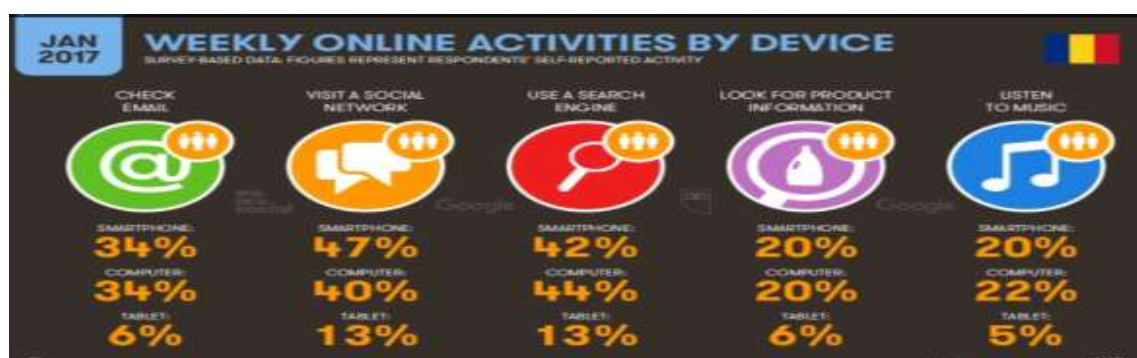
Figure no. 8. Weekly online activities by device, January 2017

Source: Hootsuite, 2017. *Digital in 2017: Eastern Europe*. [online] Available at: <https://www.slideshare.net/wearesocialsg/digital-in-2017-eastern-europe> [Accesed 2 October 2017].

3. Conclusions

Social Media has become an integral part of modern society, generating, besides the undeniable positive aspects of how people interact and share information and a number of negative aspects, some with long-term effects.

Among the positive aspects of using Social Media platforms we mention:

➢ Interactive communication with other users who share topics of general or private interest beyond the social boundaries

➢ Exchange of ideas, opinions, information within groups / communities formed on the basis of common concerns and passions

➢ Knowing more people

➢ The ability to quickly find information on events, actions

➢ The ability of each user to become a content creator

➢ Equal opportunities in terms of product promotion, engagement in an active community offered to both small businesses and large businesses without additional costs

➢ Social networks provide users with the ability to create a personal brand that employs their skills, talents, generating and sharing content, with the ultimate goal of generating trust.

The negative aspects of Social Media are derived, first of all, from serious abuse of users' private data. However, one should not neglect neither negative social effects, diminished self-esteem, self-confidence as a result of comparisons with others, online criticism, decreased productivity of employees accessing social networks during work hours, nor the impact on political life, on the deliberate broadcast of false news about current events. Although social media platforms are becoming more and more present in our lives, it is up to each one to draw boundaries and determine the extent to which they allow them to control their lives.

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SOCIAL MEDIA – PARTE INTEGRANTĂ A VIEȚII COTIDIENE

Conf. univ. dr. Delia TESELIOS
Universitatea ”Constantin Brâncoveanu” din Pitești, România
Conf. univ. dr. Mihaela SAVU
Universitatea ”Constantin Brâncoveanu” din Pitești, România
Email: ioneci_mihaela@yahoo.com

Rezumat: Într-o lume în care numărul utilizatorilor de Internet este în continuă creștere, Social Media a devenit un fenomen, fiind parte integrantă a societății moderne. Pornind de la faptul că printre activitățile online care au câștigat procente în ultimii cinci ani se numără utilizarea rețelelor sociale, realizarea de apeluri telefonice simple sau video, precum și trimiterea/primirea de e-mail-uri, această lucrare își propune să prezinte o serie de aspecte privind Social Media și impactul pe care aceasta îl are asupra societății.

Cuvinte-cheie: Social media, Internet, smartphone, Facebook.
Clasificare JEL: L82, L86.

1. Introducere

Datorită evoluției rapide a tehnologiilor bazate pe web, a faptului că utilizatorii au trecut de la starea de cititori pasivi la construirea activă a Word Wide Web-ului, nu putem vorbi despre o definiție general acceptată a termenului "social media".

În lucrarea sa (Mayfield, 2008), Mayfield definește Social Media ca fiind un grup de tipuri de media online, care au o parte sau toate caracteristicile următoare:

- Participare: social media încurajează contribuțiile și feedback-ul de la oricine este interesat;

- Deschidere: sunt încurajate comentariile, votul și schimbul de informații;

- Conversație: comparativ cu mass-media tradițională în care "difuzarea" înseamnă conținut transmis sau distribuit unei audiențe, Social Media este văzută ca o conversație în ambele sensuri;

- Comunitate: social media permite formarea rapidă de comunități care împărtășesc interese comune și comunicarea rapidă în cadrul acestora;

- Conexiune: asigură legătura între diverse resurse, oameni, site-uri.

Succint, "social media" este un termen "umbrelă" sub care se adună "oameni, tehnologie, comunicare, idei" (Lake, 2009).

Social Media include o serie de aplicații cu diferite funcții, formate de comunicare și structuri de bază, o posibilă grupare a platformelor Social Media fiind (Bădău, 2011):

- Comunicare: *bloguri* (jurnale pe internet: www.wordpress.com, www.blogger.com), *microbloguri* (un fel de bloguri unde se pot posta numai texte scurte, de maxim 200 de caractere: https://twitter.com/?lang=ro), *podcast*-uri (fișiere în format audio distribuite pe internet, care se pot descărca și reda pe PC, laptop sau dispozitive mobile: http://florinrosoga.ro/blog/category/podcast/)), *vodcast*-uri (varianta video a podcast-urilor), *rețele de socializare (*https://www.facebook.com/, https://www.linkedin.com/), *forumuri (*http://forum.portal.edu.ro/), *grupuri de discuții* (sisteme de comunicare prin care persoane cu diverse preocupări și pasiuni, schimbă informații, discută pe baza unor teme de interes general sau particular: https://groups.yahoo.com/neo, https://groups.google.com), *mesagerie instantanee (*WhatsApp, Skype, Yahoo! Messenger), *evenimente (*http://metropotam.ro/evenimente/).

- Colaborare: *enciclopedii online* (utilizatorii pot participa la scrierea conținutului: Wikipedia), *Q&A* (întrebare și răspuns: http://www.answers.com/), *site-uri favorite (*http://digg.com/).

- Multimedia: *audio (*http://romanticfm.ro/live*),video (*https://www.youtube.com*),
foto (*https://www.instagram.com/*, https://www.flickr.com/*), *live streaming* (transmisii live - fișierele video sau audio se deschid și rulează în timp real, în timp ce se încarcă)
- Divertisment: *jocuri online*, *lumi virtuale (*http://secondlife.com/*).

2. Internet-ul și Social Media în societatea actuală

Numărul utilizatorilor de Internet este într-o continuă creștere, fapt datorat atât tehnologiei web, cât și tehnologiei mobile (Internet World Stats, 2017), fiind realizată, astfel, tranziția către Internet-ul pe dispozitive mobile, fapt ce facilitează accesarea Internet-ului.

O evoluție, la nivel mondial, în perioada 2010-2017, a numărului de utilizatori este prezentată în Figura nr. 1. Se observă o creștere a numărului de utilizatori cu 23% în decursul perioadei prezentate, în iunie 2017 fiind peste 3 miliarde de utilizatori de Internet, reprezentând 51,7% din totalul populației.
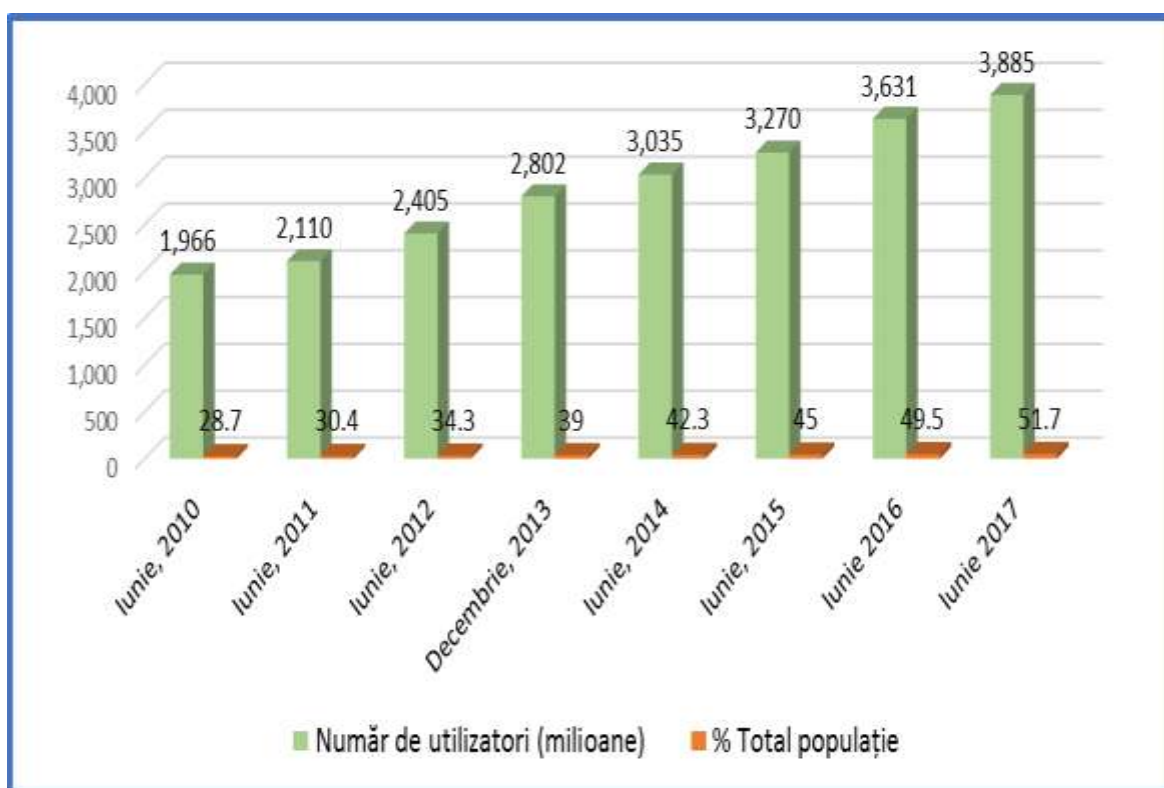
Figura nr. 1. Evoluția numărului de utilizatori de Internet în perioada 2010-2017
Sursa: Internet World Stats, 2017. *Statistic Data*. [online] Disponibil la: <http://www.internetworldstats.com/> [Accesat 2 octombrie 2017].

Deoarece conexiunea la Internet este condiția necesară pentru utilizarea Social Media, prezentăm în continuare situația pe regiuni geografice a numărului utilizatorilor de Internet. Astfel, conform datelor furnizate de Internet World Stats, la 30 iunie 2017, primul loc în ceea ce privește numărul utilizatorilor de Internet era ocupat de Asia, cu o pondere de 49,7% din numărul total al utilizatorilor, urmată de Europa, cu 17% din numărul total de utilizatori (Tabelul nr. 1, Figura nr. 2).

Tabelul nr. 1. Utilizarea la nivel mondial a Internet-ului pe regiuni geografice

Regiuni geografice	Populație (2017 Est.)	Populație (% total populație)	Utilizatori de Internet (30 iunie 2017)	Rata de penetrare a internetului (% Pop.)	Utilizatori Internet %
Africa	1,246,504,865	16,6 %	**388,376,491**	31,2 %	10,0 %
Asia	4,148,177,672	55,2 %	**1,938,075,631**	46,7 %	49,7 %
Europa	822,710,362	10,9 %	**659,634,487**	80,2 %	17,0 %
America Latină / Caraibe	647,604,645	8,6 %	**404,269,163**	62,4 %	10,4 %
Orientul Mijlociu	250,327,574	3,3 %	**146,972,123**	58,7 %	3,8 %
America de Nord	363,224,006	4,8 %	**320,059,368**	88,1 %	8,2 %
Oceania / Australia	40,479,846	0,5 %	**28,180,356**	69,6 %	0,7 %
TOTAL	**7,519,028,970**	**100 %**	**3,885,567,619**	**51,7 %**	**100 %**

Sursa: Internet World Stats, 2017. *Internet Users and 2017 Population in North America.* [online]
Disponibil la: <http://www.internetworldstats.com/stats14.htm#north> [Accesat 2 octombrie 2017].
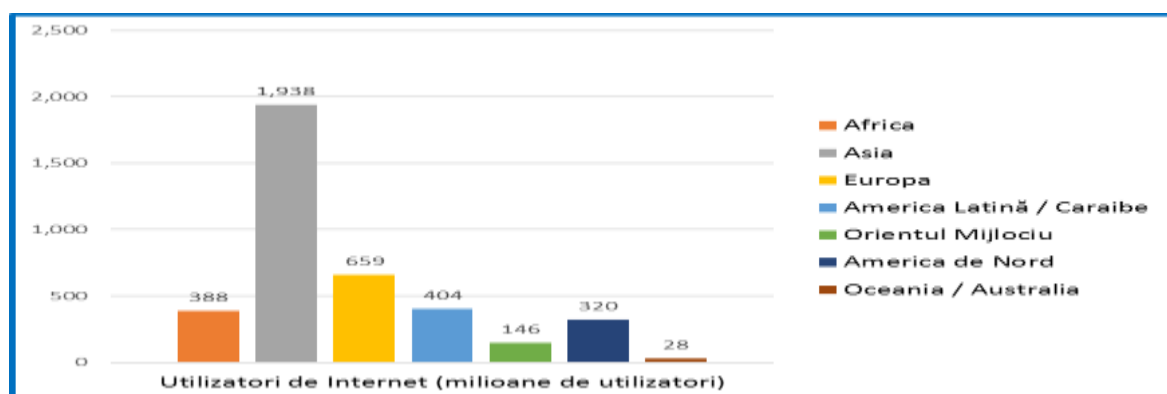
Figura nr. 2. Utilizatori de Internet (milioane de utilizatori)
Sursa: Realizat de autoare, pe baza datelor din Tabelul nr. 1

Cea mai mare rată de penetrare a Internetului este prezentă în America de Nord (88,1%), fapt datorat atât ratei de penetrare a smartphone-urilor în rândul populației (78,7%, în 2016), urmând ca, până în 2019, să ajungă, conform previziunilor, la 86,1% (Frederick și O'Malley, 2015), cât și ofertelor din ce în ce mai accesibile la serviciile de Internet mobil. Pe locul al doilea se află Europa, cu un procent de 80,2% utilizatori de Internet din total populație (Figura nr. 3).
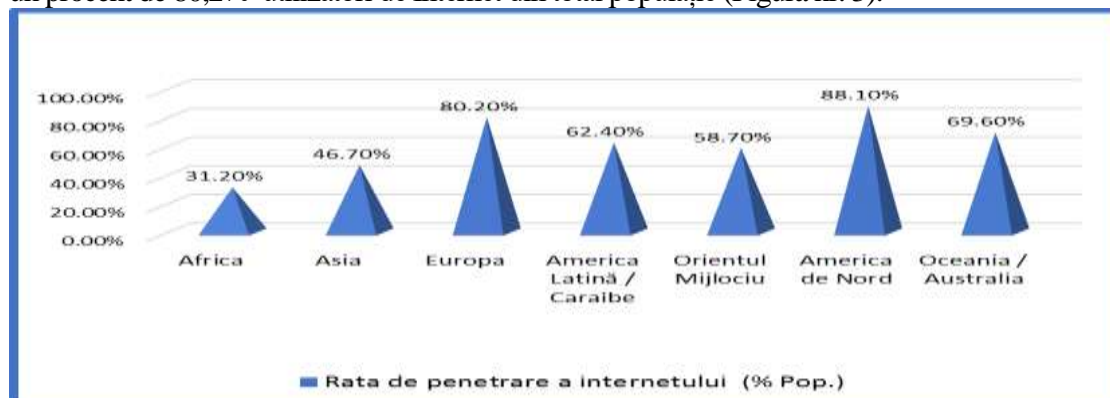
Figura nr. 3. Rata de penetrare a Internet-ului (% populație)
Sursa: Realizat de autoare, pe baza datelor din Tabelul nr. 1

La nivelul Uniunii Europene, pe primul loc în ceea ce privește rata de penetrare a Internet-ului se află Luxemburg (97,5%), urmată de Danemarca (96,9%) și Olanda (94,8%). România se situează pe penultimul loc, cu 62,8%, la o diferență de 3% față de ultimul loc, ocupat de Bulgaria.

Tabelul nr. 2. Utilizatori de Internet în Uniunea Europeană

Uniunea Europeană	Populație (2017 Est.)	Utilizatori de Internet 30 iunie 2017	Rata de penetrare a internetului (% Pop.)	Utilizatori Internet %
Austria	8,592,400	7,273,168	84,6 %	1,7 %
Belgia	11,443,830	10,060,745	87,9 %	2,3 %
Bulgaria	7,045,259	4,213,065	59,8 %	1,0 %
Croatia	4,209,815	3,133,485	74,4 %	0,7 %
Cipru	1,187,575	901,369	75,9 %	0,2 %
Republica Cehă	10,555,130	9,323,428	88,3 %	2,1 %
Danemarca	5,711,837	5,534,770	96,9 %	1,3 %
Estonia	1,305,755	1,196,521	91,6 %	0,3 %
Finlanda	5,541,274	5,125,678	92,5 %	1,2 %
Franța	64,938,716	56,367,330	86,8 %	13,0 %
Germania	80,636,124	72,290,285	89,6 %	16,7 %
Grecia	10,892,931	7,525,926	69,1 %	1,7 %
Ungaria	9,787,905	7,874,733	80,5 %	1,8 %
Irlanda	4,749,153	4,453,436	93,8 %	1,0 %
Italia	59,797,978	51,836,798	86,7 %	12,0 %
Letonia	1,944,565	1,663,739	85,6 %	0,4 %
Lituania	2,830,582	2,399,678	84,8 %	0,6 %
Luxemburg	584,103	569,442	97,5 %	0,1 %
Malta	420,521	334,056	79,4 %	0,1 %
Olanda	17,032,845	16,143,879	94,8 %	3,7 %
Polonia	38,563,573	28,267,099	73,3 %	6,5 %
Portugalia	10,264,797	7,430,762	72,4 %	1,7 %
Romania	19,237,513	12,082,186	62,8 %	2,8 %
Slovacia	5,432,157	4,629,641	85,2 %	1,1 %
Slovenia	2,071,252	1,563,795	75,5 %	0,4 %
Spania	46,070,146	40,148,353	87,1 %	9,3 %
Suedia	9,920,624	9,216,226	92,9 %	2,1 %
Regatul Unit	65,511,098	62,091,419	94,8 %	14,3 %
Total	**506,279,458**	**433,651,012**	**85,7 %**	**100 %**

Sursa: Internet World Stats, 2017. *Internet Users and 2017 Population in North America.* [online] Disponibil la: <http://www.internetworldstats.com/stats14.htm#north> [Accesat 2 octombrie 2017].

În ceea ce privește numărul utilizatorilor de Internet la nivelul Uniunii Europene, România se află pe locul 10, cu o pondere de 2,80% din totalul utilizatorilor, la o diferență de 13,9% față de Germania, care ocupă primul loc (Figura nr. 4).
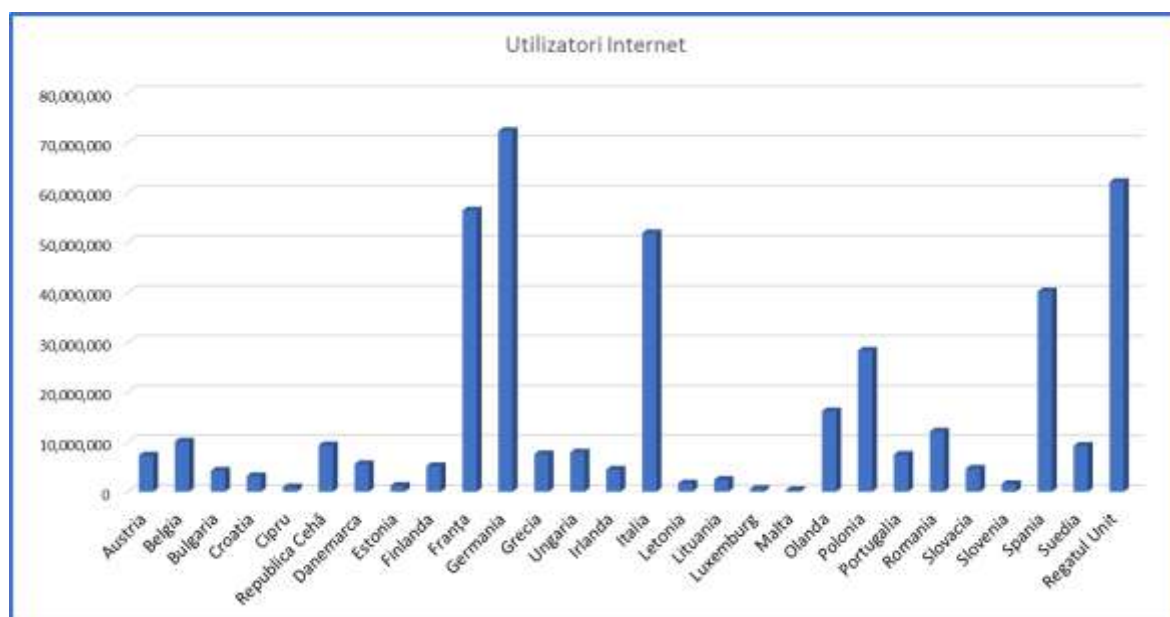
Figura nr. 4. Numărul utilizatorilor de Internet la nivelul UE-28
Sursa: Realizat de autoare pe baza datelor din Tabelul nr. 2

Conform datelor puse la dispoziție de Eurostat (Eurostat, 2017), la 26.04.2017, la nivelul UE-28, cea mai frecventă activitate online o reprezenta trimiterea/primirea de e-mail-uri (86% dintre utilizatorii Internet din ultimele 3 luni), urmată de găsirea informațiilor despre bunuri și servicii (80%), citirea știrilor online (70%) și participarea în rețelele sociale (63%). Dintre activitățile online, care au câștigat procente în ultimii 5 ani, amintim: utilizarea rețelelor sociale și realizarea de apeluri telefonice simple sau video, ambele cu o creștere de 10% în intervalul 2011-2016, precum și utilizarea Internet banking, cu o creștere de la 52%, în 2011, la 59%, în 2016.

Din Figura nr. 5 se observă că activitățile preferate ale utilizatorilor de Internet cu vârsta cuprinsă în intervalul 16-24 ani sunt reprezentate de participarea în rețelele sociale și de trimiterea/primirea de e-mail-uri (ambele cu 88%), urmate de urmărirea conținutului video distribuit de diverse servicii (ex. Youtube, Netflix), cu 81%.

Trimiterea/primirea de e-mail-uri este activitatea principală atât a utilizatorilor Internet cu vârsta cuprinsă în intervalul 25-54 de ani (86%), cât și a celor cu vârsta cuprinsă în intervalul 55-74 de ani (83%), urmată de găsirea informațiilor despre bunuri și servicii, 81% fiind procentul utilizatorilor Internet cu vârsta cuprinsă în intervalul 25-54 de ani și 77% procentul utilizatorilor Internet cu vârsta cuprinsă în intervalul 55-74 de ani.

Participarea în rețelele sociale se situează pe locul 4 în topul preferințelor utilizatorilor Internet cu vârsta cuprinsă în intervalul 25-54 de ani (64%) și pe locul 5 în topul preferințelor utilizatorilor Internet cu vârsta cuprinsă în intervalul 55-74 de ani (32%).
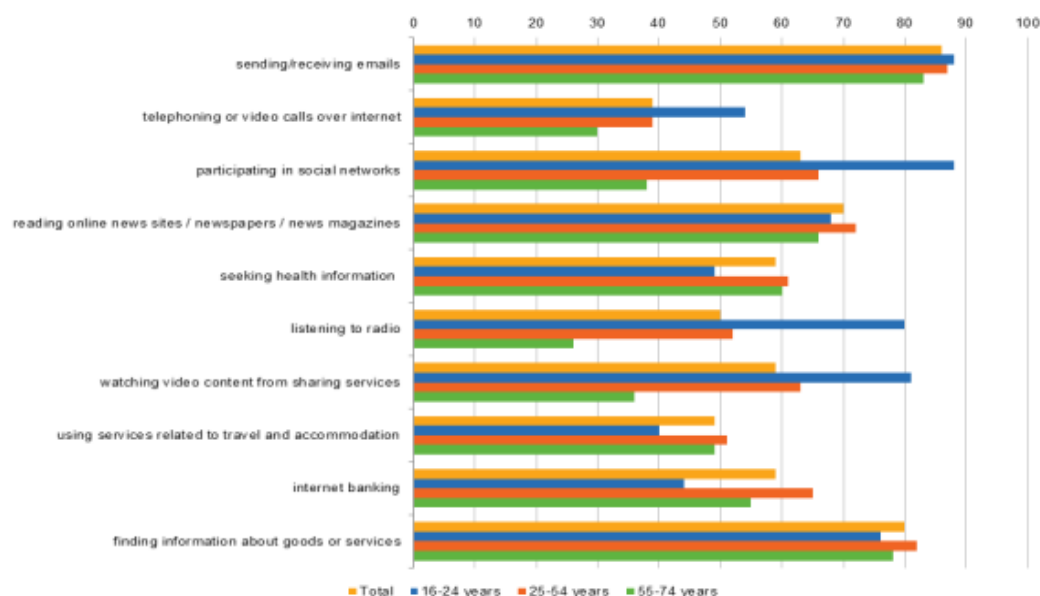
Figura nr. 5. Activități pe Internet în ultimele trei luni pe grupe de vârstă UE-28, 2016 (% dintre utilizatorii de internet)

Sursa: Eurostat, 2017. *Statistics Explained. Internet access and use statistics_-_households and individuals.* [online] Disponibil la: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Internet_access_and_use_statistics_-_households_and_individuals> [Accesat 2 octombrie 2017].

Preferințele utilizatorilor de Internet din România sunt redate în Tabelul nr. 3. Se observă că procentul celor care accesează rețelele de socializare este de 74%, cu 11% peste media europeană, reprezentând activitatea preferată din mediul online a românilor. Cea mai mare diferență (51%), față de media europeană (59%), este înregistrată de utilizarea Internet banking. Pe locul doi în preferințele utilizatorilor români de Internet se află primirea/trimiterea de mesaje (70%), urmată de găsirea informațiilor despre bunuri și servicii (59%).

Tabelul nr. 3. Activități pe Internet în ultimele trei luni, aprilie 2017

(% dintre utilizatorii de internet)

	Preferințele utilizatorilor de Internet	România	EU-28
1			
2	Urmarea unui curs online	4	8
3	Primirea/trimiterea mesaje	70	86
4	Realizarea de apeluri telefonice sau video	45	39
5	Participarea în rețelele sociale	74	63
6	Creare website-uri sau blog-uri	6	6
7	Încărcarea conținutului auto-creat pe orice website, în scopul distribuirii	31	34
8	Găsirea informațiilor despre bunuri și servicii	59	80
9	Utilizare Internet banking	8	59
10	Călătorie și cazare	22	49
11	Vânzare bunuri și servicii	5	22
12	Căutare informații legate de sănătate	48	59
13	Materiale de învățare online	16	16
14	Comunicare cu instructori sau studenți folosind website-uri/portaluri educaționale	7	9
15	Jucând sau descărcând jocuri	40	34
16	Ascultare muzică	48	50
17	Urmărire conținut video distribuit de diverse servicii	25	59
18	Gestionarea unui cont de plată pentru (eventual) plata bunurilor sau serviciilor achiziționate prin internet	1	35

Sursa: Realizat de autoare pe baza datelor disponibile la http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.doc [Accesat 2 octombrie 2017]

Ca urmare a interesului arătat de către utilizatori în găsirea informațiilor online privitoare la bunuri și servicii, companiile și-au sporit prezența pe Internet prin crearea de website-uri și prin folosirea canalelor de Social Media pentru difuzarea diverselor informații sau/și pentru campanii de marketing. Astfel, media UE-28 a companiilor (fără sectorul financiar, cu minim 10 angajați) care au website și folosesc Social Media era, în anul 2016, de 41%. Primele trei locuri sunt ocupate de Malta, cu 67%, Olanda, cu 63% și Danemarca, cu 62%. România se află pe ultimul loc, cu 21% din companii.
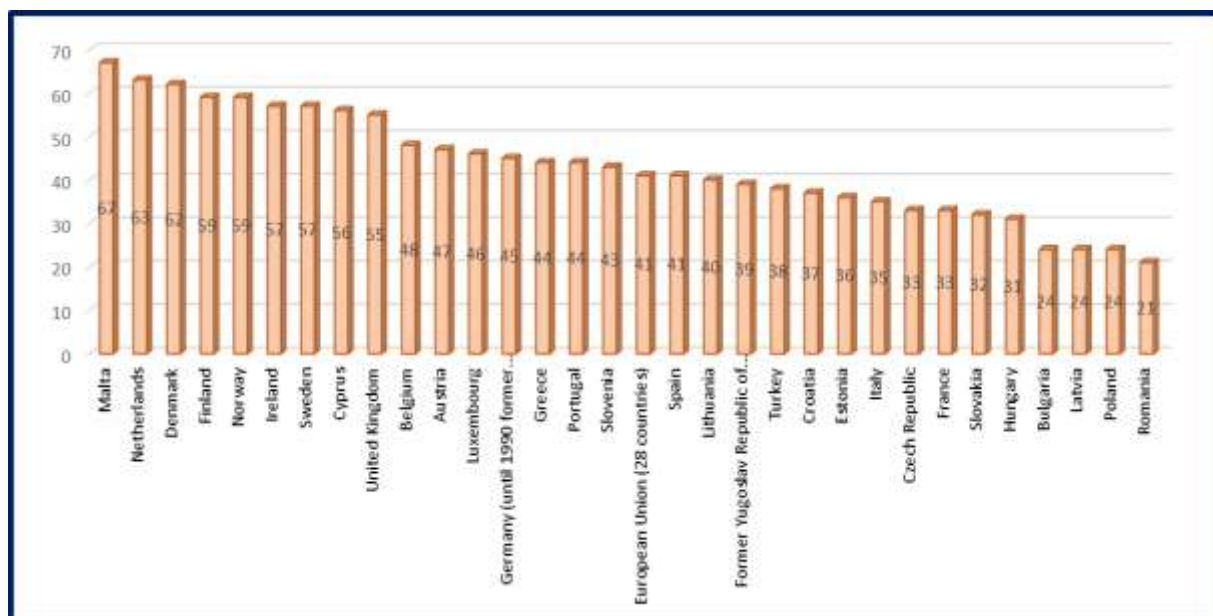
Figura nr. 6. Companii care au website și utilizează orice tip de Social Media, 2016, (% din întreprinderi)

Sursa: Eurostat, 2017. *Statistics Explained. Digital economy and society statistics_-enterprises.* [online] Disponibil la: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Digital_economy_and_society_statistics_-_enterprises> [Accesat 2 octombrie 2017].

În anul 2016, numărul utilizatorilor de Social Media, nou înregistrați, a fost de 482 de milioane (Kemp, 2017), numărul total al utilizatorilor, la nivel global fiind de 2.28 miliarde, urmând ca în anul 2021, conform unor estimări, să ajungă la 3.02 miliarde (The Statistics Portal, [statista], 2017).

Dintre platformele de Social Media, cea mai utilizată este rețeaua de socializare Facebook, cu peste 2 miliarde de utilizatori activi lunar (septembrie 2017, Figura nr. 7), la această creștere a numărului de utilizatori contribuind și lansarea, în aprilie 2016, a funcției Facebook Live, accesibilă tuturor utilizatorilor de device-uri mobile. Din 2017, Facebook Live este disponibilă și de pe desktop sau laptop.

Achiziționat de Facebook Inc. în februarie 2015, serviciul de mesagerie instantanee WhatsApp deține poziția a treia în clasamentul celor mai utilizate platforme Social Media, la o diferență de 200 de milioane de utilizatori activi față de ocupanta locului doi în clasament, YouTube.

La egalitate cu WhatsApp, în ceea ce privește numărul utilizatorilor activi, se află Facebook Messenger, urmată de Instagram (platformă achiziționată de Facebook Inc în aprilie 2012).
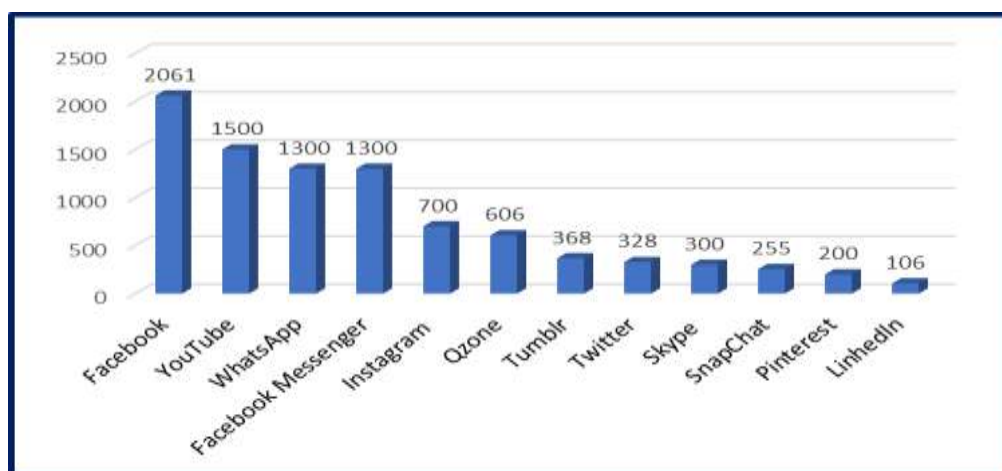
Figura nr. 7. Platforme Social Media clasificate după numărul utilizatorilor activi (în milioane), septembrie 2017

Sursa: Statista, 2017. *The Statistics Portal.* [online] Disponibil la: <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/> [Accesat 2 octombrie 2017].

Dacă până acum câțiva ani accesarea Internet-ului se făcea, în principal, de pe desktop sau laptop, creșterea vânzărilor de smartphone-uri (datorate ieftinirii acestora) a condus la creșterea numărului de utilizatori care accesează Internet-ul prin intermediul dispozitivelor mobile. Astfel, dacă în 2016, la nivel mondial, proporția de utilizare a Internet-ului prin intermediul smartphone-urilor era de 68%, până în 2018 se preconizează că va atinge 79% (Pirvu, 2016). Conform datelor puse la dispoziție de Eurostat, la nivelul UE-28, 79% dintre utilizatorii Internet au preferat să folosească smartphone-ul pentru navigare, 64% au preferat laptop-ul sau notebook-ul, 54% au preferat computer-ul și 44% au preferat să folosească tableta (Eurostat, 2017).

Se estimează că, la nivel global, numărul utilizatorilor Facebook care accesează această platformă de pe device-uri mobile, va ajunge în 2018 la 75,1% (Statista, 2017).

Urmare a acestui aspect, companiile, ONG-urile și guvernele de pretutindeni se văd obligate să își optimizeze site-ul pentru mobil, în acest fel rămânând în legătură permanentă cu publicul țintă.

Figura nr. 8. Activități online săptămânale în funcție de device, ianuarie 2017

Sursa: Hootsuite, 2017. *Digital in 2017: Eastern Europe*. [online] Available at: <https://www.slideshare.net/wearesocialsg/digital-in-2017-eastern-europe> [Accesed 2 October 2017].

Și în România, utilizatorii de Internet preferă, pentru anumite activități online, smarphone-ul, în detrimentul computerului sau al tabletei. Astfel, rețelele de socializare sunt accesate, în proporție de 47%, de pe smartphone, comparativ cu 40% accesare de pe computer. Verificarea email-ului este realizată, în același procent, de pe smartphone și computer (34%), în timp ce utilizarea motoarelor de căutare se face, în proporție de 44%, de pe computer, față de 42% de pe smartphone.

3. Concluzii

Social Media a devenit parte integrantă a societății moderne, generând, pe lângă aspectele pozitive incontestabile legate de modul în care oamenii interacționează și împărtășesc informații, și o serie de aspecte negative, unele cu efecte pe termen lung.

Dintre aspectele pozitive ale utilizării platformelor Social Media, amintim:

- Comunicarea interactivă cu alți utilizatori care au în comun teme de interes general sau particular, dincolo de limitele sociale;
- Schimbul de idei, opinii, informații în cadrul grupurilor/comunităților formate pe baza preocupărilor și pasiunilor comune;
- Cunoașterea unui număr mai mare de persoane;
- Posibilitatea de a afla rapid informații despre diverse evenimente, acțiuni;
- Posibilitatea fiecărui utilizator de a deveni creator de conținut;
- Șanse egale în ceea ce privește promovarea produselor, angajarea într-o comunitate activă, oferită atât celor care dețin mici afaceri, cât marilor întreprinzători, fără costuri suplimentare;
- Rețelele sociale oferă posibilitatea utilizatorilor de a-și crea un brand personal, care să le pună în valoare abilitățile, talentele, prin generarea și partajarea conținutului, având ca scop final generarea de încredere.

Aspectele negative ale Social Media sunt derivate, în primul rând, din abuzurile grave asupra datelor private ale utilizatorilor. Dar, nu trebuie neglijate nici efectele sociale negative, scăderea stimei de sine, a încrederii în sine, ca urmare a comparării cu alte persoane, a criticilor primite online, a scăderii productivității angajaților care accesează rețelele sociale în timpul programului de lucru, a impactului pe care îl au asupra vieții politice, a difuzării deliberate de știri false privitoare la evenimente curente. Cu toate că platformele de Social Media sunt tot mai prezente în viața noastră, rămâne la latitudinea fiecăruia să traseze limite și să stabilească măsura în care permite ca acestea să îi controleze viața.

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IMPROVING RELATIONSHIP WITH CUSTOMERS BY REDUCING COMPLAINTS - USING MODELLING AND PARETO DIAGRAM

Assistant Professor Ph.D. Nicoleta Valentina FLOREA
Valahia University of Târgovişte, Romania
E-mail: floreanicol@yahoo.com
Associate Professor Ph.D. Anişoara DUICĂ
Valahia University of Târgovişte, Romania

Abstract. *Today, marketing specialists consider that we are in an era of relational marketing. In this new era, where the environment is influenced by globalization, overcapacity of production and the latest by personalized products/ services, the focus is not on increasing production, but increasing profit by improving the relationship with profitable customers. Customers are of all kinds, they all want to get value and solutions to their problems; that is, these people are oriented towards achieving rational goals. In this context, in the present study we shall focus on improving the relationship with customers by reducing the number of customer complaints using simulation and marketing modelling: the Pareto diagram. This diagram is used to control the quality of the services and products offered, and the purpose of our research is to focus on implementing this chart to determine the problems that have arisen and to develop a plan to help reducing problems and finding viable solutions for obtaining reciprocal relationships and long-term benefits.*
Keywords: *customer relationship, customers' complaints, modelling, Pareto diagram, value.*
JEL Classification*: C53, D12, F47.*

1. Introduction

Organizations act in a turbulent environment that offers competitive advantages to companies for which they should fight continuously and strategically with fierce competition in order to achieve performance and attract, maintain and grow existing and potential customers.

We live in the relationship age, and the relationship with customers is a special one, based on knowing their needs. Thus, customer relationship management plays an important role in the success of any business. Good CRM practices involve all the functions of the organization and should be driven by top management. But the success of CRM is not achieved overnight nor is it an easy task (Knox et al., 2007, p.14). The customer is the subject of all marketing activities (Kumar and Reinartz, 2012, p.3).

2. About relational marketing

Philip Kotler proposes a new approach to organizational performance, based on the concept of relationship (Kotler, 1999). He affirmed the importance of developing stronger stakeholder relationships in the organization's environment. This highlights the need to move from a short-term, transactional marketing perspective to a long-term vision based on relational marketing in order to increase the competitiveness of organizations in local markets and the global market. O'Malley L.O. and Tynan C. affirms that relational marketing is perceived as a tie between partners as a marital partnership characterized by trust, commitment, communication and sharing resulting from the mutual fulfillment of the objectives (Baran R.J. et al., 2008, p.110). Relationships involve at least two parts that must be in contact with one another (Gummesson, 2012, p.3). Relational marketing is often presented as the opposite of transactional marketing; in the transaction, no matter how many purchases are made from a vendor, no relationship is created. Thus, emotions and feelings are not created based on experience.

To better understand the role and importance of relational marketing, we will analyze it by comparing it with transactional marketing based on some specific features (Table no. 1).

Table no. 1. Differences between transactional marketing and relational marketing

Characteristics	Transactional Marketing	Relational Marketing
Analysis horizon	Short term	Long term
Marketing activities	Accent on products and services	Accent on rezults and clients
Key-concepts	4P, segmentation, branding-ul	Interaction, relationships and used networks
Promotion strategy	Accent on non-personal promotion	Accent on personal interaction
Objective	Sales	Customer loyalty
Services	Low concentration	High concentration
Commitment to customers	Low	High
Quality	Care of the production function	Everyone's care
Object	Sole tranzactioning	Networking
Perspective	Static	Dinamic-evolutive
Centering	Decisions pre-sales	Decisions post-sales
Dependency	Low	High
Quality dominates to	Results	Interaction
Importance of the employees in the organisational succes	Low	High
Production concentrates on	Mass production	Mass personalization
Commitment	Competitive	High of the customers
Communication	Persuasive	Usual
Strategy	Of getting new customers	Of mentaing new customers
Concentration of the transaction	Of type one to many	One to one
Marketing mix	Based on the 4P	On the 7P and on the 4C
Marketing orientated on	Product	Customer
Concentration on	Price	Value

Source: adapted after Bruhn M., 2003, p.13; Rao K., 2004, p.257; Hennig-Thurau T., Hansen U., 2013, p.5; BPP Learning Media, 2015, p.409; Chadwick S. et al., 2015, p.209; Biswas S., 2014, p.11; Suphan N., 2015, p.32.

2. The benefits of the customers' relationship

The benefits resulting from the client-company relationship are leading to increased customer loyalty (Peppers and Rogers, 2004, p.20):

- The client learns more about their own preferences from each experience and feedback from the firm so that they are able to buy and handle some aspects of their life more efficiently,

- The company learns more about its own strengths and weaknesses from each interaction and customer feedback, and so will be able to sell, communicate and deal with some aspects of its own tactics or strategies more effectively.

Cultivating these learning-based relationships depends on the company's ability to efficiently manage the information received from and about customers. Customers, be they natural or legal, do not want more choices, but simply want to get what they seek or want. Technology now makes this possible, including databases that allow a large amount of data

to be collected about their needs and their use in personalizing products and services for each client. Not all customers are equal, so businesses need to focus not on sales transactions but on equity.

Organizations need to know which customer relationships to focus on and decide to maintain. Products and services need to be personalized according to their needs and desires, and customers should feel proud because they are created and modeled according to their wishes. The more they collaborate, the customers will not want to leave the company. Thus, relationships form a affection, an attachment to the firm, a trust-based collaboration, a value-based relationship, from which the firm can gain competitive advantage, over its competitors.

Recognizing that customers are co-producers for the firm, they should personalize their offer and strive to maximize their involvement in the production process by knowing their needs and desires. The result is customer engagement in relational exchange and gaining benefits for both parties (Kleinatenkamp, 2006):

- the belief that the partner is trustworthy, basic, competent offers quality,
- the partnership offers value,
- the customer experience is an efficient one in terms of cost,
- the relationship offers minimal risks,
- the exchange is based on moral obligations,
- the exchange is based on personalization, leading to a high level of satisfaction of needs, desires, tastes and preferences.

Both parties involved in the relationship can benefit from customer retention; it is not only in the company's interest to build and maintain loyal customers, but also to customers benefit from a long-term relationship. The benefits of the two parties show that they will have won their customers if they remain loyal to the company and will receive a higher value than that received from other competitors; the value being an exchange between what they offer and what they receive. Customers remain in a relationship when the value of what they receive (quality, satisfaction and other specific benefits) exceeds the amount they offer (monetary costs - amounts spent and non-monetary, such as date and information about their purchasing behaviour, brands bought, desires and needs, preferences, tastes).

When the company provides what customers value, the client will be rewarded and then loyal. The benefits offered to loyal clients are numerous and directly related to the specialists who come in direct contact with them, and some drawbacks for both sides are described in this relation (Table no. 2).

Table no. 2. Advantages and disadvantages resulting from the company's relationship with customers

Relationship Advantages	
For the firm / company	**For the customers**
Higher purchased quantities	Social benefits
Lower costs	Trust
Clients detained on TL	Special treatment
Increased profits	Reduced risks
Lesser deficiencies	Increased value
Free advertising made directly by customers	Customized services
	Increased satisfaction
	High interaction with the company

Relationship Disadvantages	
For the firm / company	**For the customers**
Whenever a customer makes a transaction, it does not necessarily indicate that a customer is CRM loyal, in addition to its benefits, can also bring costs (it is said that between 30-50% of the implemented CRM programs fail and between 60-80% of them do not achieve their goals) One of the limits of the CRM is too high concentration on means (IT tools) and too little on the final link (customer).	The customers may not want a relationship with companies, so companies will lose financial and energy resources needed to build such a relationship

Source: Hudson and Hudson, 2013; Klopper et al., 2006, p.319.

3. The customer complaints – a source to improve the relationship between organization and customer

The customers' complaints are another valuable way of communicating with customers and finding out what they want. The customers' complaints should not be seen as something that hurts the organization, but as something that will do well in the future for the specialists and the organization itself.

Thus, these complaints (Peppers and Rogers, 2004, p.185):

- provide an opportunity to connect with customers and to find out the problems that affect the efficiency of the relationship; so the company can determine ways to regulate the situation, straighten the relationship,
- allow the organization to expand its knowledge and understanding the customer wishes; it can learn more about clients, know their needs and increase their customers' value and usefulness for them,
- provide clear and honest information on the products / services offered, by listening to complaints, understanding the behavior, changing the offer, and providing feedback.

So even if the company gets a negative feedback, you have to think that a complaining customer actually offers a gift (a present). The information we receive from complaints / reclamations by the firm can improve and increase performance. To improve these problems from organizations, specialists may use different mathematical models who may help to observe them before they appear (Florea, 2014, p.43), to measure their impact or their evolution in time, such as: stochastic function (Florea and Mihai, 2014, p.312), regression function (Florea and Mihai, 2015, p.231; Stegaroiu and Florea, 2013, p.226), Markov chains (Florea, Mihai and Duica, 2017, p.749; Florea, 2017, p.68), or Pareto diagram, which will be used in our research. The customer complaints provide the opportunity to find out what issues exist, how we can help our clients, and how we encourage them to return and use the company's products and services. When organizations listen to their customers in an open and more flexible way, they can gain new experiences from complaints received. Unfortunately, most people who hear complaints block them psychologically. Other clients do not even complain, they just go to other companies without giving them valuable information about improving their business.

4. Research methodology

To improve the relationship with the people, to provide them with satisfaction and the long-term value, the organization must communicate with the clients using the dialogue (Duică and Florea, 2017, p.49) to objectively and with great attention to the causes of the

dissatisfaction and provide viable solutions. One of the main causes is customer complaints and reclamations, and one of the solutions underlying the improvement of relationship is to determine the problems and minimize the number of complaints about customer dissatisfaction.

An unsatisfied, unhappy customer becomes a fragile client, open to the competition's news and offers. And because they are more and more demanding and frequently expressing their dissatisfaction and not hesitate to discuss this with other clients, they want to be listened, understood and respected, waiting for not a response, but a solution to the problems presented.

One of the methods that help to know and implicitly reduce the number of complaints is the Pareto diagram. *This* is a graphical method used in the decision-making process, which aims to prioritize decisional priorities based on the premise that 20% of the variables of a phenomenon generate 80% of the effects (Duică, 2009, p.159).

Case study - Improving customer relationships by reducing customer complaints / complaints using the Pareto diagram

A chain of stores offering electronics and home electronics products and services wants to improve their relationship with customers and increase their satisfaction. To achieve this goal, the number and typology of complaints received from customers using their products and services is analysed. The company receives on average 490 monthly complaints (Table no. 3). It seeks to improve relationships with its customers and search for solutions to minimize complaints. The Pareto chart is developed to determine the type of complaints and their importance.

Pareto diagram deployment steps:

Step 1- Collecting data on complaints typology

Step 2- Preparing the data. Complete the table for ordering complaints in descending order and calculate the cumulative relative frequencies for each type of complaint.

Step 3- Making the Pareto diagram (according to both ways).

Step 4- Interpretation of the results. In order to solve 80% of customer complaints, it is sufficient to eliminate 20% of the reasons for their dissatisfaction. Therefore, it is necessary to develop a plan of measures to improve patient satisfaction.

Step 1 Collecting data - the number of complaints is placed in a table, in the order of the categories of complaints determined and their total number is calculated for further processing (Table 3).

Table no. 3. Colectting data for analysis

No.	Category	Number of complaints
1	Problem solving time	143
2	Staff attitude and behavior	35
3	Price	52
4	Customer information, communication	123
5	Quality of products and services offered	65
6	Work program	27
7	Purchase experience	38
8	Other problems	7
	Problems Total	490

Step 2 Preparing the data - placing the complaints in order of their importance, thus determining absolute frequency, cumulative absolute frequency, relative frequency and cumulative relative frequency, until it reaches 100 (Table no. 4).

Table no. 4. Preparing the data

No. of complaints	Category	Absolute Frecvency	Absolute cumulative frequency	Relative Frecvency	Relative cumulative frequency (%)
1	Problem solving time	143	143	29,2%	29,2
4	Customer information, communication	123	266	25,1%	54,3
5	Quality of products and services offered	65	331	13,3%	67,6
3	Price	52	383	10,6%	78,2
7	Purchase experience	38	421	7,8%	86
2	Staff attitude and behavior	35	456	7,1%	93,1
6	Work program	27	483	5,5%	98,6
8	Other problems	7	490	1,4%	100
	Total	490		100	

Step 3 - Pareto Diagram - the first form of the Pareto diagram (the two types of bar graphs) is made in descending order of the absolute frequency and in ascending order of the absolute cumulative frequency (Figure no. 1).
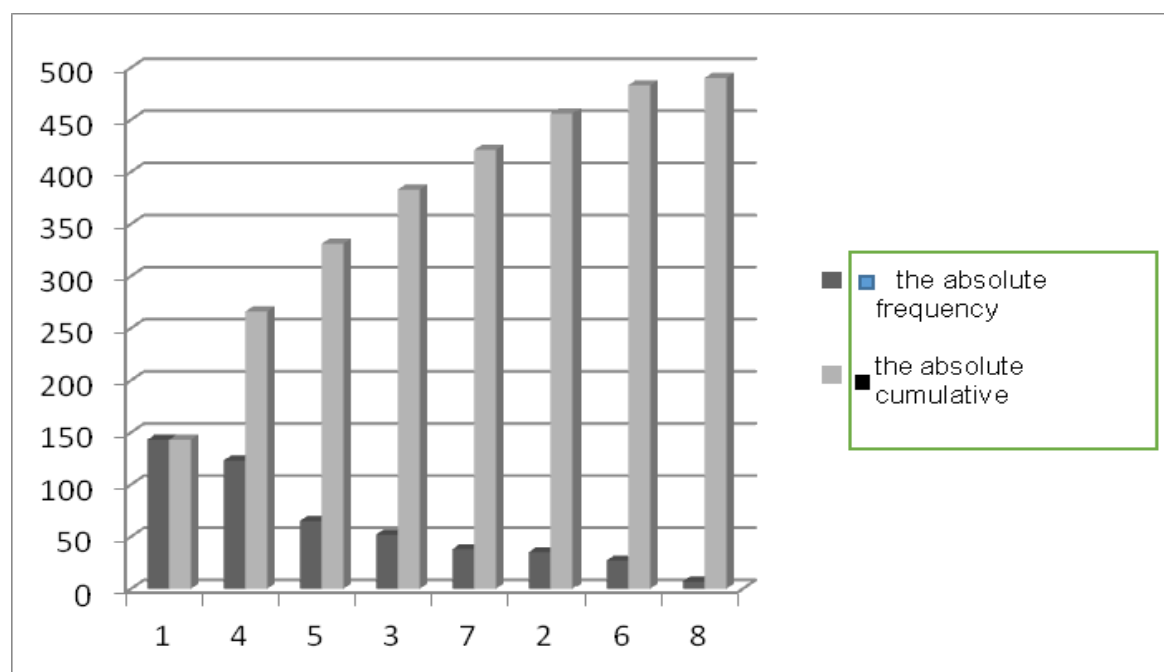
Figure no. 1. Pareto Diagram

The Pareto diagram is a histogram that tells us how many times a look of a situation has been repeated. In the second type of the diagram (relative frequencies), the height of each column is shown which illustrates the relative frequency with which it occurred. Histograms help us to find out the causes of the problem in a process; as we can see, the

first four types of complaints (1, 4, 5 and 3) are the most important ones to be analysed (Figure no. 2).
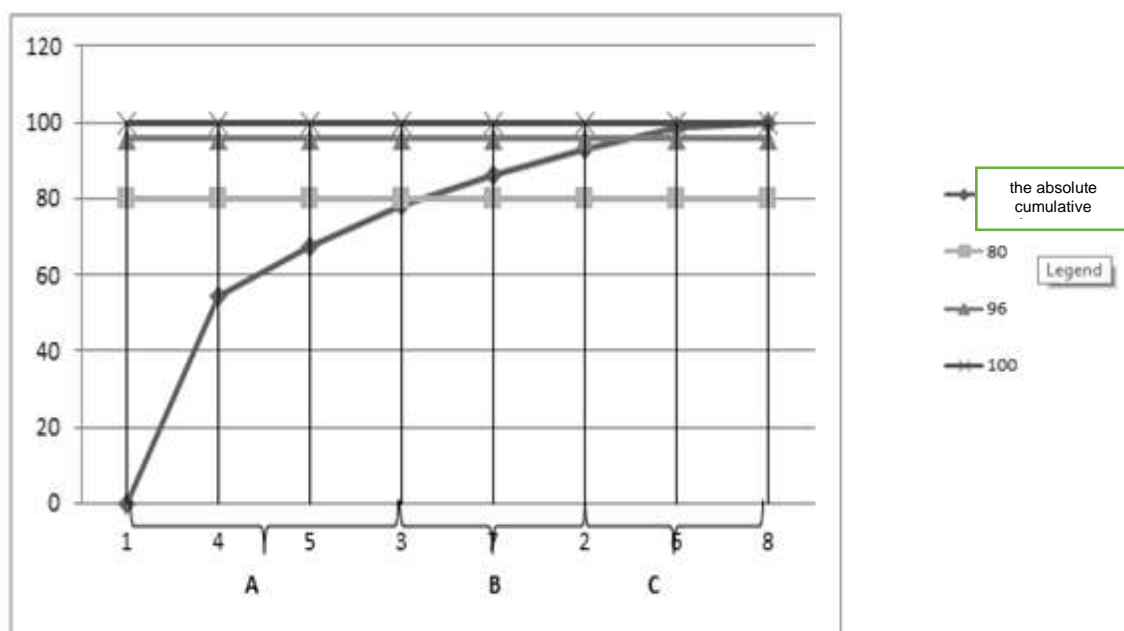
Figure no. 2. Pareto diagram and ABC analysis.

Because it is easier to reduce a high frequency than a low frequency, the diagram shows that it would be more helpful to focus on the first causes: 1, 4, 5 and 3 in area A (80%) than of the secondary: 7, 6, 2, 8 in the B and C areas (96% and 100%, respectively).

Step 4 - Implementing a plan of measures to reduce the number of complaints

To reduce the customer complaints and increase customer satisfaction, the organization must implement a plan of measures that is made available to all employees on all hierarchical lines and align them with the CRM strategy (Table no. 5).

Table no. 5. Plan of measures necessary to minimize the number of complaints

No.	Measures	Effective actions
1	Problem solving time	The development of internal plans based on coaching, mentoring, periodic information sessions, quality circles to ensure, inform and apply the reduction of dead time between the existing activities at the client level by determining and knowing the processes and solving JIT principles and priorities of arrival, Increasing the quality of customer service by developing staff and passing on new knowledge in the field to be trained to carry out such processes, Employing only the trained staff, according to the „man in the right place" principle.
4	Information, customer communication	Informing the client using a communication language in his / her meaning, Transmitting clear information, using transparency and opening, Transmitting to be done in a timely manner, without much expectation, Empathy at the customer level by putting it in place and understanding its problems by providing physical help and

		moral support, Listening to be an active one, based on asking questions, to find out as many answers as to customer satisfaction, his / her wishes and needs, and his / her training for various other processes Creating a database that leads to customer knowledge, promotion of new products or services according to customer wishes Display visible discounts Formation of fidelity cards based on purchase, re-purchase, purchase frequency and store expenditure (RFM). Product presentation to make use of sensory marketing techniques: see, hear, smell, touch. Create an attractive, up-to-date website that uses the AIDA technique).
5	The quality of the offered products and services	Improving the quality of the services offered by referring to training and development programs of sales specialists Improve sales knowledge: listening, empathy, communication, negotiation, persuasion Product quality to keep up with customer wishes and needs (desires from questionnaires, direct discussions, comments, forum, site)
3	Price	Displayed in a visible place Discounts made available to customers through brochures, websites, flyers. Discounts from the shelf in conjunction with the shelves. Discounts applied according to the above-mentioned model (RFM) to motivate retaining loyal customers.

Once these will be implemented in the few actions proposed in the plan of measures necessary to eliminate these causes, another diagram may be developed, after a period, to check the decrease in the number of complaints about both categories.

5. Conclusions

Pareto modelling and analysis are used to indicate the relatively small number of causes that can cause most of the problems encountered or defects that occurred. Under 80-20, 80% of the problems are based on only 20% of the possible causes, the Pareto method helps us prioritize and decide why we will spend more time and what can we postpone.

The proposed actions are just a start in improving customer complaints but not a limit in developing other actions and measures to improve customer relationship and satisfaction.

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NATURE AND SOURCES OF THE COMPETITIVE ADVANTAGE OF THE COMPANIES

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

Abstract: *Globalization and the economic changes have recently caused new challenges for the companies, industries and countries. The popularity of the concept of competitiveness is shown by the high national interest for this aspect, similar to the policies by which the government's aim to enhance the competitiveness of the national industry. The present paper aims to answer several questions regarding the analysis and measuring of competitiveness at the company level. Making a connection between the concepts of internationalization, performance and company competitiveness, one can build a conceptual framework to analyse the different dimensions of the competitiveness. The analyses of the ways to develop the competitive advantage of the companies can be done in terms of the resources. The competitive advantage of the companies relies on their capacity of accumulate, exploit, combine anew and innovate the set of resources specific to the company, similar to the transfer of these resources into its expanded network.*
Keywords: *competitiveness, competitive advantage, internationalization, company.*
JEL Cassification: *D24, L20.*

1. Introduction

The literature has many concepts of competitiveness. Competitiveness can be treated as dependent, intermediary or independent variable, function of the analytical perspective (Man et al., 2002). On the other hand, competitiveness refers to different aspects of the competitiveness at a certain moment (for instance, in terms of the comparative advantage, the strategic and administrative perspective, as well as the historic and socio-cultural perspective). Competitiveness is a concept whose study and measuring focused on various levels of analysis: the individual level for company competitiveness, the microeconomic level for industry competitiveness and the macroeconomic level for country competitiveness (Nelson, 1992). At the company level, competitiveness is defined as the capacity of a company to design, produce and market products and services with better characteristics (Rugman et al., 2001) than those provided by the competitors (Ambastha şi Momaya, 2004) within a global market economy in which the goods, services, people, abilities and ideas circulate freely across the national borders (Chao-Hung şi Li-Chang, 2010). A company is competitive if it can produce and deliver products and services with a better quality and at lower costs than its national and international competitors.

2. Competitiveness and the competitive advantage

The notion of *competitiveness* reminds the notion of competitive advantage. According to the consolidated broad visions of the competitive process, the performance of a company is influenced by the competitive advantage. On the other hand, the nature of such advantage will result in one or more specific sources of competitive advantage, which the company controls.

The notion of *competitive advantage* is the focus of strategic management studies (Porter, 1985; Ghemawat, 1986), reminding of comparison and rivalry. A competitive advantage refers to the position of superiority, within an industry in which the company developed, compared to its competitors. The level of competitiveness of the company shows its ability to design, produce and sell better products than those of the competitors, the superiority being evaluated in terms of price, quality or technological advance.

Competitiveness can be considered at various level of aggregation: company, industry and country. The company analytical level regards the behaviour and performance

of companies. Competitiveness is often analysed at the level of the industry or of the group, by comparing it with the same industry from another region or country open to trade. Behind the factors specific to the company and to the industry, globalization has recently stressed the importance of the country effects on the performance. The depletion of resources, the cost of labour and of production, the financial and technological infrastructure, the access to the markets and the institutional framework are examples of country-specific factors which determine company performance. The different dimensions of the competitiveness are strongly related: for instance, the competitiveness factors of a particular country are determinant for the international competitiveness of the companies. On the other hand, the most important aspect for the international competitiveness of a country is the competitiveness of its companies compared to the companies from another country.

Relying on comparison, competitiveness is a relative concept, meaning that the criteria and variables used to measure this construction cannot be applied irrespectively of the specific time and spatial conditions. At the company level, profitability, costs, productivity and the market share represent indicators of competitiveness. Generally, competitiveness is considered to be synonymous with success. Hence, the performance should be measured in terms which show the way in which a company manages the critical factors of its success (Ferguson şi Dickson, 1982). Today, beyond the financial or market indicators, the measures of competitiveness also include variables such as innovation, quality, as well as social variables such as ethnic framework, responsibility and the labour conditions of the workers.

The analyses of the sources of variation in the performance of a company represent a key-problem both in the studies of strategic management, and at the level of industrial organisation. Basically, there are at least two points of view regarding the origin of the competitive advantage of the company. On the one hand, the industrial organisation relies on the influence of the determinants of an industry on the performance of the companies, with a particular stress in the importance of factors such as focusing, barriers to entry, barriers to exit, economies of scale. According to Porter (Porter, 1980), the competition within an industry is defined by five structural parameters: current competition within the industry, power of negotiation of the buyers and providers, threat of the new players and threat of substituting the products and services. Therefore, the evolution of an industry depends on the strategic choices of a company.

On the other hand, the vision based on resources appeared as dominant paradigm within the study of the strategic management during the 90s. According to this perspective, the competitive advantage of a company derives from those resources which coincide with the specific conditions such as value, heterogeneity, rarity, durability and imperfect mobility. Different classifications of the resources of a company have been developed in the literature and they have generally made the distinction between the tangible and intangible resources. The perspective relying on the capacity of the competitive advantage of a company derives from its capacities and competencies, which reflect a more dynamic vision of the competition, focusing rather on the processes of company business than on its assets or resources seen from a static point of view. In the broad way, this perspective comprehends all the researches which studies concepts such as distinctive capacities, organisational capacities, basic capacities and dynamic capacities.

3. Company competitiveness – organised framework

To develop a systematic analysis of the research, one can use an organised framework which sets the main ideas of the literature in a 2 by 2 matrix (Table no. 1).

Table no. 1. Analysis of competitiveness

		Dynamic	**Static**
Nature of competitiveness	Leader	Vision based on competencies	Vision based on resources
	Result	Trend of profitability, market and other indicators	Financial relations, market share and other non-financial parameters

Source: processing by the author

The vertical dimension refers to the way in which competitiveness is perceived. Competitiveness can be seen as a dependent or independent variable: the first approach sees competitiveness as indispensable factor of company performances, while the second sees competitiveness as result of the competitive advantage of the company. In other words, the distinction can be seen as the difference between „ex ante" competitiveness and „ex post" competitiveness. The horizontal dimension distinguishes the study of competitiveness in static terms versus the dynamic analysis.

The vision of *leader competitiveness* includes all the contributions about the sources of the competitive advantage of a company. The main classifications of the sources of company competitiveness distinguish between the internal, company, sources and external sources, such as industry or country factors.

The ***internal sources*** can be classified in *tangible* and *intangible* sources, directed towards the employees or towards the company:

- The intangible internal sources of the company include organisational and transformational resources and exit-based capacities, as well as the company knowledge as a whole;

- The intangible internal sources related to the employees include company strategies, the human resources, the managerial capacities and the knowledge of the individuals;

- The intangible internal sources related to the company include entry-based physical and financial resources and operational capacities.

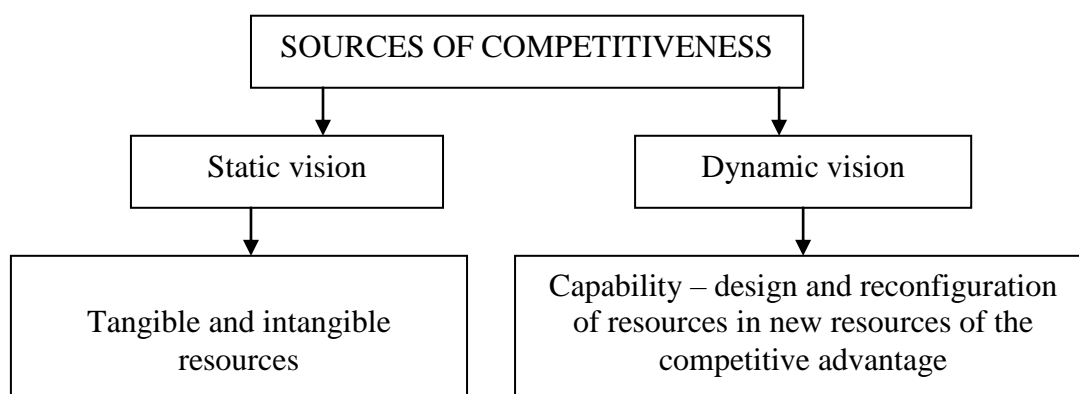**Figure no. 1. Sources of company competitiveness**

Source: processing by the author

The ***external sources*** based on industry include all the variables related to the structure and competition of the industry:

- Low power of the providers and buyers;
- Very low competition among the companies within a particular industry;
- Low threat of substitution and of new players entering the market.

The internal sources of the competitive advantage can be seen both statically and dynamically: the first view concerns the underlying resources and assets of company competitiveness, while the second concerns the process of management which transforms these assets so as to achieve the desired performance. Specifically, the dynamic capacities are those which transform resources into new resources of competitive advantage, being processes which aid the companies to reconfigure their resources and to generate new, innovative forms of the competitive advantage (Teece, Pisano and Shuen, 1997) (Figure no. 1).

The distinction between the dynamic and static approach can be understood referring to the distinction between the competitive advantage seen in terms of company position within the industry and the competitive advantage seen in terms of company actions and abilities to work more efficiently than its competitors.

The position of the company within the industry can be defined in various ways which remind the relation between the company and the main competitive forces such as the consumers, providers, competitors and others, such as the shareholders and the governments (for instance, a better access or detailed control of the results and factors of production, or in relation with the providers). Assets such as brand reputation and client loyalty are related to the interaction between the companies and their clients. The network resources involve the relation between the partners and a better access to the channels of distribution which concern company position or the distributors.

Competitiveness as effect. Market performance or the economic superiority are generally regarded as indicators of the competitive advantage. Profitability is reckoned as the most important measure of the competitive success. The short-term economic performance can be measured by the rates of profitability. The costs and productivity are good signs of the competitiveness, particularly in the case in which the industry is characterized by homogenous products.

The non-performing financial indicators can be: the market share, the proportion of client loyalty, the proportion of distributors loyalty or employee yield (for instance, the market share can be an indicator of competitiveness only if the company sacrifices profits in order to adjust the market share to its benefit). The factors which affect this construction vary from one company to another, from one industry to another. Furthermore, the indicators cannot rely on a single period of measuring, as competitiveness is a time-dependent construction.

However, if we look at the performance indicators, we can male an idea about the past and present competitiveness, but we cannot fully evaluate whether, and how much, will the company be competitive in the future. Actually, even though the past performance shows a competitive advantage, it doesn't supply enough information on the sustainability of those advantages. Hence, we need to use a higher number of indicators related to the expected competitiveness of a company.

4. Clarification of the concept of international competitiveness

The international competitiveness of a company can differ from its national competitiveness. A company can be profitable in its country, with a high share of the domestic market, but can have a low international competitiveness, if the domestic market is protected by barriers to the international trade. Thus, the competitiveness of that company would be compromised if the domestic market were to open to trade. Furthermore, some companies may sacrifice their competitiveness on the domestic market in order to penetrate better on foreign markets. The export market share is frequently used as measure of the international performance of a company. Such measure, however, is not satisfactory if the market share is maintained by significant reduction of the price, therefore

by a lower profitability. Therefore, the increase of foreign sales is done to the detriment of profitability and perspective of competitiveness. In order to analyse the international competitiveness of a company, distinction has to be made between internationalization and international competitiveness (Porter, 1990).

The *international competitiveness* is a broader construction than the level of internationalization. A higher level of internationalization, in terms of foreign sales, cannot capture fully the foreign competitiveness of a company if such information cannot be integrated with data on the way in which the foreign expansion affects the productivity of a company and the factors that drive it. In other words, the level of internationalization expresses the presence abroad of a company, while competitiveness refers to the way in which this presence is acquired and sustained. Buckley et al. (1990) propose an analytical framework for the international competitiveness based on three groups of variables: performance, potential competitiveness and process management competitiveness. He says that the performance measures "provide a historical perspective and are all characterized by their incapacity to provide perspectives for the sustainability of this performance". The economic and market performance achieved by a company within its processes of internationalization derive from the past choices and from initiatives, but don't allow a full evaluation of its capacity to preserve and regenerate performance in time. Therefore, it is necessary to focus not just on the performance, but also on the conceived competitive potential and on the capacity of a company to preserve and renew its sources of competitive advantage. Performance is thus related to the past and to the present competitiveness, while the competitive potential is related to the future of company competitiveness.

Beyond the performance and competitive potential, the analysis of company competitiveness should also consider a third group of variables regarding the management processes of the company, i.e. the management practices and the mechanisms and systems of organisation. Such an analysis explains how the competitive potential can transform into positive performance. Buckley shows that "when the statistics were used to show, for instance, that the enterprises behave better on the market than their competitors and that they have generated and sustained a more competitive potential, the qualitative information acquired from investigating the management processes help explaining the reasons for success". The Buckley pattern has been substantially validated by several empirical researches based on the analysis of the most relevant factors of company competitiveness, as perceived by the managers.

Performance can be regarded as „ex post" competitiveness, while the competitive potential is „ex ante" competitiveness, the competitive position that might be achieved in the future. The relation between the competitive potential (prospective competitive position) and the actual potential (competitive position) is the competitive strategy, which comprehends options, behaviours and processes which facilitate the transition from the competitive potential to the competitive position.

Expanding and reviewing Buckley's classification (Buckely et al.,1990), and relying on the distinction between ex-ante and ex-post, one sees that the analysis of company competitiveness should be divided into three different, yet resembling, aspects (Figure no. 2):
- Nature and sources of competitive advantage of the companies (ex-ante competitiveness and potential competitiveness);
- Level of internationalization, which shows how much, is the company present in the international competition;
- Company market and economic performance on foreign markets (ex-post competitiveness).
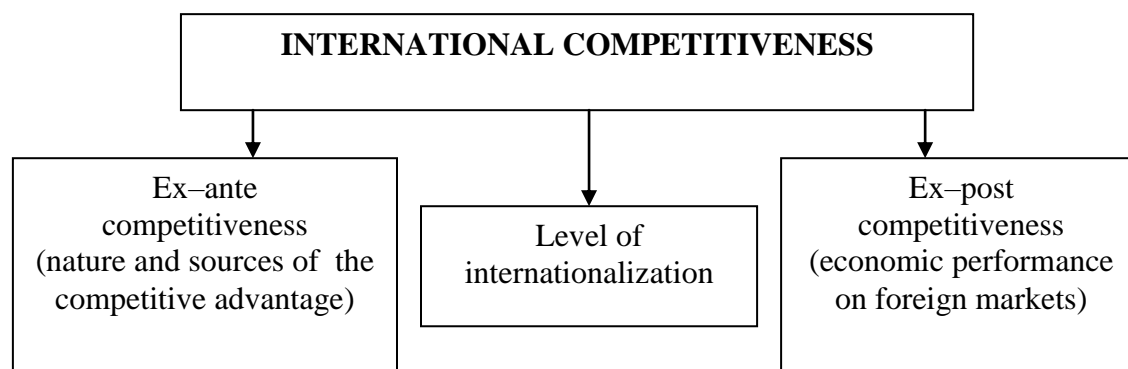
Figure no. 2. International competitiveness
Source: processing by the author

5. Relation between performance and the level of company internationalization

Measuring the level of internationalization and the relation between the level of internationalization and performance, are key-elements in the international business research. Many empirical researches explored the relation between performance and the level of internationalization. There are many dimensions of internationalization. Typically, the single dimension measures the rate of foreign sales within the total sales, the proportion of foreign employees and the number of countries in which the company operates. Specifically, the rate of foreign sales within the total sales is a common measure of internationalization that focuses on the impact of internationalization on company performance. Other measures of internationalization can be: the geographical range, foreign resources, foreign production within the total production, number of international partners, international mergers and foreign acquisitions and financing.

Hassel says that company internationalization doesn't take place in the production area, but that there is a governmental corporate dimension of internationalization which focuses on the proper types of investors (Hassel et al., 2003). Hence, internationalization must be evaluated rather in financial than in real terms, determining the extent to which a company gets international or finances its own structure, achieving a closer relation with the international investors. Hassel identifies three such measures of financial internationalization:

- Foreign owners as percentage of total owners;
- Number of listings on the foreign financial exchange, showing the signal that the company aims to draw in foreign investors;
- Adoption of international accounting standards other than the simple accounting standards derived from the national laws; this type indicator shows the need of the company to communicate efficiently with the international investors.

The relation between internationalization and performance is not linear, rather a curve: thus, studies suggest that the geographical expansion will increase company performance up to a point, after which the joint action of the costs and of the higher complexity associated to the international organisation will exceed the benefits of the international growth.

Lu and Beamish (2004) show that a company is confronted with the weakness of going abroad: during the early stages of internationalization – when the companies start the foreign direct investments – profitability decreases, but the level of the foreign direct investments is associated to high performance.

The international companies are more complex organisations than the companies which operate within a company and which suffer of the lack of adequate management capacities. The governance costs and the difficulties associated to geographically dispersed activities may affect adversely the performance of the international companies. A newly-established company has a handicap which reduces its competitiveness compared to a company that is already established on the local market. Other problems come from the cultural diversity and from the difficulties to transfer non-corporeal assets in various countries.

6. Conclusions

The competitive advantage shows how much a company makes profit, either by low operational costs, by quality, by its capacity for fast and timely delivery, or by adaptability to market demands. This parameter can transform into sustainable competitive advantage for the company when this performance ensures a long-term top position in its field of activity.

Competition is associated to the competitive advantage. The competitive advantage is the ability of the company to perform better than its competitors in terms of profitability.

The competitive advantage results from the added value that a company can create, above the incurred costs, value which the company offers to the potential buyer at a lower price than its competitors (or at equal or even higher price, but with higher quantitative or qualitative benefits). In other words, there are two types of competitive advantage: of price and of higher quality/larger amount.

The most important factor which determines company profitability is the attractiveness of the sector in which it operates. Therefore, an essential element of any strategy of competitiveness is to identify and understand in detail the rules and practices which generate this attractiveness, and the final purpose of the competitiveness strategy is to use of modify these rules and practices in favour of the company.

Considering the above, in any industrial or services sector, the rules and practices mentioned above refer to the action of five competitive forces:

(i) Emergence of new competitors on the domestic and/or international market;
(ii) Threat from products of substitution (original or not);
(iii) Buyer's power of negotiation;
(iv) Supplier's force of negotiation;
(v) Rivalry between the competing companies.

Not all these factors act in all the industrial or services sectors, their action of inaction depending on the structural particularities of those sectors.

Thus, when new competitors come into the market, there are barriers to their entry, such as the possibility of obtaining scale economies, brand identity, capital requirements, access to the distribution networks, governmental policies in those fields, etc. The existence/threat of substituents depends mainly on the relative performance regarding the price of sale, and on the propensity of the buyers for products or services of substitution.

The force of negotiation of the suppliers of goods and services depends on the differentiation regarding the inputs (substitution inputs included), on the level of suppliers concentration, on the level of company integration in the specific sectors of production or services, etc. Finally, the elements which determine the buyer's power of negotiation consist in the level of buyer concentration, in the volume of purchases, in the extent to which the buyers are informed about the trends on the markets for goods and services, in the price for the goods and services and how they are formed, in the quality/performance achievable by purchasing the particular goods/services, etc.

The five competitive forces and their determining elements which are the fundament of the strategies of company competitiveness are not immovable or rigid, however. This, such strategies can be different, under certain circumstances, depending on the sector of production or services in which the company operates. Each sector is unique and has a unique structure, and the group of five competitive forces give the companies the possibility to evaluate the complexity of their activity and, within this context, to pinpoint those factors which are critical in coping with the competition in their areas of activity.

In other words, this design can be the basis for drawing up a strategy which to enable the company to acquire competitive advantages on increasingly complex markets.

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THE MANAGEMENT OF GREEN CERTIFICATES IN ROMANIA

Senior Scientific Researcher, Ph.D. Gabriela PICIU
"Victor Slăvescu" Financial and Monetary Research Center,
Romanian Academy, Romania
E-mail: gabriela_piciu@yahoo.com

Abstract: Green certificates remain a sensitive issue both for Romanian authorities, but especially among producers of renewable energy that thought they would benefit from the authorities' support for a long time. Thanks to a particularly generous support scheme (the most generous in Europe), there is a danger of producing a phenomenon similar to that produced in the real estate sector in 2006-2008 by creating an investment bubble in the field of unconventional energies. The renewable investment bubble would be choppy following the reduction in the number of green certificates, a government measure. Since the legislative measures to be taken on green certificates are not yet clear, there is a possibility that their number may fall or their volume drops from 55 euros. At present, the producers of renewable energy pay the profit tax only when the CV is traded, which will lead to the decrease of the cases of insolvency and bankruptcy among the renewable energy producers.

Keywords: renewable energy, green certificates, reducing emission, renewable investment bubble, efficiency.

JEL Classification: Q42, Q43, Q48.

1. Introduction

In Romania, there are two markets for energy transactions, the regulated market and the competitive market, which are also divided into the wholesale market, the retail market and the green certificates market.

The Green Certificates Market is a market distinct from the electricity market operating on the basis of competitive, demanding and green certificate offerings. At EU Member State level, the energy system is applied through two price-based systems, a fixed price for renewable energy and quantity is set, and governments impose an obligation on suppliers or consumers to produce part of their electricity from renewable sources.

Green certificates are titles that show the production of a quantity of electricity from renewable sources.

Their purpose is to gradually allow the development of new technologies for the production of electricity from renewable sources without public aid. If the price-based system does not have a limit on the amount of energy produced, it allows for a forecast of outputs, receipts, and also a long-term business plan, the green certificates market is traded with certificates attesting to 1MWh of electricity produced from renewable energy sources. These certificates are issued in order to promote E-SER through a system of competitive market mechanisms, that of binding quotas combined with green certificates trading (CVs), as energy suppliers have to buy a share of E- SER and resell it to final consumers.

These certificates can be traded separately from the associated electricity, on a bilateral contract market or on the centralized green certificates market and have unlimited validity. Their price is set by the government and ranges from a minimum price calculated to protect E-SER producers, and a maximum price cut to protect consumers.

Until 2012, there has been an increase in investments in this area of green certificates, together with the number of legal entities that benefited from the Romanian state support scheme.

The value of green certificates was calculated at a value of 55 euro / piece, the average value between the values of the reference years analyzed. The value of green certificates increased by 765.5% in 2012 compared to 2005, with the indication that the maximum was reached in 2012. Also, the number of energy producers increased by 48% in 2012 compared to base year 2005, which means a development of this sector.

2. Evolution of value of green certificates in Romania

This rhythm of growth is in line with the projections of the National Energy Strategy, with the Romanian state providing subsidies and aid to producers in order to increase investments in the renewable energy sector. The annual evolution of the CV number issued since the implementation of the E-RES promotion system to date is shown in Table no. 1.

Table no. 1. Evolution of the green certificates number since the implementation of the E-RES promotion system

Year	2010	2011	2012	2013	2014	2015	2016	2017
Hidro/ SER technolo-gies	272412	186913	747026	1233874	1699219	1523843	1854457	1974883
New winds	292072	1334282	4429299	6390576	4249381	521862	6010239	10888083
Biomass	112115	209260	212692	561999	113062	120283	864917	783722
Photo-voltaic	7	1815	45269	1809603	4942852	6217502	6177080	6530926
High efficiency cogenera-tion	0	20524	66710	136988	0	0	0	0

Source: Data processed by the author based on statistics ANRE (2017).

The decision to suspend (temporarily) green certificates trading will probably reduce the number of green energy market participants, especially the producers in this sector. At the same time, it is important for the market to remain dynamic and not to block itself on the basis of those public decisions, in order to avoid possible adverse effects.

Perhaps a large number of producers will disappear from the market as a result of the decision to suspend green certificates trading, the large proportion will be among those producing small amounts of renewable energy. In support of them, the Romanian government promises to grant subsidies in order not to block their activity until 2017.

Renewable energy producers who own plants / parks with a capacity of up to 1 MW will benefit from regulated tariffs ranging from 69.4 Euro / MWh to 167 Euro / MWh. These tariffs will be granted according to the technology used by the producers.

The number of CV required to meet the quota in 2015 was 12,193,817 CV, and the share of CVs received by E-RES producers who benefited from them in 2015 were: Enel Green Power Romania with a 10 %, CEZ Romania with a 5% share, EDP Romania with a 5% share, Verbund Renewable Power with a 4% share and a 1.44% Hidroelectrica S.A are shown in Figure no. 1.
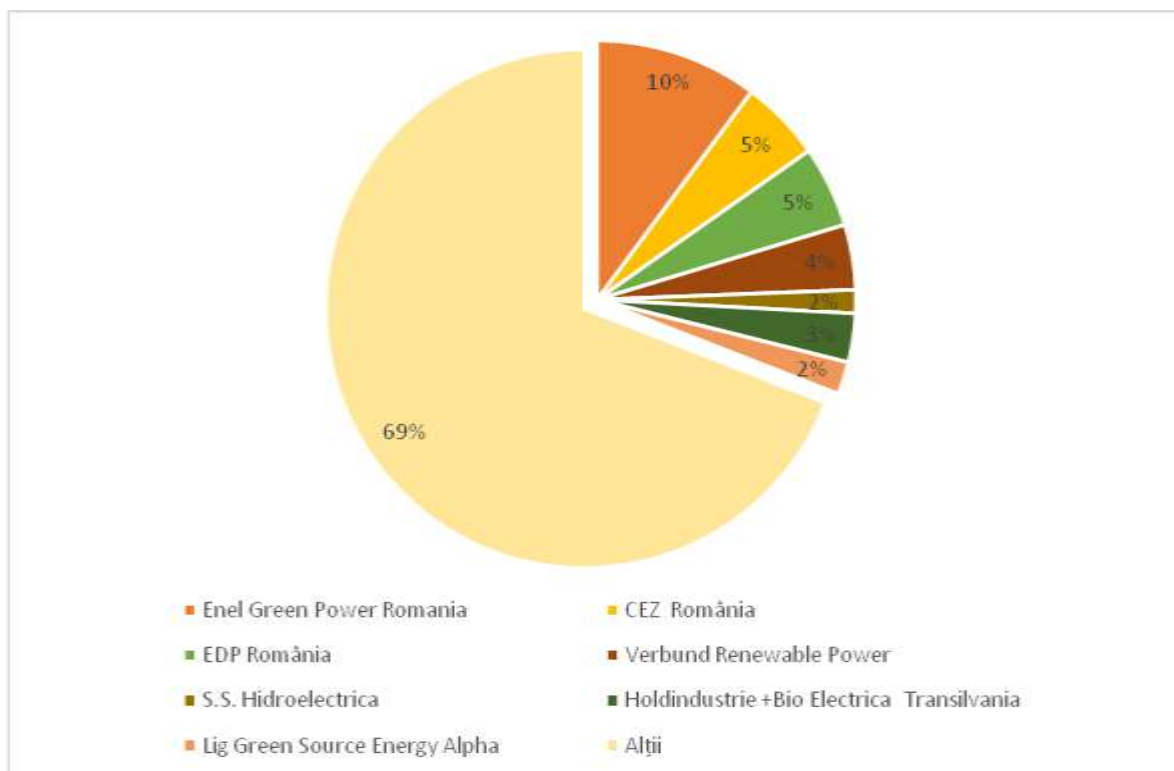
Figure no. 1. Share of green certificates system received by manufacturers in 2015

Source: data processed by the author on the basis of ANRE statistics (2015)

If at the beginning of 2009 the renewable energy field was underdeveloped, it is currently experiencing a considerable increase in both the number of market players, installed capacity, investments in the field and the results obtained from using this type of energy (Figure no. 2).

Figure no. 2. The evolution of the renewable energy production quantity of producers who benefited from the green certificates system
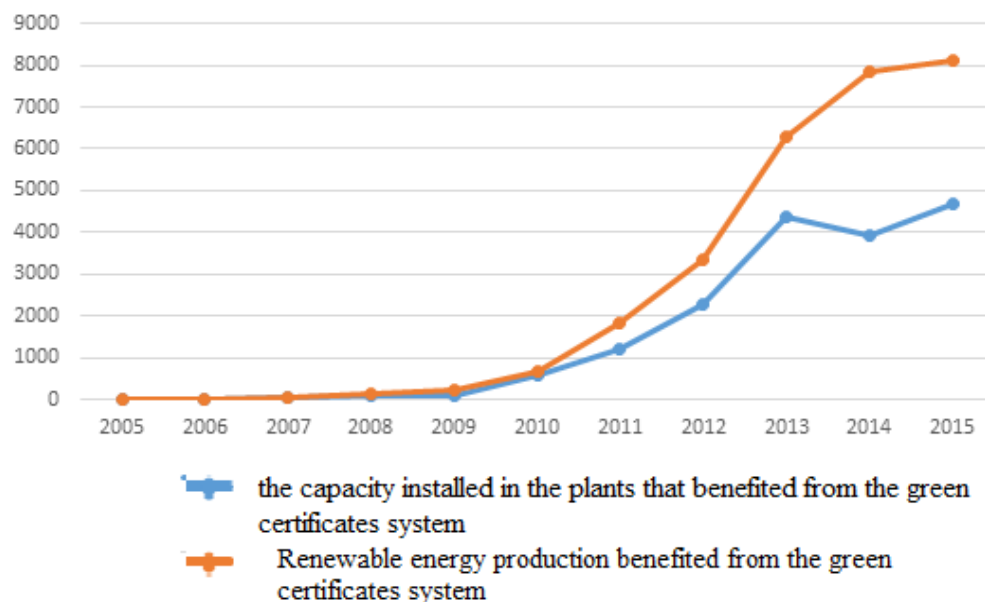
Source: data processed by the author on the basis of ANRE statistics (2005-2015)

Analyzing Figure 2 we can see that the year with the highest renewable energy produced in Romania is 2015, when the total energy consumption is covered by 15% of wind and solar, while the investments in the field tend to zero.

In Romania, out of the 25 wind farms, 8 of them are central probes with a total installed capacity of 1887.5 MW at the end of 2013, and with a total investment value of 2973, 8 million euro, 6 are managed by companies with Romanian capital, and the remaining 19 are owned by foreign companies.

The largest parks are owned by EDP Renewables (Portugal), with six parks, by Enel Green Power in Italy with five own parks and one jointly followed by CEZ with two parks.

However, the biggest capacity is the wind farm owned by CEZ, this company occupying the first place on the wind power market with the highest installed capacity and the highest value of the investment. The total value of investments in Romania, in production capacities, by type of technology, in the period 2011-2014 is 5.529 million euro (Table no. 2).

Table no. 2. Value of investments in production capacities, by types of technologies, in 2011-2014

SER technologies	Investment 2011	Investment 2012	Investment 2013	Investment 2014	Total
New winds	1.243	1.272	1.015	143	**3.673**
Hydro (new, refurbished)	61	67	240	36	**403**
Biomass	-	30	860	0.384	
Photovoltaic	3	62	1.228	43	**1.336**
Total	**1.307**	**1.431**	**2.568**	**223**	**5.529**

Source: Data processed by the author based on statistics ANRE (2016)

The two wind farms built in Constanta (Fântânele and Cogealec) have the supremacy in Europe with an installed capacity of 600 MW.

Regarding the solar parks, in 2012, there were 1082,103 MW installed in photovoltaic parks in Romania with a total investment value of 2 billion euros. Despite these investments, in Romania at the end of 2012 only three solar parks with a total of 2 MW operated.

The decline in renewable energy investments in mid-2013 can be explained by the fact that the Romanian state has changed its support scheme for this area and decided that part of the support for already operational projects be postponed for the period 2017-2020. Thus, support for energy producers has been diminished as follows: wind energy is to receive 1 green certificate compared to 2 certificates granted by 2017, hydro power will receive 1 green certificate versus 3 and solar energy will receive 2 green certificates against the 6 green certificates granted until 2017.

In 2017, what will remain as certificates will be preserved by ANRE (National Regulatory Authority for Energy), which will estimate and calculate the number of green certificates corresponding to each investor. Their value can be used only in 2017, until it remains stuck.

Also, the fact that the payment of green certificates was postponed has produced negative effects, the EUR 4 million that had to be collected for the production of green energy from wind sources in July 2013 to be recovered after January 2017.

Starting with 1 April 2017, Government Emergency Ordinance no. 24/2017 regarding the amendment and completion of the Law no. 220/2008 to establish a system for the promotion of renewable energy production to ensure a balance between producers of electricity from renewable sources and final consumers with the objective of maintaining the national target of 24% of the total energy produced.

In the period 2011-2017 the evolution of the annual mandatory quotas of CVs and of the quotas made by the acquisition of CV by economic operators obliged to purchase green certificates is presented in Table no. 3.

Table no. 3. Evolution of annual mandatory CV shares and quotas achieved by the acquisition of CV by economic operators

Years / CVs	2011	2012	2013	2014	2015	2016	2017
Annual CV rates	0,037	0,119	0,224	0,218	0,278	0,306	0,357
Annual quotas made by CV	0,118	0,223	0,218	0,278	0,278	0,306	0,357

Source: data processed by the author based on statistics ANRE (2017).

In 2017, the estimated mandatory green certificate acquisition quota was set at 0.320 CV/MWh, corresponding to a final electricity consumption excluding green certificates of 6,700 GWh.

The mandatory green certificate purchase quota for 2018 was set at 0.346 CV / MWh, corresponding to a final electricity consumption excluding green certificates of 7.040 GWh.

3. Distortions on the Renewable Energy Market in Romania - Comparative analyzes

Regarding the distortions of the energy market obtained from renewable sources in Romania, we will aim at highlighting the malfunctions regarding the financing of this sector, the subsidies granted by the state to the investors whose projects have no financing to be completed, the defective management, the energy prices which evolves inversely in proportion to consumer incomes.

E-SER producers are the beneficiaries of CV subsidies, this cost being borne by industrial and household consumers through the monthly electricity bill. Although in the E-SER field, production capacity increased from 21 MW in 2005 to 4552 MW in 2015 and ANRE predicts continued growth, energy efficiency remains a problem for Romania because the economy and the national energy sector are not sustainable, the main causes being the poor organization and losses in this sector.

Distortions of the green certificates market are the result of subsidizing this sector, an intervention that changes the price of energy affecting producers, suppliers and final consumers of energy.

Renewable energy producers are beneficiaries of CV subsidies, their cost is borne by industrial and household consumers through the monthly electricity bill.

The number of traded green certificates increased 13 times, from 48 economic operators in 2010, to 622 economic operators in 2014, while the weighted average price, both in lei and in euro, was changing (Table no. 3).

Table no. 3. Evolution of green certificates number traded on the renewable energy market in 2010-2014

Green certificates	2010	2011	2012	2013	2014
New winds	26	42	56	73	23
Hydro (new, refurbished)	18	32	47	77	81
Biomass	3	4	7	14	19
Photovoltaic	1	4	41	395	456
Total	48	82	151	559	622

Source: Data statistics ANRE (2016).

Financing the energy sector is a public decision, borne by all consumers, which affects the attraction of private funding and hinders real investment in this area. The lack of adequate legislation in the energy sector and a stable political climate have had adverse effects on attracting investment in the E-SER sector. While the liberalization of the E-SER market is desirable, it can't be sustained by the state at all times, the lack of investments in the field being a real problem.

Also, E-RES grants are only used through mandatory green certificate quotas. In this way, many investors have been able to benefit from the recovery of investments made by issuing and selling green certificates, not wanting to continue their activity on the energy market as operators.

Under these conditions, investors who have produced green energy and have managed to recover their investments are no longer loyal players on the market, abandoning their activity and withdrawing money from the Romanian market. In fact, they get a double win: once they sell the business at the market price, recovering their money and once they have benefited from the subsidies granted by the Romanian state. This raises the question of those investors receiving subsidies of any kind and the fact that their grant should be conditional on a long-term commitment to the Romanian energy market.

The renewable energy market can't be truly developed in Romania due to the functioning of the electricity market. Thus, although we witness the liberalization of the electricity market in Romania in 100% since 2007, this is not really the case due to long-term bilateral contracts negotiated outside the stock market at prices below the market (centralized market of bilateral contracts), which represent approximately 16TWh, about one third of total consumption, we can't talk about a total liberalization of the electricity market in Romania. These contracts represent 80% of long-term contracts, indicating that the electricity market is about 20-25%.

The development of EE's production capacities in the SER is only apparent, since the approvals of documentation for the construction of a wind or photovoltaic park remain mostly in the feasibility study, with potential investors not finding sources of financing for investment projects.

Electricity in Romania has a distorted price, has not declined at all in recent years, contrary to the expectations of the Romanian authorities that have supported the development of green energy and the fact that the country has one of the largest national renewable potential. In 2012, the average price per MWh is 21% higher than in 2011, so for a company the average cost of electricity is $ 80 / MWh, compared to the U.E. of $ 65 / MWh. This can be explained by the fact that in Romania about 35% of the electricity price is composed of subsidies, eco-taxes, infrastructure and transport tariffs.

Electricity prices in Romania are considered small compared to the European average, but monthly consumer bills reflect fairly high values, largely due to the fact that markets are not properly regulated and liberalized. Also, prices rise very quickly and significantly in relation to the incomes of the population, which prevents their support in the medium and long term.

If the system of the electricity market in general and of the energy in the RES were based on perfect competition, the price of the product would be the result of the efficient use of energy resources, the ideal situation within the economic theory. The market mechanism can be radically influenced if the price of a good does not include the socio-economic costs resulting from its production.

Excessive volatility of energy prices and trading-related risk occurs when participants can not estimate the quantities produced and consumed, the manufacturer can't predict when its production capacity will be exceeded, and the energy seller can't estimate the demand. Thus, the price tends to have strong oscillations, mean values and variable dispersions, presents seasonality, the so-called calendar effect, characterized by increased volatility and unpredictable developments.

In the electricity market, although prices are largely regulated, they do not include the real socio-economic costs of the products traded. In the energy market the most common environmental externalities are difficult to quantify and often not included in the price of products and services.

Market prices do not reflect some of the costs or benefits associated with production or consumption, lack of socioeconomic cost assessment creates distortions, preventing price formation according to the supply-demand ratio.

Within the energy market of the RES, there are some major imbalances between the prices paid by households vs. on the one hand, and the prices of cogeneration power plants. individual consumer prices, on the other hand. These disturbances seriously affect the heating economy, a sub-sector, which is completely disconnected from European practices. Renewable energy support schemes have further contributed to disrupting the proper functioning of the energy system.

In this situation, minimizing the impact of energy market transformation shocks, environmental externalities, and the risks associated with company penetration raise the issue of studying an optimal structure of the market for the existence of an optimum.

Although the costs of negative externalities are fairly high, they are borne by all consumers and produce inefficiencies in resource allocation, they are preferred to the detriment of alternative energy generating alternatives.

The different costs of the externalities resulting from the application of the technologies for energy production in the RES are relatively low. However, these technologies remain a rarity in the energy market due to very high operating costs. In these situations, in order to eliminate the distortions of the energy market in the RES, it is necessary to internalize the environmental externalities resulting from the exploitation of these resources

Distortions of the market are manifested in various ways: energy price changes, fragmented information of market players, inadequate subsidies, uncontrolled and insufficient investment, corruption, bureaucracy, negative externalities, improper management and losses in the electricity distribution network. Energy losses account for almost a third of consumption, largely due to old technologies, old buildings and inefficient transport systems.

Other constraints that may arise from climate change restrictions, reluctance to use nuclear power and the difficulty of further promoting renewable energy, due to higher costs.

The lack of informing the market players, the lack of information of the suppliers regarding the changes in electricity taxes, bureaucratic barriers and corruption, are other causes of the occurrence of distortions from the EER market of the EES.

In many cases the projects have documentation, have connections to the National Energy System but are not completed due to corruption). These distortions on the SER energy market can be corrected by monitoring investments for a period of 3 years.

In order to correct the distortions of EER market E, the subsidies for these energies and the indirect effects they produce should be considered: the real impact on prices, the production market, the pressure on transport networks.

Those who invest in green electricity production should benefit from a stable, fair and predictable regulatory framework that would provide them with conditions for meeting a calendar to maximize the economic performance of the plant.

4. Conclusions

In many cases, despite the fact that subsidy E of the RES is borne by all consumers due to the increase in production, it was exported to the exclusive benefit of traders.

It is often ignored that the price of electricity to the producer has decreased in Romania as a result of the market entry of renewable energy, which put pressure on all the producers to make the activity more efficient.

In order to correct the market failures of renewable energy, the following measures are needed:

- Renewable energy subsidies should be granted to those who make a commitment to long-term participation in the Romanian energy market. Subsidization introduces changes in energy prices - manufacturers, suppliers and end-users are affected. Many investors benefited from investment recovery by issuing and selling green certificates but did not want to continue their activity on the energy market as operators (they sell their investments at market price). Renewable energy producers receive free green certificates, which they sell on a specialized market for extra gains from energy. These green certificates are paid by all consumers in Romania, including by the population, in the final electricity bill.

- setting the correct energy price - about 35% of the electricity price consists of subsidies, eco-taxes, infrastructure and transport tariffs.

- internalizing externalities - market prices do not reflect some of the costs or benefits associated with production or consumption.

- the existence of bilateral long-term negotiated contracts at below-market levels (the centralized bilateral contracts market). This represents about 80% of long-term contracts. (OPCOM - Operator of the Romanian Electricity and Natural Gas Market).

- Monitoring investments over a period of 3 years (have documentation, have connections to the National Energy System, but projects are not completed due to corruption);

- Trending from the payment of the CV when they were registered in the profit tax account only at the moment of their trading, which will lead to the decrease of the cases of insolvency and bankruptcy;

- investing in modern technologies and eliminating energy losses.

The measures needed to achieve the priority objectives are: regulations, energy audit, voluntary agreements and cooperation instruments, financial instruments, energy performance contracts involving the private sector (energy saving services), tax reductions, subsidies to private companies involved, advantageous loans granted by banks to private producers of renewable energy

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SUCCESSES AND FAILURES IN REFORMS IMPLEMENTATION PROCESS IN THE REPUBLIC OF MOLDOVA

Associate Professor Ph.D. Lilia GHIŢIU
National Institute for Economic Research, Republic of Moldova
E-mail: ghitiulilia@yahoo.com
Associate Professor Ph.D. Zinovia TOACA
Academy of Economic Studies of Moldova, Republic of Moldova
Scientific Researcher Zaharia OLARESCU
National Institute for Economic Research, Republic of Moldova

Abstract: A brief look on current socio-economic situation of the country denotes its tedious condition as a result of many years of reforms which have come across and which have not been successfully at all. The greatest difference is observable when we compare with other states 'situation in the region. The paper is based on an analysis of information (data) from the period of 2000-2016 years, delivered by the National Bureau of Statistics on Gross Value Added, salary fund, number of employees and number of working hours per national and branch economy. Also, was used statistical information of other countries in the benchmarking. The research reveals low levels of labor productivity and low wages in the national economy in comparison with countries from the region. The unsatisfactory economic development caused by reforms lack placed the Republic of Moldova on the last places among compared countries. The GDP growth rates registered in the years of independence of our country will not allow a crucial changing of things in the nearest future.

Key words: Labor productivity, labor cost, average wage.
JEL Classification: J24, J30, J31, E24.

1. Introduction

The followed road by the Republic of Moldova after it has achieved independence was complicated and difficult one. In fact, after 10 years of continuous recession, in 2000 year the country's economy finally started on the path of growth, being determined by several factors, including: stabilizing of the situation on markets of Eastern European countries, especially the Russian one; increase of domestic demand which is influenced by amount increase of done work by residents from abroad; activation investment process; taking of measures to curb the growth of money in circulation, inflation reduce, etc.

In process of economic recovery, Moldova has benefited of a strong financial support from international financial institutions - IMF, World Bank, EBRD and other development partners. Especially useful was the non-reimbursable financial assistance from the EU and USA. From the USA, the Republic of Moldova has gained more than $ 1 billion within non-reimbursable assistance to implement several projects and programs, aiming firstly on improving the country's infrastructure which situation it was extremely difficult.

2. A brief look on current socio-economic situation of the country

With active support from the European Union and the USA, Moldova has got not just a considerable financial, material and moral support. After many bilateral negotiations with development partners, Moldova is the first Eastern Partnership country which materialized ratification of the Moldova-EU Association Agreement, including the Deep and Comprehensive Free Trade Area Agreement, as well as liberalized regime of visas for its citizens. This has created favorable conditions, both internally and externally, in order to develop with rapid rhythms.

In the first years of re-launching of national economy (2001-2005), there were recorded major GDP growth rates, around 7%. Starting with 2006, however, the growth rates have diminished, and in 2009 the country's economy, being heavily affected by the

global financial and economic crisis, recorded for the first time since 2000 – decrease, inclusively a decreasing in GDP with 6.0% in comparison with the previous year. After the decline in 2009, there were regressions also in 2012 (0.7%) and 2015(0.4%).

However, during the period of economic growth, the GDP increased twice, in real terms and investments in long-term assets - 2.2 times. In the concerned period, more dynamically has developed: in the industrial sector - quarrying, manufacturing; in services - retail, construction, and communications. In this period the annual GDP growth rate achieved 4.5%, the investments in long-term assets - about 5%, industrial production - about 4% and agricultural production - over 1%.

The results could be much better, but the global financial and economic crisis, overlapped by political crisis inside our country, has complicated the socio-economic situation, especially last years. Although, the country's new government had an anti-crisis program, its achievement was complicated by political instability and unfavorable conditions in foreign markets.

The socio-economic situation of the Republic of Moldova started to worsen considerably after parliamentary elections from November of 2014, gradually turning into a great disappointment and revolt of population caused, first of all, by devaluation of three important banks of a colossal amount of money, qualified in media sources as "the theft of the century." In the following period, the sociopolitical situation of our country prevented the process of achieving priority issues related to reforming society through the implementation of the Association Agreement with the EU. And it's no wonder that as a result of too late reforms, the country's economy could not manage partly recovering of the losses admitted in the early years of recession, now having just over 70% of its potential in the early 1990s, became also the poorest country from Europe.

It is known, that a concrete situation of a concrete country, can be evaluated just in process of comparison with other country, or with a group of countries, or with certain well-defined standards, in other words, to make some comparisons that would reveal the competitiveness of this country. In this case is strongly recommended, a multi-dimensional, multi-criteria approach. Competitiveness indicators are based on variables or criteria evaluations that can be grouped according to how they characterize different areas of the socio-economic system. One of the main competitiveness indicators that characterize the efficiency of used time is - labor productivity.

The Table no. 1 shows the amount of hourly labor productivity in the EU-28, Romania and Moldova in Euro since 2000 year.

Table no. 1. Labor productivity per hour (euro)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2012	2012	2013
EU-28, average	27,9	28,4	28,9	29,3	29,8	30,2	30,9	31,3	31,2	30,7	31,4	31,8	31,9	32,1
Romania	3	3,2	3,8	4	4,4	4,6	4,9	5,2	5,6	5,4	5,3	5,4	5,4	5,6
Moldova	0,5	0,6	0,6	0,7	0,8	0,9	1,0	1,2	1,5	1,6	1,8	2,0	2,3	2,4
The level of the RM in % towards the EU	1,4	2,1	2,1	2,4	2,4	3,0	3,2	3,8	4,8	5,2	5,7	6,3	7,2	7,5
The level of the RM in % towards Romania	17	19	16	18	18	20	20	23	27	30	34	37	43	43

Source: Author calculations based on statistical data. Vlad, I.V., 2015. *Strategia de dezvoltare a României în următorii 20 de ani*, Vol. I. Bucharest: Romanian Academy Publishing, pp. 250-251.

The data from the table shows how far is our country's level in comparison with developed countries. Although in these 13 years the labor productivity in the EU countries evolved at a little rhythm that exceeded 1% annually, in this period of time, Moldova increased this indicator by 4.8 times, even in this case the level of labor productivity barely reached 7.5% compared to the EU average. Moldova and Romania have a level of labor productivity below 50%. However, it is worth mentioning that the data in the Table, for Moldova are presented according to the official annual average of the Leu, against the euro for that period of time, but as we know, such a comparison is not accurate and the degree of accuracy is relative. A higher degree of accuracy in the comparison process can be obtained through the purchasing power parity (PPP) in a single currency, Figures no. 1 and no. 2.

Although, Moldova has registered a higher labor productivity increase than other states in the region (except Georgia), it continues to be on a low place by productivity. In 2016 labor productivity, expressed at purchasing power parity, for the Republic of Moldova was 15.5 thousand US dollars per employed person and increased with 4% compared to 2015. This level ranks Moldova as last among the comparison states. In 2016 in Ukraine labor productivity was $19.6 thousand, in Georgia - $ 21.9 thousand, in Serbia - $ 32.4 thousand, in Romania - 52 thousand, in Latvia - $64.7 thousand and in Lithuania - $ 68, 6 thousand. Data show that Georgia had the highest average annual growth rate of 7.1% in 2007-2016, Moldova ranks secondly - 5.8%, followed by Lithuania - 5.4%, Romania - 4.9 %, Latvia - 4.4%, Serbia - 3.3% and Ukraine - 1.7%. Ensuring of increased labor productivity in Georgia and Moldova at higher rates than other countries in the region, it still has not substantially reduced the gap between these countries in terms of labor productivity, with the remaining difference of 2-3 times.
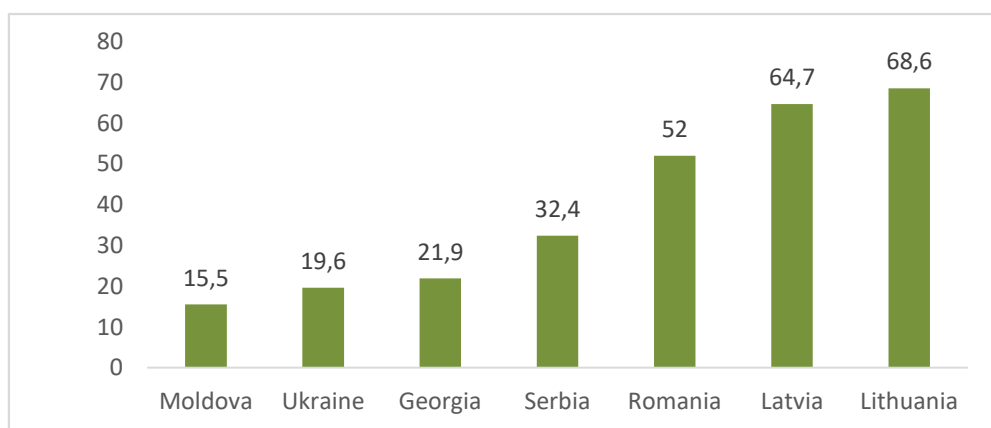
Figure no. 1. Average of labor productivity in 2016 (GDP at PPP prices 2011 year) thousand US dollars per capita

Source: Wikipedia, 2017. *List o countries by past an projected GDP (PPP) per capita.* [online] Available at: <https://en.wikipedia.org/wiki/List_of_countries_by_past_and_projected_GDP_(PPP)_per_capita#IMF_estimates_between_2000_and_2009> [Accessed 2 February 2018].
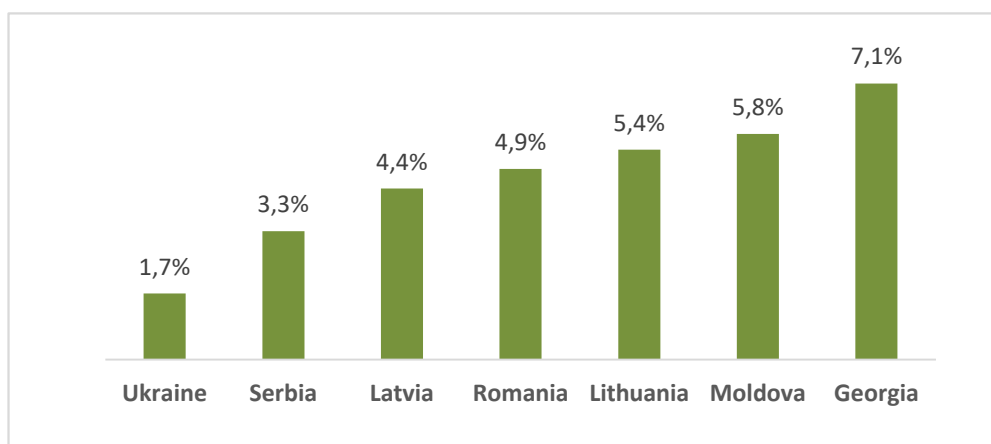
Figure no. 2. Labor productivity rhythm in 2007-2016 in the states of the region,%.

Source: Wikipedia, 2017. *List o countries by past an projected GDP (PPP) per capita.* [online] Available at: <https://en.wikipedia.org/wiki/List_of_countries_by_past_and_projected_GDP_(PPP)_per_capita#IMF_estimates_between_2000_and_2009> [Accessed 2 February 2018].
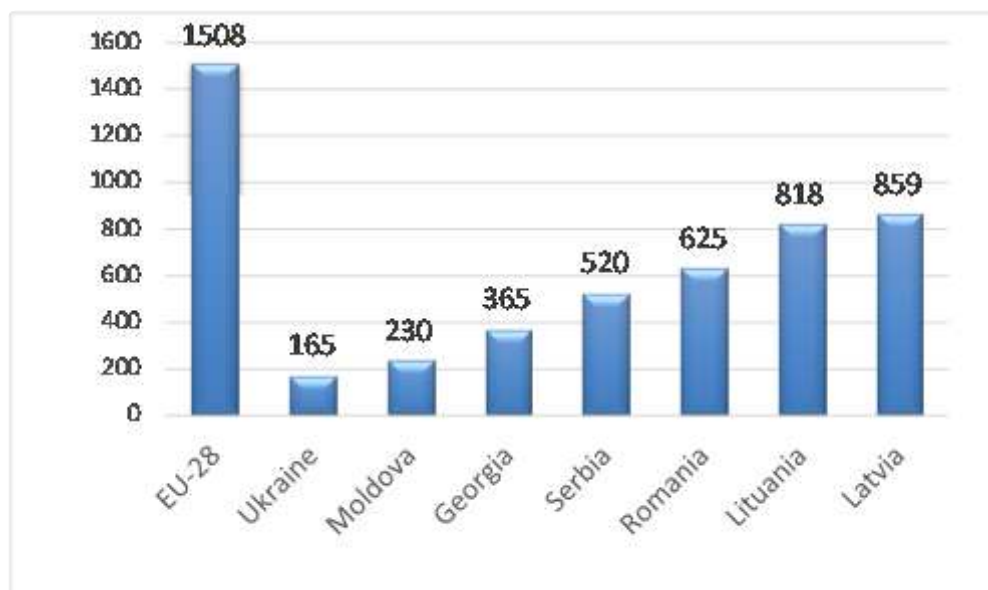
Figure no. 3. Average gross nominal wages in 2016 in comparison with countries from the region, euro

Source: National Bureau of Statistics of Republic of Moldova, 2018. *Statistical Data.* [online] Available at: <http://www.statistica.md/index.php?l=en> [Accessed 2 February 2018].

The low level of labor productivity, as a general rule, also corresponds to an adequate compensation of all efforts. The European average salary, which significantly exceeds salaries of other states, is further evidence. As far as the Republic of Moldova is concerned, it has been and is currently in the queue of the ranking of the states in the region. The average monthly net salary for Moldova has slowed down compared to other countries. In the period after 2009 and until 2016, Moldova has worsened its position with the lowest salary (except for Ukraine): 37% lower than Georgia, less than half that of Serbia. The regional crisis triggered by the sanctions against the Russian Federation was also felt in Moldova, also intensified by the domestic crisis in the banking sector, so that in 2015 the average monthly salary for Moldova decreased by 1.5% compared to the previous year and constituted 220 euro (after the official average annual rate). In 2016, the average monthly wage increased to 230 euros, but it still remained 6.6 times below the EU average, 3.7 times lower than the Latvian salary and 2.7 times lower than from Romania (Figure 3). A short time ago, Moldova has given to Ukraine the last place in ranking, which as a result of the armed conflict with Russia in 2014, is passing through a deep crisis, as a as a consequence the salary dropped sharply from EUR 267 / month (2013) to EUR 165 / (2016).

It is important that in the production process the rising wage rhythms should not exceed the rhythms of increasing labor productivity in order to avoid macroeconomic disproportions.

In Moldova, during the period of 2000-2016, the salary increased from 3.4 thousand lei per person to 48.1 thousand lei / person, that means more than 14 times, while the productivity labor has registered an increase of more than 10 times (from 9.25 to 93.9 thousand lei, which is not a normal situation). It should be mentioned that the higher wage growth compared to the labor productivity occurred in the first years of the analyzed

period, and in the last 10 years this correlation has practically leveled, such were registering the same rhythms of growth (3.2 times).

3. Conclusions

The task of this paper was not to disclose all aspects on international competitiveness of the country (more details can be found in the *"Competitiveness and Impact Assessment Report on the Improvement of the Competitiveness of the Republic of Moldova for the 2015 Year"*, Chisinau, 2016), but these indicators analyzed in the research, according to the authors, in a comprehensive form characterizes the situation of the Republic of Moldova in comparison with other states from the region. We can observe that the situation is really disastrous because of many causes.

Since the moment of achieving independence and sovereignty, the Moldovan society is in a process of continuous reformation, accompanied by a series of mistakes and failures. The political class has not yet a clear agenda on how to implement the reforms that have been set up and how to achieve a sustainable balance for the everyday life of its citizens. Up to now, at state level, it has not been decided to clarify the goals and priorities of the country's development, the main directions and the succession of reform promotion. The EU-Moldova Association Agreement step by step stipulates those reforms that need to be implemented in the country to overcome existing obstacles and move on the path of prosperity, but they are often mimicked, or are done with great delays.

The Moldovan society has not consolidated around a progressive idea, in the spirit of time, which would unite the citizens of this country. In the last years, due to internal problems and external factors, the country has been in a situation of endless political and socio-economic crisis that has considerably amplified the phenomena of constraints in virtually all spheres of the vital activity of society and of the state. The complexity of the current period of society's development lies primarily in the result of the inheritance of the Soviet past, which we have not yet final discarded.

What are the prospects for the next period, what can we expect? To answer to this question, we need to see how the economy has evolved in recent years. As was already mentioned, the situation in the country has worsened, especially since the last parliamentary elections from 2014. Thus, in the years of 2014-2016, judging by the rhythms of GDP growth and the main branches of the economy, and taking into account the level of development that has been achieved so far, it can be said with certainty that the country is in a stagnant situation, and its prospects do not inspire great hopes.

If we refer to concrete figures in the last 3 years, we can notice the following situation: GDP growth rate was just 2.8%, industrial production - 2.9%, of which in the last 2 years - 0.8%, agricultural output has advanced on average by 3.5% and this is due primarily to the years favorable for agriculture - 2014 and 2016. Investments in real estate in general decreased by 18%, constituting in 2016 only 14.6% of GDP (for comparison, in 2008 they were 29%). The foreign direct investments in the national economy fell from 243 million US $ in 2013 ($ 711 million in 2008) to US $ 143 million in 2016. It is known that if you do not invest now, you will have nothing to expect in the future, that is why the prospect of the country's development is rather bleak.

According to NIER's researchers, in 2017, however, we expect an increase of around 4% of GDP. If the forecast will become true, this means that we will reach 75% of the level in 1990 this year, and with such growth rates we would still need 7 more to reach 100%. It's too much. Moldova cannot afford to move forward with such rhythms. In order to ward off the remaining countries in the region, the growth rates should be at least of 7-8% per annum for a longer period. Is such a development really possible? Experience of such developed countries as China, Ireland and others proves that it is possible.

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RELEVANCE OF ECONOMIC-FINANCIAL DIAGNOSIS IN SUSTAINABLE DEVELOPMENT OF BUSINESS

Associate Professor Ph.D. Mădălina ALBU
Petroleum-Gas University of Ploieşti, Romania
E-mail: malbu@upg-ploiesti.ro

Abstract: The analysis of the economic and financial activity is a very important and very complex component of the process of substantiating and realizing the strategy of an organization, because with it, it gets a complete picture of the activity, which leads to the identification of strengths, weaknesses and of the causes of their occurrence. The economic-financial diagnosis offers managers the opportunity to make both qualitative and quantitative analyzes of the current situation of the company they lead, but also of its prospects. The aim of the need to know the economic situation of a trading company is to give an overview of its activity in order to formulate measures of efficiency by using research means used by the economic and financial analysis. This paper attempts to implement a theoretical aspects in a case study conducted at the Oltina Impex Prod Com Company. The analysis of the financial field of the company shows that it managed to manage intelligently the financial resources it had in the analyzed period, registering profit every year. As a result of the SWOT analysis at the organization level, proposals for development of the activity could be formulated to help managers to take timely decisions.

Key words: economic diagnosis, financial diagnosis, sustainable development.
Classification JEL: O12, D57, D22.

1. Introduction

The company is a very complex system, the development of which is difficult to conceive, being the result of several variables. The attempt to encompass all these variables as well as the interactions between them in the mind of a manager is not a solution just as it is not a solution nor leaves solving the problems of various complex systems to intuition alone. Companies are currently confronted with a very common strategic issue, namely the timely choice of the best response to environmental changes, but above all the question of implementing an integrated strategic management site.

Sustainable development is a major goal for all businesses. The major difficulty of implementing this goal is the difficulty of properly translating the specific directions of sustainable development into the current business of a business, in its financing and in finding consumers willing to pay the price of sustainability of benefits.

The implementation of the concept of sustainable development in the business model is important both for the achievement of competitive advantages for companies and for an efficient and responsible development (Danciu, 2013, p.21).

Making pertinent analyzes of the firm's activity is the starting point in designing and implementing a sustainable development strategy for the future. The economic and financial diagnosis has the capacity to provide important information and conclusions, aimed at setting medium and long-term objectives for a strategic reinvention of the firm. The sustainable development of the business is a desideratum of all entrepreneurs. However, in order to achieve this objective, account must be taken of the financial side of sustainable development. For this, the realization of an economic-financial diagnosis of the business is of particular relevance, due to the information it provides.

Diagnostic analysis is a process of broad-based investigation of the main aspects of an organization's activity, which may be of an economic, technical, sociological, legal and managerial nature, with the purpose of conceiving recommendations, proposals for improvement and development of the organization by identifying the strengths and dysfunctions that occur at its level, as well as the causes of their production (Russu and Albu, 2005, p. 12).

Diagnosis is both a method in which special research and analysis techniques are used, as well as a phase in conducting a study to determine changes at the organization level.

The importance of bakery, pastry and milling products in meeting the food needs of the population is a factor driving the rapid development of the bakery industry in Romania along with other branches of the national industry.

It is precisely these reasons that represent my motivation to choose the case study presented in the paper. I believe it is very important that the Romanian companies active in this field of bakery and milling to participate positively in achieving the objectives of the Romanian bakery industry, focusing on ensuring food security, using and embracing competitive technologies and production processes on the market European standards, bringing Romanian standards to European and international standards.

2. Economic and financial diagnosis of the company - case study conducted at the company Oltina Impex Prod Com.

The environment in which an organization operates is composed of components on which it has a decisive influence and theoretically an absolute control. It is necessary to study the environment of the organization, because it identifies the source of the resources it has and can determine the degree of accomplishment of the chosen strategy.

S.C Oltina Impex Prod Com SRL is located in the town of Urlati in Prahova county and has as its activity the bakery and milling, namely the production of bread, bakery and pastry specialties, wheat and maize flour and their distribution. The importance of bakery, pastry and milling products in meeting the food needs of the population is a factor driving the rapid development of the bakery industry in Romania along with other branches of the national industry.

2.1. Analysis of the economic and financial domain

The analysis of economic and financial activity is a very important and very complex component of the process of substantiation and realization of the strategy of society, because, with the aid of it, a complete "radiography" of the society is achieved, which leads to the identification of strengths, weaknesses and of the causes of their occurrence.

The economic-financial diagnosis is an extraordinarily important stage because it gives managers the opportunity to express and draw judgments of both qualitative and quantitative value regarding the current situation of the society they lead, but also its dynamics and perspectives.

The purpose of the knowledge of the economic situation of Oltina Impex Prod Com SRL is to give an overview of its activity in order to formulate efficiency measures by using research tools used by the economic and financial analysis.

In order to carry out this analysis we used data from the public accounting records on the Ministry of Finance's website from 2011 to 2016.

A first step in the analysis of the financial field of the society is the analysis of the evolution of the main indicators of S.C. Oltina Impex Prod Com S.R.L, presented as follows in the following table.

Result of the exercise = Income – Expenses

Turnover analysis is needed to assess the position of the company in its industry and market, its possibilities to launch and develop various activities in a profitable manner. Depending on the turnover, it can be said how important or negligible is the participation of the company in the sector of activity or the market.

Table no. 1. Evolution of the main indicators of S.C. Oltina Impex Prod Com S.R.L in the period 2011 - 2016

Indicators (thousand lei)	Period					
	2011	2012	2013	2014	2015	2016
Net turnover	79394256	110318424	113087749	126189354	105210502	135851617
Total income	93157143	130209518	129141653	137569939	118671536	146631734
Total expenses	86102663	115619190	126507219	131737456	114123561	137215582
Operating income	90243652	121405631	103204182	137304230	118606990	119212664
Expenses from exploitation	81258462	132345724	101446820	129431509	112983488	111620872
Net income	5976121	12491745	2237303	5021092	3907165	8147061
The result of the exercise	7054480	11561919	2634434	5832483	4547975	9416152

Source: Processing after accounting reports S.C Oltina Impex Prod Com S.R.L.

It can be noticed how the result of the exercise is growing in the period 2013-2016, it rising by 6781718 lei in 2016 compared to 2013, but it is also noticed how in 2012 the highest value of the analyzed period is 11561919 lei. This major difference can be attributed to the expenditures registered following the decision to change by extending and refurbishing the whole society, implemented in the period 2009 -2011, but also on the revenues generated by this activity.
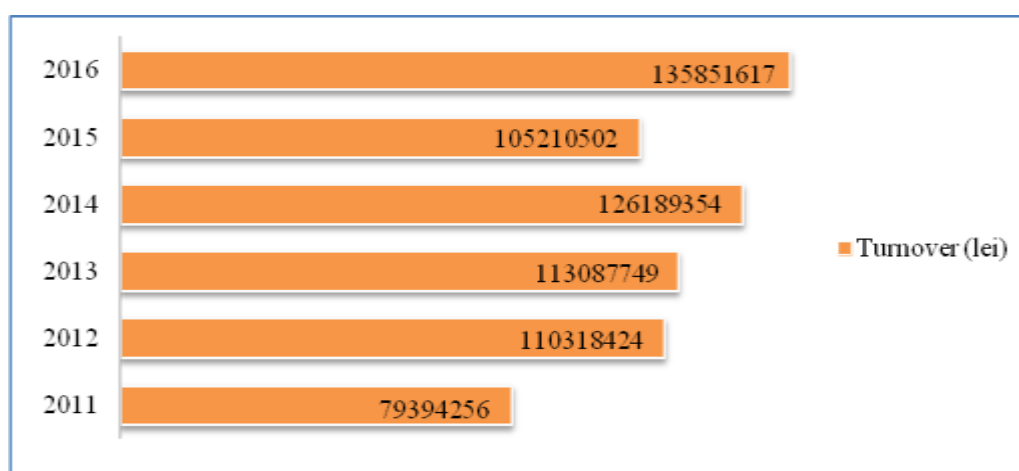
Figure no. 1. Evolution of turnover (lei) in the period 2011 - 2016
Source: Processing after accounting reports S.C Oltina Impex Prod Com S.R.L.

Thus, in terms of net turnover it can be seen how it increased during the analyzed period in 2011 by 71.1% compared to 2011, amounting to ROL 135,851,617 thousand and compared to the previous year with 29.1%. It can be said that this increase of turnover was an important factor in obtaining the title of leader on the market in Prahova of the company Oltina Impex Prod Com S.R.L.

Operating expenses are down 1.2% from year-over-year in 2016, with material and fuel savings.

The second step in the analysis of the financial field of S.C Oltina Impex Prod Com S.R.L is the analysis of the market share of the company. The calculation of the absolute market share was based on the fidelity rate and the attractiveness rate (table no.2).

Table no. 2 Calculation of the absolute market share

Indicators	Period		
	2014	2015	2016
Market share (lei)	126189354	105210502	135851617
Fidelity rate (%)	-	90	85
Rate of attraction (%)	-	4	10
Absolute market share (Pi)	16,73	18,62	20,34

Source: Processing after accounting reports S.C Oltina Impex Prod Com S.R.L.

Absolute market share:

$$P_i = \frac{CA_i}{CA_t}$$

where:
CA_i = the turnover of the firm analyzed;
CA_t = the total turnover of the sector in which the firm operates;

$$P_{it} = \alpha \times P_{i(t-1)} + \beta(1 - P_{i(t-1)}),$$

where:
P_{it}= the global market share of the firm analyzed at time "t" when analyzing;
$P_{i(t-1)}$= the global market share of the firm analyzed at the previous time "t-1" against which the analysis is made;
α = rate of fidelity;
β = rate of attraction of customers

It can be noticed that although customer satisfaction has decreased, the absolute market share has risen year-on-year, from 16.73% in 2014 to 18.62% in 2015 and 20.34% in 2016 It seems that attracting new customers has offset the decrease in satisfaction.

The rate of fidelity was calculated at the company level as the percentage of customers who at the time of the analysis bought bakery products from Oltina and in the previous year did the same thing.

The rate of attraction of customers was calculated at the company level as the percentage of customers who at the time of the analysis bought baking products from Oltina and in the previous year were not the clients of the company.

The results were taken from company accounting reports.

2.2. Analysis of the general situation of the production and trading activity of the company Oltina Impex Prod Com S.R.L

The analysis of the dynamics of the production and marketing activity aims to highlight the objectives established in accordance with the achievements of the previous periods, the level of achievement of these objectives, the reasons for the deviations that may occur and the measures necessary to correct the unfavorable situations that may arise at at a certain time.

The data necessary for calculating the value indicators necessary to determine the dynamics of the production and trading activity of the company Oltina Impex Prod Com S.R.L. are presented in table no. 3.

Table no. 3. Value indicators and value indices of S.C Oltina Impex Prod Com S.R.L

Indicators (lei)	Years			Indices (%)		
	2014	**2015**	**2016**	2015/2014	2016/2012	2016/2015
Turnover (CA)	126189354	105210502	135851617	83,37	107,65	129,12
Production of manufactured goods (Q_f)	116001640	9732068	127585671	83,89	109,98	131,09
Production of the exercise (Q_e)	125615318	107205502	137116973	85,34	109,15	127,90
Value added (VA)	15984268	16816246	37740315	105,20	236,10	224,42

Source: Processing by S.C Oltina Impex Prod Com S.R.L, Balance Sheet.

Analyzing previous data, we see a decrease in turnover in 2014, equal to the decrease in production. Equality between turnover and production of manufactured goods shows that the balance between the company's stock dynamics and the dynamics of deliveries will be maintained.

In 2016 turnover and production made the highest values of the analyzed period, increasing by 29.12% compared to 2015 and by 7.65% as compared to 2014, which is a favorable situation for the analyzed company.

Another good thing for the company is the amazing evolution of value added over the 2014-2016 period, as it practically doubles its value in 2016 as compared to 2014, rising by 119%. This percentage represents, for S.C Oltina Impex Prod Com S.R.L, the wealth plus obtained from the development of the technical-productive activity and the confirmation that the company is constantly developing.

The evolution of the main value indicators of the production activity is shown graphically in figure no. 2.

Figure no. 2. Evolution of the main value indicators of the production activity

Source: Processing after accounting reports S.C Oltina Impex Prod Com S.R.L.

Based on the data presented above, the relationships presented in table no. 4.

Table no. 4. Static ratio of value indicators

Current number	Report	2014	2015	2016
1.	CA/Q_f	1	1	1
2.	Q_f/Q_e	0,92	0,91	0,93
3.	VA/Q_e	0,13	0,16	0,27

Source: Processing after accounting reports S.C Oltina Impex Prod Com S.R.L.

In general, the results of previous reports that are ≥1 are generally considered to be favorable to the firm. The first report, that of the turnover and the production of manufactured goods, expresses the evolution of the stock of finished products and other incomes besides the financial and extraordinary ones. The second report shows the evolution of company stocks as well as domestic consumption. It can be seen from table no. 4 that its value does not exceed 1 but is close to it. The company records an unfavorable situation as to the result of the ratio between value added and output of the exercise; it indicates that although the purchasing costs have declined over the period under review, the result is still not expected. The ratio between value added and output of the exercise highlights changes in material expenses. The situation is considered to be favorable when the ratio is over-unitary (Maxim, 2008).

2.3. SWOT analysis of the activity

The SWOT analysis (Strengths, Weaknesses, Opportunities, Threats, Weaknesses, Opportunities, Threats) is a very effective method used in strategic planning to identify potentials, priorities and outline a common vision of development strategy development society (Russu and Albu, 2005, p. 99). Following the analysis carried out on Oltina Impex Prod Com SRL, the following strengths, weak points, opportunities and threats were identified:

Table no. 5. The SWOT analysis of Oltina Impex Prod Com Company S.R.L

STRENGTHS	WEAKNESSES
− High manufacturing line flexibility; − High quality products; − Diversity of products; − Good brand image; − Good sales department; − Own shops network for own products marketing; − New contracts with new clients; − Specialized staff	− The absence of a marketing compartment; − Reduced advertising versus company size and product diversity; − No parking for the employees of the company; − Large fluctuation of distribution personnel; − Existence of inadequate infrastructure
OPPORTUNITIES	**THREATS**
− Attracting new partners; − Existing large demand for products marketed by the company; − Attracting customers of its competitors; − Existence of fairs and exhibitions.	− Changing customer preferences; − Downward trend in bread consumption at national level; − Easily substitutable products; − Strong competition.

Following the SWOT analysis can be made the following proposals for decisions by confronting the elements of the analysis, as follows:

a. Decisions resulting from the confrontation of strengths with opportunities:
  - Maintaining and improving the image of society;
  - Maintaining leadership;
  - Creating a marketing compartment;
  - Participation in fairs and exhibitions;
  - Development of own network of stores

b. Decisions resulting from the confrontation of weaknesses with opportunities:
  - Making investments in distribution staff to reduce fluctuation (staff motivation);
  - Creating a marketing compartment;
  - Making publicity in the media (radio, TV);
  - Car parking for employees of the company;

c. Decisions resulting from the confrontation of the strengths with the threats:
  - Making branded "star" products, only recognized as Oltina products (with special ingredients / patented techniques);
  - Researching consumer preferences;
  - Concentration of the company's attitude on the client;
  - Entering new markets from different counties;

d. Decisions resulting from confronting weaknesses with threats:
  - Making publicity in the media (radio, TV);
  - Engage staff more seriously in order to respond more promptly to customer requests;
  - Making surveys to see to what extent the customer is satisfied with the services provided.

3. Sustainable business development

A sustainable business development strategy can be defined as a set of decision-making processes necessary to choose the right variants of the company's objectives as well as the factors (resources, activities etc.) that these objectives achieve in a certain period of time (Danciu, 2013, p. 16).

The development strategy aims to achieve results that are superior to the previous ones (both qualitatively and quantitatively), by enhancing the competitive capacity of society. This strategy implies the achievement of very important qualitative changes in the field of activity of the society (Pană and Pană, 2006, p.43).

To meet customer needs, in order to reduce the risk of loss of actual or potential buyers and to achieve an upward trend in turnover, it is necessary to create a development strategy that aims to enrich the content of the company's offer and increase its quality.

Thus, analyzing the situation of Oltina Impex Prod Com SRL based on the strengths and weaknesses of its departments, but also taking into account the threats and development opportunities, compared to the situation of the competitors, in order to obtain a good share in the market where it operates and of a high reputation, a sustainable development strategy can be proposed in order to maintain a leading position on the market in Prahova.

S.C Oltina Impex Prod Com S.R.L is a company that has as main mission the production of bread, bakery and confectionery specialties, the production of wheat and maize flour as well as their distribution.

It should be kept in mind that the activities and products offered must be constantly improved to ensure competitiveness and satisfaction of stakeholders (associates, employees, customers).

The main strategic objectives pursued are:

- Maintaining and improving the image of society;
- Developing promotion channels;
- Providing a range of diversified and high-quality products;
- Customer loyalty and attracting new customers;
- Development of own network of stores;
- Professionalizing and empowering employees;
- Participating in fairs and exhibitions.

Through the analyzes carried out during this work on the activities of the company Oltina Impex Prod Com SRL, especially the production of bread, bakery and pastry specialties, wheat and maize flour, as well as their distribution, two main aspects: on the one hand, it was proved that the analyzed company is constantly developing with a very good position and image at local and county level (it obtained the leading position on the market in Prahova).

From the analysis of the financial field of the company Oltina Impex Prod Com S.R.L, it emerged that it managed to intelligently manage the financial resources it had in the analyzed period, registering profit every year. It has also been demonstrated by analyzing the relative market share that the company is a leader in the Prahova market.

Following the financial analysis, S.C Oltina Impex Prod Com S.R.L had financial results in the last 5 years of profit. Thus, the shareholders of the company have the option to realize these proposals for development and improvement of the company's activities - self-financing.

4. Conclusions

The ability of a firm to have a sustainable activity depends greatly on how the company is responsive to changes in the environmental and social environment.

A performance management must take into account both business development goals and, at the same time, must include in the company strategy and concepts of sustainability and sustainable development. The firm must be able to move beyond the main market dominance and be able to use existing resources taking into account future prospects. Including risk management and innovative development strategies in the company strategy is a step forward in developing the firm's ability to act sustainably.

Making pertinent analyzes of the firm's activity is the starting point in designing and implementing a sustainable development strategy for the future. The economic and financial diagnosis has the capacity to provide important information and conclusions, aimed at setting medium and long-term objectives for a strategic reinvention of the firm.

Sustainable development is a major goal for all businesses. The major difficulty of implementing this goal is the difficulty of properly translating the specific directions of sustainable development into the current business of a business, in its financing and in finding consumers willing to pay the price of sustainability of benefits.

Defining objectives capable of responding to these requirements and successfully implementing strategies capable of providing the company with healthy growth and sustainable development can no longer take place without taking into account the sustainability of actions taken and their impact on the environment, of the efficiency of their own activity.

The economic and financial diagnosis conducted at S.C. Oltina Impex Prod Com S.R.L has shown that this firm has the resources to implement modern technologies that focus on the development of production in close connection with the concept of sustainability.

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LEGAL ASPECTS REGARDING PUBLIC PROCUREMENT IN ROMANIA

Lecturer Ph.D. Isabela STANCEA
"Constantin Brâncoveanu" University of Piteşti, Romania
Email: stanceaiza "@ yahoo.com

Abstract: For the holders of public property rights, but also for the holders of private property rights, the current way of procuring the material assets necessary for their operation and their existence is the purchase of goods in the civil circuit of the company. In the case of public authorities and institutions, the acquisition of goods in the civil circuit is generally carried out through public procurement. In the field of procurement, the award procedure is the basic part of the procurement process. In other words, it is the time when the contracting authority meets with the operator or economic operators to evaluate the offers and decide the package of products, services or works that is appropriate for the institution or public authority.
Keywords: public procurement, contracting authority, award procedure.
JEL Classification: H57, K12.

Public procurement is the sum of all the processes of planning, prioritizing, organizing, advertising and procedures for purchases by organizations that are fully or partly funded by public (European, national or local) budgets.

The Romanian Public Procurement Framework Act[1] regulates the way public procurement is carried out, the procedures for the awarding of public procurement contracts and the organization of the contests, the specific instruments and techniques that can be used for the award of public procurement contracts, as well as certain specific issues related to the execution of public procurement contracts.

The normative act aims to provide the legal framework necessary to achieve the purchase of goods, services and works in conditions of economic and social efficiency. The principles underlying the awarding of public procurement contracts and the organization of solution contests are:

a) non-discrimination;
b) equal treatment;
c) mutual recognition;
d) transparency;
e) proportionality;
f) assuming responsibility.

This law[2] applies to the award of a works contract by a non-contracting legal entity if the following conditions are met cumulatively:

a) the contract is financed / subsidized directly by more than 50% of its value by a contracting authority;

b) the estimated value, exclusive of VAT, of the contract is equal to or higher than the threshold of 23,227,215 lei, for the public procurement contracts / framework agreements;

c) the contract includes one of the following activities:
- civilian genius works;

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[1] Law no. 98 of May 19, 2016 on public procurement, published in the Official Gazette of Romania no. 390 of May 23, 2016.
[2] Article 6 of Law no. 98 of 19 May 2016 on public procurement.

- construction works for hospitals, facilities for sports, recreation and leisure activities, buildings of pre-university and university education institutions and administrative buildings.

Recently, in the Official Gazette no. 1022 of 22 December 2017 was published Government Emergency Ordinance no. 107/2017 for amending and completing some normative acts with a major impact on public procurement.

These amendments cover all primary legislation in the field of public and sectoral procurement as well as concessions, including Law no. 98/2016.

Thus, the changed aspects start from the definition of Contracting Authorities and come to contraventions and sanctions.

While, according to Law no. 98/2016, in order for a public body to be considered a contracting authority, it should have been set up to meet needs of general interest, without commercial or industrial purpose, Government Ordinance no. 107/2017 provides clarification in that it considers that needs in the public interest are of a commercial or industrial nature if the entity set up under the law by a contracting authority fulfills cumulatively the following conditions:

a) operates under normal market conditions;

b) seeks to obtain a profit;

c) bear the losses resulting from the exercise of its activity.

Also, the old threshold of 648,288 lei, existing until 01.01.2018, for the framework contracts or agreements for products and services, for which there is the obligation to publish the notices of participation and / or award in the Official Journal of the European Union, according to the new legislative amendments no longer apply to the local contracting authorities and the subordinated authorities. The new normative act introduces for these authorities a new threshold, considerably higher, of 994,942 lei, which until 01.01.2018 was 929,089 lei.

Moreover, while the old regulation made the award of contracts on individual lots even if they fulfilled the conditions regarding the estimated value and the percentage of the cumulated value, in the current regulation the contracting authority has the right to apply the simplified procedure or, as the case may be, the acquisition direct, for assignment.

According to Article 7 of the Law no. 98/2016[1], the award procedures for which publication of a contract notice and / or award is mandatory in the Official Journal of the European Union applies to the award of public procurement contracts / framework agreements whose estimated value net of VAT is equal to or greater than the following thresholds:

a) 23,227,215 lei, for the public procurement contracts / works framework agreements;

b) 600,129 lei, for public procurement contracts / framework agreements for products and services; b ^ 1) 929.089 lei, for public contracts / framework agreements for products and services awarded by local contracting authorities, as defined in art. 23 of the Local Public Administration Law no. 215/2001, republished, with the subsequent amendments and completions, as well as those under their subordination;

c) 3.334.050 lei, for public procurement contracts / framework agreements for services that are related to social services and other specific services[2].

The contracting authority shall award public procurement contracts / framework agreements and organize contests for public procurement solutions the estimated value of

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[1] Article 4, paragraph (3) of the Law no. 98 of 19 May 2016 on public procurement.
[2] Article 6 of O.U.G. no. 107/2017 of 20 December 2017 for the modification and completion of some normative acts with impact in the field of public procurement, published in the Official Gazette no. 1022 of December 22, 2017.

which is less than the thresholds mentioned by a simplified procedure, in compliance with the principles laid down by law.

However, the law also introduced an exception; the contracting authority may apply the simplified procedure or the direct procurement, where appropriate, for the award of individual lots, where the following conditions are met cumulatively:

a) the estimated value, without VAT, of the respective lot is less than 355,632 lei, in the case of the purchase of goods or services, or less than 4,445,400 lei, in the case of the purchase of works;

b) the aggregate value of the lots for which the condition referred to above is and is or has been awarded does not exceed 20% of the total value of all the lots in which the work concerned was divided, the purchase of similar products or services view.

Therefore, under the circumstances, any economic operator has the right to participate in the award procedure as a tenderer or candidate either individually or jointly with other economic operators, including in the form of temporary association established for the purpose of participating in the award procedure, in conditions provided by law.

The award procedures governed by law applicable to the award of public procurement contracts or framework agreements or the organization of contests of an estimated value equal to or above the values prescribed by law are as follows:

a) open tender;

b) restricted bidding;

c) competitive negotiation;

d) competitive dialogue;

e) partnership for innovation;

f) negotiation without prior publication;

g) solution contest;

h) the award procedure applicable to social services and other specific services; i) simplified procedure[1].

According to Article 12 of O.U.G. no. 107/2017 if no tender / request to participate has been submitted in the context of an open tender procedure, a restricted procedure or a simplified procedure for the procurement of those products, services or works, or only inappropriate tenders / requests for participation have been submitted, provided not to substantially alter the initial conditions of the acquisition and, at the request of the European Commission, to report to it.

This procedure will also be applied as a strictly necessary measure when periods of open tender, restricted bidding, competitive negotiation or simplified procedure can not be met due to extreme urgency due to unforeseeable and unpredictable events under no circumstances whatsoever of an action or inaction of the contracting authority.

With regard to clarifications in the awarding documentation, any interested economic operator has the right to request clarification or additional information regarding the awarding documentation, in compliance with the deadline set by the contracting authority in the contract notice / simplified / contest. The contracting authority establishes one or two deadlines in the tender / simplified / contest notice in which it will respond in a clear and complete way to all requests for clarification of the additional information, according to the provisions of the methodological norms provided by the law[2].

To the extent that requests for clarification or additional information have been requested within the deadline set out in the contract notice / simplified / contest, the

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[1] Article 11 of O.U.G. no. 107/2017 of 20 December 2017 for the modification and completion of some normative acts with impact in the field of public procurement, published in the Official Gazette no. 1022 of December 22, 2017.

[2] Article 160 of Law no. 98 of 19 May 2016 on public procurement.

response of the contracting authority to these requests must be submitted at least 10 days and 5 days respectively in the demonstrated emergency situations by the contracting authority, before the deadline set for the submission of tenders or requests to participate.

The 10-day and 5-day periods respectively replace the old 6-day and 4-day periods as set out in the old regulation. The contracting authority has the right to establish through the procurement documentation requirements on the economic and financial situation that are necessary and appropriate to ensure that economic operators have the economic and financial capacity to execute the public procurement / framework agreement and to be protected against a possible risk of proper contract failure.

The requirements for the economic and financial situation established by the contracting authority may concern elements such as:

a) a minimum level of annual turnover, including a certain minimum turnover in the field of public procurement / framework agreement;

b) the minimum annual turnover imposed on economic operators must not exceed twice the estimated value of the public procurement contract or, as the case may be, the expected maximum value of the subsequent contracts to be executed at the same time or, if that is not the case known at the estimated value of the largest subsequent contract[1].

The contracting authority has the right to establish through the procurement documents the technical and professional capacity requirements that are necessary and appropriate to ensure that the economic operators have the human and technical resources and experience required to execute the public procurement / of the appropriate quality.

The technical and professional capacity requirements established by the contracting authority may in particular address the existence of an appropriate level of experience, by reference to contracts executed in the past.

In the case of procedures for the award of public contracts / service or works framework agreements or public procurement contracts / framework agreements for products requiring work or location or installation operations, the professional capacity of economic operators to provide services or to execute the construction or installation operations can be evaluated according to their skills, competencies, efficiency, experience and potential.

The economic operator shall demonstrate compliance with the technical and professional capacity requirements by presenting, as appropriate, one or more of the following information and documents:

a) a list of the works carried out during a period covering no more than the last 5 years, accompanied by certificates of good execution for the most important works; where necessary to ensure an appropriate level of competition, the contracting authority may establish that relevant works completed more than 5 years ago are taken into account;

b) a list of the main deliveries of the goods or of the principal services supplied during a period not exceeding the last three years, indicating the values, dates and public or private beneficiaries; where necessary for the purpose of ensuring an appropriate level of competition, the contracting authority may determine that deliveries of relevant relevant products or services rendered more than 3 years before are taken into account;

c) indication of the technicians or technical bodies involved, whether or not they belong to the economic operator's organization, in particular those responsible for quality control and, in the case of public works contracts, those available to the contractor for the execution work;

d) a description of the technical facilities and measures used by the economic operator to ensure its quality and facilities for study and research;

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[1] Article 175 paragraph (1) of Law no. 98 of 19 May 2016 on public procurement.

e) specification of the management and traceability systems within the supply chain that the economic operator will be able to apply during the execution of the contract;

f) where the products or services to be supplied are complex or, exceptionally, intended for a particular purpose, the results of a check carried out by the contracting authority or, on its behalf, by a competent official body in the country in which the economic operator shall be established, subject to the agreement of that body, relating to the production capacities of the economic operator supplying the products or the technical capacity of the economic operator providing the services and, if necessary, the study and research facilities available to him and the measures quality control that he / she is to apply;

g) the educational and professional qualifications of the economic operator providing services or executing works or of the managerial staff of the economic operator, if these are not assessment factors;

h) specification of the environmental management measures that the economic operator will be able to apply during the execution of the contract;

i) a statement of the average annual number of personnel of the economic operator providing services or works and the number of senior management personnel over the past 3 years;

j) a statement of machinery, plant and equipment at the disposal of the economic operator providing services or executing works for the execution of the contract;

k) specification of the part / s of the contract that the economic operator intends to subcontract;

l) samples, descriptions or photographs of the products to be delivered, the authenticity of which must be certified at the request of the contracting authority;

m) certificates issued by official quality control institutes or recognized organizations attesting conformity of the products to be delivered, clearly identified by reference to technical specifications or standards[1].

When intending to award a public procurement / framework agreement on lots, the contracting authority shall apply the capacity requirements by reference to each lot. By way of exception, the contracting authority may set requirements for the annual minimum turnover level by reference to groups of lots where multiple lots may be awarded to the same tenderer and the contracts for them must be executed at the same time.

However, as a condition for the possibility of awarding contracts which are the subject of several lots to the same tenderer, the contracting authority may establish the technical and / or professional resources requirements by reference to groups of lots where the use of these resources in the framework of the contracts is carried out simultaneously or it is impossible to allocate the same resource for multiple contracts running at the same time.

The capacity criteria and the minimum requirements required to meet them, together with appropriate evidence, are set out in the contract notice[2].

Where more than one economic operator participates jointly in the award procedure, they may benefit from the support of a third party for fulfilling the criteria relating to the economic and financial situation and / or technical and professional capacity.

According to Article 187 of the Law, without prejudice to legal or administrative provisions on the price of certain products or the remuneration of certain services, the contracting authority shall award the public procurement / framework agreement to the

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[1] Article 179 of Law no. 98 of 19 May 2016 on public procurement.
[2] Article 181 of Law no. 98 of 19 May 2016 on public procurement.

tenderer who has made the most economically advantageous tender. In determining the most economically advantageous tender, the contracting authority has the right to apply one of the following award criteria: a) the lowest price; b) the lowest cost; c) best value for money; d) the best quality-cost ratio.

The best value-for-money / quality-cost ratio is determined on the basis of assessment factors including qualitative, environmental and / or social aspects related to the subject matter of the public procurement / framework agreement.

However, the contracting authority will not use the lowest cost / lowest price as the award criterion for:

a) certain categories of public contracts / framework agreements for works or services which have as their object intellectual services and which involve activities of a high level of complexity;

b) public procurement / design and execution framework agreements or services relating to trans-European transport infrastructure projects as defined by law and county roads.

According to the Emergency Ordinance no. 107/2017, it is a contravention not to provide NAPA with the information regarding not only the awarding of public procurement contracts / framework agreements, but also their modification.

The new legal act also removes the exception to the application of sanctions on public procurement contracts financed by European funds and / or national public funds related to them. Thus, sanctions will also apply if the contravention found is a deviation, in accordance with the provisions of O.U.G. no. 66/2011.

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1. Law no. 98 of 19 May 2016 on public procurement, published in the Official Gazette of Romania no. 390 of May 23, 2016;

2. O.U.G. no. 107/2017 of 20 December 2017 for the modification and completion of some normative acts with impact in the field of public procurement, published in the Official Gazette no. 1022 of December 22, 2017.

THE GLOBAL TRENDS OF INVESTMENTS DURING LAST YEARS

Professor Ph.D. Alexandru GRIBINCEA
Free International University of Moldova, Republic of Moldova
Professor Ph.D. Ana ȚIBULEAC
Moldova State University, Republic of Moldova
Ph.D. Student Petru COBAN
Free International University of Moldova, Republic of Moldova

Abstract: The global volume of transactions in terms of investment in 2015 decreased compared to the previous year by 3% reaching 689 billion USD. At the same time, the transaction volume in 2015 increased by 5% reaching 748 billion USD. Thus, the decline of the dollar investment indicator in regions is a result of the strengthening US currency. In turn, the US real estate market showed the highest result in 2015 - reaching 294 billion USD meaning an increase of 9% compared to 2014. It is expected that the volume of real estate investments on the global level in 2016 will increase to 720-730 billion USD. Taking in consideration the slowdown of world economy during last years the investors continue to look for options to diversify their risks and to invest in different sectors. Limiting new offers on the real estate market by increasing the capital oriented to the acquisition of assets, could encourage investors to focus on lesser-known markets and to consider different investment objects, such as student hostels and nursing homes for the elderly. If considering the FDI the interest of foreign investor, therefore, their involvement could be seen in the long run, the fact that excludes the possibility of carrying out speculative activities as in case of foreign portfolio investments.
Keywords: Investment, transactions, amount of capital, world market, supply of investment.
JEL Classification: E 22, E01, F21, G33, H31.

1. Introduction

"The money must make money" under this statement, the main world concern is to put money in circulation in order to have profits. Unfortunately, sometimes the flow of money and their circulation is not so smooth to bring benefits instantly moreover, they could run uncontrolled, as happens often during financial crisis and a recent evidence is the global financial crisis started in 2008. Paying very high economic and social costs during this crisis, the international community demanded the setting of a new financial score. Some years later amid slow global aggregate demand, deepening income inequality and the continuing financial instability of the world economic system, the world economy remains vulnerable to the fluctuations of the financial markets (JLL, 2015). It would be wrong to say that the reform agenda did not progressed beyond the draft stage, however, at the national and international level have been taken real steps related to the improvement of market conditions, some of which proved to be quite effective. Despite all measures that were taken, these were not been able to solve states of vulnerability and weakness caused by excessive dependence on global financial markets.

2. The volume of investments in global markets

The global volume of investment transactions in dollar terms in 2015 decreased compared to the previous year by 3% reaching the amount of 689 billion USD.

At the same time, the transaction volume in local currency for 2015 increased by 5% reaching 748 billion USD. Thus, the decrease in the dollar value of the investment indicator by regions is a result of the strengthening of the American currency. In turn, the US real estate market showed a record result in 2015 the volume of investment transactions reaching 294 billion USD, a 9% increase compared to the previous year.

The experts of JLL (Jones Lang LaSalle) expect an increase in the volume of investments in the global real estate market in 2016 estimating an amount of 720-730 billion USD.

Taking in consideration the slowdown of world economy during last years the investors continue to look for options to diversify their risks and to invest in different sectors. Limiting new offers on the real estate market by increasing the capital oriented to the acquisition of assets could encourage investors to focus on lesser-known markets and to consider different investment objects, such as student hostels and nursing homes for the elderly. If considering the FDI the interest of foreign investor, therefore, their involvement could be seen in the long run, the fact that excludes the possibility of carrying out speculative activities as in case of foreign portfolio investments.

In dollar terms, the volume of transactions in Europe fell by 9% in 2015 reaching 253 billion USD at the same time the volume of transactions in national currency was positive (registering an increase of 8% in 2014). Virtually all of the major countries in the region have shown a positive trend volume of investment transactions in the previous year; the leaders are Germany and Scandinavian countries that registered almost 30% growth. The reduction in investment activity was observed only in Central and Eastern Europe.

The volume of investments in global markets in 2014 fell for the first time in five years, slowing down by 6.3% reaching to 1.21 trillion USD. The decline stems from the fact that the Chinese are buying less land. Excluding transactions with sites in China, investment in Asia rose 1%. Other regions of the world showed growth: North and South America - by 11.4%, Europe - by 11.8% (Loewendahl, 2001). Concerning the United States and China, they are considered the most popular markets. Half of the 20 most popular countries among investors are in Europe. In the first place - the USA, the second – China. Among the top five investors are included the United Kingdom, Germany and Japan. Russia holds the 17th place.
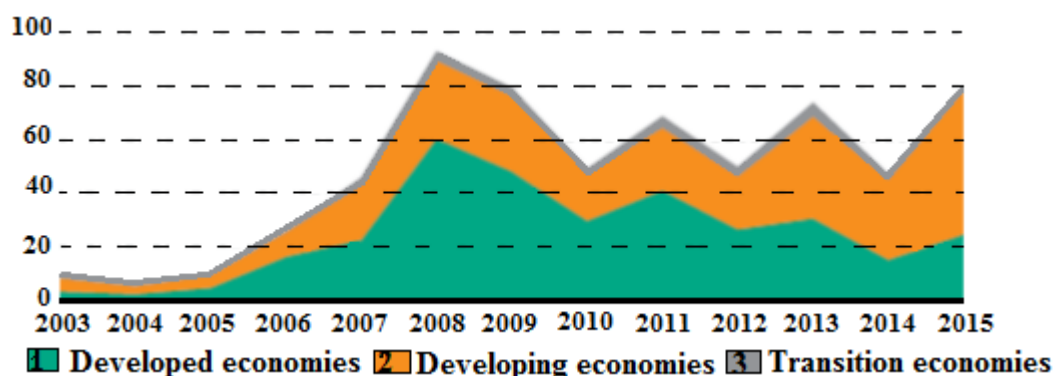
Figure 1. Announced greenfield projects in selected low-carbon business areas, by group of host economies, 2003-2015, billion USD (European Cities Marketing, 2016; UNCTAD, 2017)

From the total volume of world investments, the United States accounted for 32%, the value invested in American market worth 340.6 billion USD, which is 16.2% more compared to the previous year. The fastest growing markets were South Korea, Spain, the Netherlands, Ireland and India. Among the more attractive cities for international investors are New York, London, Tokyo, Los Angeles, San Francisco. In the top 20 cities attractive, the best 12 cities are located in the United States.

Table 1. The ranking of most popular destinations for 20 countries for investors

	The most popular countries for investors		The most popular cities for investors
1	USA	1	New York
2	China	2	London
3	Great Britain	3	Tokyo
4	Germany	4	Los Angeles
5	Japan	5	San-Francisco
6	Australia	6	Paris
7	France	7	Washington
8	Hong Kong	8	Chicago
9	Canada	9	Hong-Kong
10	South Korea	10	Dallas
11	Switzerland	11	Sidney
12	Spain	12	Boston
13	The Netherlands	13	Atlanta
14	Singapore	14	Miami
15	Taiwan	15	Huston
16	Italy	16	Melbourne
17	Russia	17	Shanghai
18	Ireland	18	Seattle
19	Poland	19	Denver
20	India	20	Frankfurt

Source: International Monetary Fund, 2015.

Except for capital of local investors US states have also attracted more foreign capital, amounting 65.5 billion USD; international investment increased by 73%. Canada holds the second place in terms of foreign capital, followed by Singapore and China. Among the fastest growing markets are Japan (173%), Kuwait (134%) and Norway (115%).

"Ukraine and Russia were at risk to enter into recession in 2015, and weak demand on Russian market is becoming a limiting factor for the whole of Europe. Nevertheless, Russia is one of the most dynamic emerging markets, supported by the vast resources and capital (The Financial, 2017). "Many investors will avoid this market, but there are investors interested in investments with high risks and willing to take advantage of new opportunities", is stated in Cushman & Wakefield report (Cushman & Wakefield, 2015).

Land - the leading real estate sector. In 2014, land sales has registered the sharped decline - by 28%. This is the lowest level reached in six years, but this sector remains the largest among all real estate sectors (about a third of transactions). Most notably has increased the proportion of sales of offices. The hotel sector also grew significantly - by 16.6%, the market share being 5.5%. Most noticeable sales of hotels were registered in Europe and North America, with a continuing upward trend will continue in 2015.

The offices and hotels sector is followed by commercial and industrial real estate. The share of apartment buildings on the global market reaches 12%. At the same time the most prominent role in this sector is played by North America. The United States and Canada accounted for 26.5% of sales in the sector of apartment buildings. Three major European markets in this sector are Germany, the UK and Sweden - the volume of investments in these countries has decreased, nevertheless due to the high demand for

rental, apartment buildings is considered a profitable investment in the long term. The world market is dominated by investors from North America. The second place is hold by the buyers from Asia and the third place by the Europeans.

Profitability. In the 4th quarter of 2014 the rate of return increased for the first time since 2012, although only slightly - by 2 percent points (0.02%). This increase is due to increased risk in several markets, including Russia, Ukraine, Taiwan and Malaysia. However, the rate of return tend to have a decreasing trend. During the one year, it fall by 0.08% and is now at 104 basis points below the peak levels of 2009. On the global market the highest increase was registered for the rent of commercial space sector - by 3.8%. Industrial and office segments showed growth of 0.9% and 0.3%, respectively.

Prediction: In which markets to invest. The analysts forecast the increase of investment activity in 2015. Overall, the global market in 2015 will be associated with increased risks, and most buyers will be oriented to invest in reliable markets. In 2015 the European market was estimated to be a dynamic one in 2015. Germany is the most popular investment destination, and among cities, London and Paris will continue to dominate. Based on the information provided in the report, in Europe, the most reliable investment in the next two years will be facilities in London, Paris, Scandinavian countries and Germany.

Table 2. Where to invest in 2015–2016

	North America	Asian-Pacific Area	Europe and the Middle East
The core markets	**Offices**: New York, San Francisco, Los Angeles, Toronto, Vancouver **Stores**: USA and Canada **Apartments:** large US cities (New York, Boston, San Francisco, Los Angeles)	**Offices** in Sydney, Melbourne, Shanghai, Beijing, Tokyo Shops and hotels in Hong Kong, Tokyo, Sydney, Osaka **Accommodation:** Japan, Singapore **Logistics complexes:** Singapore, Sydney, Hong Kong, Tokyo	**Offices:** London, Paris, Stockholm, Munich, Frankfurt, Berlin **Stores:** the key German and Scandinavian city, as well as Paris and London **Logistics complexes:** London, Paris, Munich, Hamburg, Rotterdam, Antwerp
Alternative markets	**Offices:** Atlanta, Boston, Seattle, suburbs **Logistics complexes:** South Carolina, New Jersey, Miami, Seattle, Dallas, Chicago	**Offices**: Singapore, Hong Kong, Seoul, Delhi, Mumbai, Bangalore **Stores:** Singapore, Chengdu, Jakarta, Kuala Lumpur, Seoul **Accommodation:** Hong Kong	**Offices:** Amsterdam, German and British second-tier city *, Prague, Madrid, Barcelona, Milan, Warsaw, London, Paris, Stockholm, Frankfurt **Stores:** the key cities of Northern Europe, as well as Italy, Poland and Spain **Logistics complexes:** German second-tier city*, Warsaw, Prague, Budapest
Opportunistic (investments with high risk)	**Logistic systems**: key cities in Brazil and Mexico **Stores:** and housing in Santiago, the major cities of Mexico, Brazil and Colombia **Offices and housing for rent:** South Florida, Dallas, Chicago	**Offices:** Manila, Jakarta, Kuala Lumpur, Iskander (Malaysia) **Stores:** Hanoi, Kuala Lumpur, Bangkok, New Delhi and other Indian and Chinese cities **Logistics complexes:** Shanghai, Beijing, Guangdong, Indian cities	**Offices**: Lisbon, Moscow, Istanbul, the city of the eastern part of the EU **Stores:** large cities of Turkey and the EU countries in the east **Logistics complexes:** Porto, Barcelona, Milan

* The second-tier cities - big cities that are not capitals and have a great influence on the economy of a country.

USA leading on increasing investment market

✓ The total aggregate investments in the global commercial real estate market has increased over the year by 16% (942.8 billion USD), and reached record levels in 2008

✓ The share of investments in commercial real estate in 25 key cities in the world amounted to 53% of the total global market

✓ New York became the leader in the amount of attracted investments, the US market is showing the fastest growth

✓ By the middle of 2017 the level of global investment is expected to increase by 17% and achieving a new record of 1.1 trillion USD due to the growth of investments in commercial real estate in the US (UNCTAD, 2017).

Despite the increased volatility in the stock markets, uncertainty in China and the Middle East, as well as the possibility of the resumption of the financial crisis in the US, last year showed a growth rate of investment in the global commercial real estate market (Cushman & Wakefield, 2015; The Financial, 2017).

The report, "World Cities: competition for investment" - a study of the global market for commercial real estate investment, where is indicated the list of cities that attract the largest share of investments. The report is presented at the international exhibition of commercial real estate and investments Expo Real in Munich. According to the survey, for the year to June 2015, the volume of investments in the global commercial real estate market has grown by 16% compared to the same period in 2013-2014, and reached 942.8 billion USD, becoming the record since 2008

However, with the overall steady growth at the global level the situation in different regions vary considerably. There is a strong inflow of capital into the most liquid and accessible markets. According to the report, the share of investment in the 25 largest cities rose from 51% to 53% of the world total. With regard to the previous year - 23 city of 25 remained on the list, only Austin and Phoenix changed San Diego and Stockholm.

New York continues to attract the biggest amount of commercial real estate investments - over the past year, investors have invested in real estate in USA 74.8 billion USD, which is about 36% more than in previous year. The metropolis remains firmly on the same position for the fifth consecutive year; the increase of this index is conditioned by the high activity of foreign investors. Here the growth rate is due, in particular, the high activity of foreign investors. London remains on the second place in the ranking with 55.2 billion USD. As in the past year, the metropolis is the largest market in the world in terms of international investment. In case of London the growth is more restrained - in commercial real estate was invested by 13.3% more than last year, thus increasing the gap between the two leaders. This is followed by Tokyo and Los Angeles, top 5 closes San Francisco.
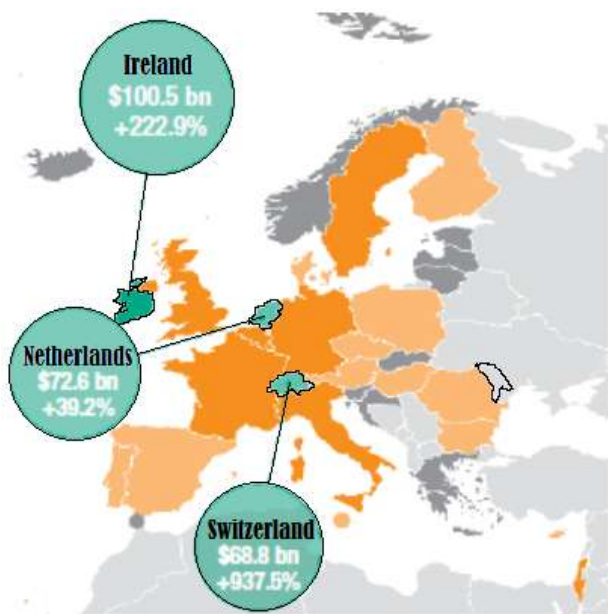
Figure 2. Europe continued to attract capital, 2015 [8; 16]
Source: Jll, 2017; European Cities Marketing, 2016

"Despite the overall stable growth and permanence of key leaders, there are significant differences at the regional level, Europe continued to attract capital, but the most rapid growth was the North American market, and largely due to foreign investments. Of the 25 cities in the world, leading in terms of investments in commercial real estate, 14 - are located in the United States. For comparison - in the second place is Germany, and in the list of the 25 largest capital markets are listed only three German cities. Investments in the USA increased by 32%, while it has been invested only by 7% more in other markets from the list. "
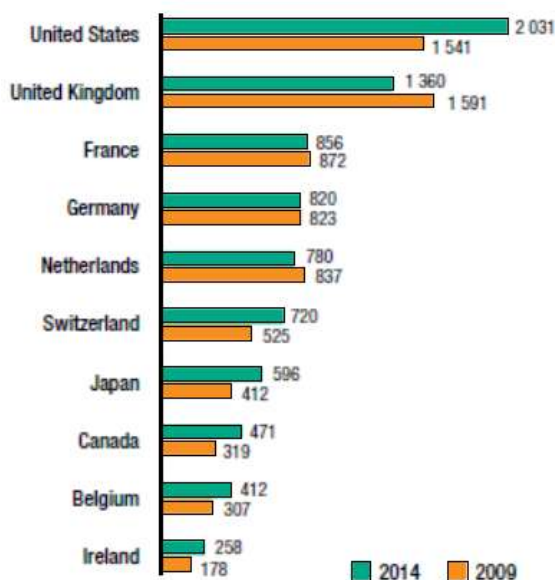
Figure 3. Top 10 investor economies, by FDI stock, 2009 and 2014 (billions of USD)
Source: OECD, 2018; OECD, 2002.

The report also named the cities that have shown the highest rates in 2016. These are key markets such as London, Berlin, Sydney, Tokyo, Shanghai, Seoul, New York, Boston and San Francisco.

Carlo Barel di Sant'Albano, CEO of Cushman & Wakefield, comments: "Despite some volatility in the global market, investor behavior remains confident. According to our forecast, by the middle of next year the volume of investments in the global commercial real estate market will grow by 17% to reach a record high of 1.1 trillion USD- not including projects under construction - largely due to the growth in the North American market" (Cushman & Wakefield, 2015).

According to JLL estimates, the volume of direct investments in commercial real estate in the world amounted about 700 billion USD in 2015. Which roughly corresponds to the result of the previous year. At the same time, the company's experts have recorded changes in the top three largest cities in terms of volume of transactions: the first place was hold by New York, The second place - London; while both cities are leading by a wide margin from the other top 30 largest investment cities (see. chart).

On the third place after a two-year absence from the top 3 went back Paris, it moved to the fifth position the former favorite - Tokyo. Moscow was in the top 30 largest investment market in real estate in 2011-2013; according to the results of 2015, it does not have a place in the ranking.

The total volume of investment transactions in commercial real estate in the world in 2015 only 1% lost to the same period of the previous year (704 billion USD) And by 7% decrease has loose the ground to the absolute record registered in 2007 (758 billion USD). At the same time, this dynamic dollar index is a direct consequence of the strengthening US currency, while local-currency growth to a record was recorded in 2015 - 765 billion USD (from the exchange at a fixed rate).

In 2015, there was an increase in demand for premium properties in the world's major economic capitals. As a result, New York was able to come out on top place in the top 30 and ahead of London in terms of investment. Two of the city reached a total amount of 92 billion USD. That is 13% of the total world volume of direct investments in real estate in 2015.

USA cities account for half of the list of the top 30 investment markets in the world by the end of 2015. In particular, Seattle, San Diego and Miami showed a sharp increase in investment activity and are back in the top 30.

The volume of direct investments in commercial real estate segment in the emerging markets (excluding China) fell by one-third, with 8% of the world total in 2014 reaching 5.5% in 2015. At the same time, the investment performance of Shanghai and Beijing markets were high last year, with the result that they are able to enter the top-30.

Currently, there is a high interest of investors to the so-called "new world city", namely small and medium-sized cities with a favorable infrastructure and living conditions that were able to go global due to their specialization. Successful examples include San Francisco, Seattle, Munich, Miami and Melbourne. Today the 32 towns that JLL refers to the "new world city" hold more than 20% of the total investment in commercial real estate against 10% in 2006.

Economic recovery and activity in the real estate sector in southern Europe contributed to the appearance of Madrid and Milan in the ranking of top 30, for the first time since 2009.

"The previous year was marked by stable performance in terms of investment in commercial real estate, and we have every reason to believe that the beginning of the 2020s the total volume of transactions in the segment will reach 1 trillion USD annually -. Said Colin Dyer, President and CEO of JLL. - While participants "Big Six" - New York,

London, Tokyo, Paris, Hong Kong and Singapore - will continue to lead the ranking of cities with the highest volume of transactions, but we expect that more cities will be attractive from investment point of view and be able to be a challenge for them". By 2020, the volume of investments in the global real estate market will reach 1 trillion USD.
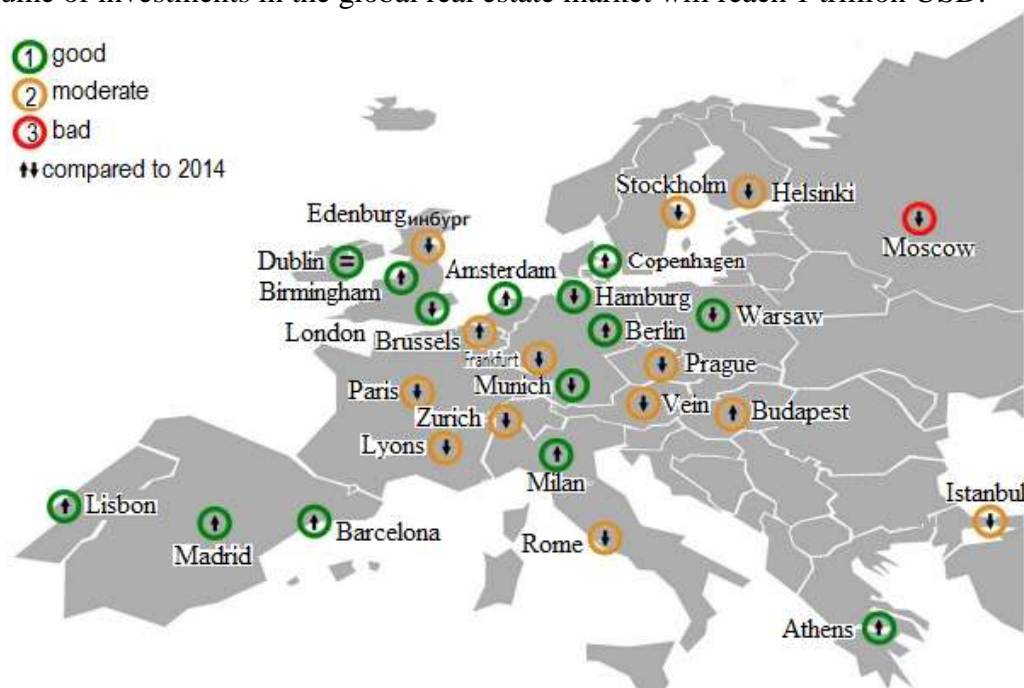

Figure no. 4.The prospects of investing in real estate European countries [10]
Source: Statista, 2017.

Due to low interest rates and the ECB policy, demand for real estate will continue to grow and the volume of investment will be equal or will exceed the last years, especially if it is about the strong markets, such as Germany or France or recovering markets such as Spain, Ireland and the Netherlands, UK, overpassing the growth rate of the European economy. Primary and secondary real estate with a reasonable ratio between price and quality will continue to be a driver of growth in investment activity. Many experts believe that portfolio transaction will underpin investment activity this year. The sellers are trying to take advantage of favorable market conditions and the growing interest in high-risk assets. This type of transaction is also suitable to new foreign members of the European investment market, which are also not willing to take advantage of favorable financial conditions. Concerning the FDI accumulated in Moldova's economy at the end of the first quarter of 2014 amounted 3 billion 677.57 million USD or a 5.6% increase compared to the same period of the previous year (Vietnamnet, 2017).

According to the National Bank, accumulated value of investment in equity capital and net reinvested earnings rose over the year by 5.2% - from 2 billion. 600.14 mln. USD in late March 2013 to 2 billion 736.2 mln. US dollars at the end of March 2014 (Gribincea and Andreeva, 2013).

The volume of intra-group credits earned (other capital) increased by 6.6% - from 883.03 mln. USD up to 941.37 mln. USD. The cumulative volume of FDI in the Moldovan economy from EU, at the end of the first quarter of 2014 was about 52.8%, CIS countries held 11.4% and 35.8% from other countries. The share of investment from EU since the beginning of 2014, increased by 0.6 percentage points (p.p.) due to new investments from Italy, Germany and Romania. The ratio of investments from CIS decreased by 0.1 p.p. and from other states was reduced by 0.5 p.p. As concerning the banking sector the largest FDI

amount in social capital comes from Italy, Romania, France, Germany, Russia, Austria, USA, Great Britain, Holland, Greece.

In other sectors the biggest investors are Russia, the Netherlands, USA, Cyprus, Germany, Italy, Romania, France, Switzerland, Turkey. The investments in the financial sector accounted for 26.4% of total accumulated FDI, the volume of investments in manufacturing sector in reached 23.8%, the wholesale and retail trade, repair of cars and appliances - 14.5%, transport and communications - 11 2%, real estate - 10%, Heat power sector accounted for 7.6%.

3. Conclusion

Currently creating a favorable investment climate, improving tools for attracting foreign and local investors, and promote domestic products to enhance the competitiveness are the fundamental priorities for the authorities of Moldova. Development, promotion and implementation of a comprehensive economic policy for attracting investment and promoting exports is closely related to economic growth based on innovation and investment. Contribution of investments to the improvement of competitiveness and facilitation of technology transfer, the creation of new jobs and stimulation of foreign trade were the basic elements considered in formulation and implementation process of attracting investment and promoting exports policy. According to data published by the National Bank of Moldova, 2014 the net inflow of FDI in the national economy amounted to 207.4 mil. USD, 12.2% less than previous year. However, the inflows of FDI in the national economy increased by 6.8% compared to 2013 and constituted 396.0 mln. USD. A significant contribution had the 7 free economic zones (FEZ), which are considered an attraction for local and foreign investors, whose activity is oriented mainly towards high value-added industrial output oriented to export. As a result of taken actions since the launch of their activity, the total investments in free economic zones totaled 212 mln. USD, of which in 2014 were invested 14.1 mln. USD.

The total volume of net sales of industrial production in the this period was 3.65 billion. MDL or 27.7% higher than previous year. Similarly, the volume of wholesale trade made through Giurgiulesti International Free Port during 2014 amounted to 4.02 billion. MDL or 47.1% more than in 2013. Through the development policies of cooperation between local and foreign investors and stimulate export activity of enterprises with foreign participation during 2014 were organized about 30 events in the country and abroad, which focused on presenting investment opportunities to foreign entrepreneurs and promoting the local goods and services.

In the first six months of the year the value of investments in long-term tangible assets was 5.449 million MDL. Compared with the same period of previous year this amount decreased by 21%. In period from January to June 2016 the value of investments in comparable prices decreased compared to the same period of previous year to 2.4% for residential buildings, for exclusively residential buildings and other buildings has decreased by 18.3% , for equipment, machinery, installations transmission was with 28.8% less. The investment in transport increased by 1.8% compared to the same period of previous year. The largest share of investments in this sector is allocated for equipment, machinery, transmission installations reaching 36.4% of total investments.

For investment made from January to June 2016 were primarily used investor's own resources, which constituted 4.157 million MDL, representing 76.3% of the total amount of invested funds. According to the National Bureau of Statistics, in January-June 2016 to ensure investment needs at the expense of budgetary resources were used 299 million MDL, which represents 5.5% of total investments.

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A THEORETICAL APPROACH ON GLOBALIZATION AND SUSTAINABILITY

Professor Ph.D. Tiberu Horaţiu GORUN
”Constantin Brâncuşi” University of Târgu-Jiu, Romania
E-mail: gorunhoratiu@yahoo.com
Ph.D. Student Ramona BIRĂU
University of Craiova, Romania
Email : Ramona.F.Birau@gmail.com

Abstract: The main aim of this research paper is to provide an exhaustive theoretical approach on globalization and sustainability. Globalization is a complex phenomenon that exceeds international boundaries and requires interaction, diffusion and integration thus amplifying differences and diversity in spite of any cultural influences. Sustainability is also a broad concept focused on the preservation of the environment and exhausting natural resources without affecting the equal chances of future generations. Contrariwise, the anti-globalization movement contests the quintessence of the globalization concept along with its various positive implications based on the principles of equity and homogenization. Consequently, the advantages and disadvantages of globalization highlights a dynamic structure in a globally connected world, considering different internal and external factors. The interconnections between globalization and sustainability are analyzed in this research article based on multiple theoretical perspectives.
Keywords: globalization, sustainability, anti-globalization movement, international boundaries.
JEL Classification: F00, J00, H00, O20.

1. Introduction

The main objective of this research article focuses on an elaborate theoretical approach regarding globalization and sustainability. Beyond any ideological dispute, globalization and sustainability are some of the most complex concepts of a even more complex actual reality. There is no universally accepted definition of "globalization" or "sustainability" but a lot of opinions and points of view have been formulated in this regard. The current knowledge regarding the concepts of globalization and sustainability is extremely vast and heterogeneous. Moreover, the continuous dynamics of the theoretical approach indicates that these particular concepts give rise to a significant interest.

In recent years, the concept of globalization has generated many controversies especially due to certain anti-globalization views on its contribution to the loss of national cultural identity. Analogous, any global approach to sustainability has been increasingly tending to highlight the numerous positive implications of socio-economic and environmental development. Absorbing relevant information, any empirical or theoretical research leads to the conclusion that globalization is a multidimensional and multi-actor phenomenon.

The starting point in understanding the concepts of globalization and sustainability must also take into account the causal interlinkage between these extremely complex phenomena. However, a linkage disequilibrium is an inevitable consequence in the era of computerization, liberalization, integration and directly expressed globalization. Beyond any complex definition, globalization is a multidimensional conglomerate that includes many social and economic processes. Consequently, globalization contributes significantly to the expansion of human interrelations across the world.

2. Literature review

The conceptual framework focuses on causality and interconnected links between globalization and sustainability. Popli and Kumari (2012) have provided an interesting research study on the effects of globalization and sustainable development based on an introspection for India and have suggested that in achieving poverty reduction targets and sustainable development objectives "public action must be an integral part of development strategies, which should not be forgotten along with the enthusiasm for markets and globalization". Moreover, Allena and Fracchia (2017) investigated relegant issues regarding globalization, environment and sustainable development based on a research study on European and Italian approaches.

Harvey, Fisher, McPhail and Moeller (2009) have conducted research on global decision-making processes of global managers and provided an innovative insight into the global approach. Gaan (2006) investigated the implications of globalization and concluded that this complex phenomenon in fact did not involve "more democratization, freedom, independence or emergence of a multipolar world and regional powers".

According to the UNICEF and the 2030 Agenda for Sustainable Development "eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development". Birau (2017) suggested that sustainability requires integrated management regarding economic, social and environmental aspects. Berger (2000) has conducted research on globalization focusing on the challenges caused by the implications of trade and capital mobility on the autonomy of nation – states.

On the other hand, Kioko (2012) conducted a complex study on the impact of globalization in developing countries and suggested that "increased cross-border crime, terrorist acts, environmental degradation, climatic change, spread of diseases, and erosion of cultural identity are all related with globalization process". Ekins (2011) investigated relevant issues on environmental sustainability focusing on concerns of global interest.

3. Conceptual analysis

The growth of interest in disseminating the impact of globalization and sustainable development leads to the necessity of excavating the essential theoretical aspects. Certain issues that have been raised considering the implications of sustainable development and globalization on long-term prosperity and distribution of economic well-being. Advanced information and communication technology are specific attributes of global integration facilitating access to products and services across global markets. However, the policy framework suggests the opportunity to implement programs and policies regarding sustainable development in the context of globalization. Moreover, in spite of the fact that the the concepts of globalization and sustainability have been shaped by varied policy makers, the aggregate impact is more difficult to estimate. A practical approach highlights the dynamics of globalization based on the three main pillars of sustainable development, namely environmental, economic, and social sustainability.

Globalization is a dynamic and integrated alternative to certain policies such as protectionism, socio-economic dirigism, isolationism and extreme economic nationalism. The multifaceted nature of globalization is highlighted by a number of advantages and disadvantages. The vast scope of sustainability revealed the essence of globalization itself based on a structural trend. Nevertheless, the level of utility is significant on the optimal conditions for evolving socio-economic development. In addition, globalization is a multidimensional concept considering the fact that technology and information play key roles worldwide. In another train of thoughts, critical thinking provides an overview on the

negative consequences generated by the impact of globalization on sustainable development.

The motivation in understanding the causes and effects of globalization represents the catalyst that can generate sustainable development. Moreover, globalization can also be perceived as an effective solution to combat unemployment, social exclusion and poverty all over the globe. Another positive feature of globalization is the free movement of labor force among different countries. However, the positive consequences of globalization, such as diminishing unemployment and providing easy access to technological progress have greatly contributed to economic growth in developing countries.

Multinational corporation (MNC) also known as worldwide enterprise or transnational corporation constitute one of the most challenging and profitable products of economic globalisation. A multinational corporation is based in one particular country (native country) but operates its activities and establish subsidiaries in several different countries. A multinational corporation is highly dependent on global capitalisation, foreign markets, highly skilled foreign employees, cheaper labour force from developing countries, global supply chain. In the recent past, multinational companies have grown significantly in developing countries and for many of these countries sustainable development is still a very difficult target.

Conversely, globalization has also particular disadvantages which lead to affecting in a certain degree the implementation of sustainable development strategies. Globalization has unfortunately led to the polarization of society so that the discrepancies between the social classes have become very accentuated. The anti-globalization movement suggests that globalization contributes to the universalisation of society, based on the loss of national cultural identity. However, the negative dimension of globalization does not meet the principles of sustainability.

At the individual level, the interaction between a certain economy and the other economies of the world does not necessarily lead to sustainable growth. Protectionist measures can not provide a sustainable global development leading to major economic imbalances for countries that promote such isolationist policies. One other main negative characteristic of globalization is the unequal distribution of earnings, due to the highly accentuated economic competition and labor force mobility. Furthermore, increased demographic growth and severe poverty in most developing countries affects the implementation of sustainable development strategies.

In a concise expression, sustainable development aims to establish a balance between economic, social and ecological systems. Nevertheless, the negative attributes of globalization can affect the implementation of sustainable development strategies. Globalization is a dynamic phenomenon that eliminates trade barriers between countries facilitating the free movement of foreign capital. Consequently, poor or emerging countries are attractive in terms of very cheap workforce and natural resources but the economic development gap compared to the developed countries of the world is accentuated in the conditions of globalization. On the other hand, if a multinational corporation decides to withdraw its investment from a specific country local government authorities can not influence its decision despite the major economic consequences.

4. Conclusions

A comprehensive overview on globalization and sustainability provides a complex perspective on the research subject. The actual reality highlights a very suggestive perspective on globalization based on its many advantages and disadvantages. The world today is a highly globalized world in which people have become more and more interconnected. The significance of global long-term development engage a certain factors

of influence especially in the context of globalization. Foreign investments are very important in order to support public policies regarding the implementation of sustainable development strategies, especially in developing countries. Moreover, an effective reform of the public policy system is a fundamental objective in achieving sustainable growth in the context of the global economy.

The research paper concluded that globalization is a multicast process with various implications, both positive and negative on sustainable development. The major challenge is to identify the correlation between globalization and sustainability in order to maximize economic and social objectives. Globalization goes beyond conceptual limits, exceeding barriers between countries in order to achieve sustainable development. Political fragmentation have contributed to increased economic gaps between countries. Maximizing profits is not the goal behind sustainable development but rather focusing on the conservation of scarce natural resources in order not to compromise the chances of future generations. the impact of globalization onsustainable economic growth is indisputable. Moreover, there can be no sustainable development without globalization or at least not in the full sense.

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EXTERNAL ECONOMIC THREATS OF THE FINANCIAL STABILITY OF THE REPUBLIC OF MOLDOVA

Scientific researcher Tatiana PETROVA
National Institute for Economic Research, Republic of Moldova
E-mail: tancikk@mail.ru
Scientific Researcher Ph.D. Corina GRIBINCEA
National Institute for Economic Research, Republic of Moldova
E-mail: cgribincea@gmail.com

Abstract: The external economic sector is a concentrated reflection of all macroeconomic balances that exist in the economy. The purpose of the work is to identify the existing and potential threats to the external economic subsystem of the national economy, the mechanism of their impact on the state of the banking system, the foreign exchange market and to assess the level of their impact on the financial stability of the Republic of Moldova. The main factors of the instability of the external economic sector that generate the threats of the emergence of a crisis situation are considered: the openness of the economy, the deterioration of external trade conditions, the slowdown in economic growth, the current account deficit of the balance of payments, the high external debt against GDP, the sharp rise in price / cheaper national currency and budget deficit. In this context, it is necessary to assess the threats of the financial stability of the Republic of Moldova in order to develop measures to prevent them.
Keywords: external economic threats, financial stability, crisis situation, Republic of Moldova.
JEL Classification: G01, G19, H12, P34.

1. Introduction

The socio-economic situation in the Republic of Moldova at present stage is characterized by the existence of external and internal threats to the financial stability of the country, which cause serious negative consequences. External threats are associated with a high degree of dependence of economic activity of the Republic of Moldova on external sources of financing and imported goods for industrial purposes.

2. Scientific research methodology

Theoretical bases of definition of threats and risks of financial sector of economy and achievement of financial stability are detailed described in the studies of such authors as: F. Mishkin, A. Demirguk-Kunt, E. Detragiache, S. Lysondo, G. Kaminski, K. Reinhart, D. Stiglitz, C. Borio and other scientists. It can be highlighted that foreign economic sector is a concentrated reflection of all macroeconomic balances that exist in the economy. The methodology used to calculate the financial stability indicators of the external economic sector of the economy was published in the following IMF publications:

- Financial Soundness Indicators Compilation Guide (IMF, 2006);
- Balance of Payments Manual (IMF, 2014a);
- External debt statistics: guide for compilers and users (IMF, 2014b).

Direction of the Balance of Payments of the NBM elaborate balance of payments Based on the Fundamental Law of the National Bank of Moldova (National Bank of Moldova, 2018) which is a macroeconomic account, summarizing systematically a resident-non-resident transaction for a certain period of time.

3. Determination of crisis factors and indicators of the financial stability of the Republic of Moldova

In order to maintain financial stability, the Republic of Moldova needs to assess the existing and potential benefits of the national economic sub-systems and to develop measures for their prevention. The table no.1 shows factors of instability in the external

economic sector that generates the crisis situation and the mechanism of their impact on the banking system and foreign exchange market.

Table no. 1. Mechanisms of crisis factors' impact

No.	Crisis factors	Mechanisms of impact
1	Openness of the economy	The more open the economy is, the more it turns out to be dependent on external shocks
2	Deteriorating external conditions of trade	Reduction of prices for traditional export of goods or a sharp increase in the cost of imports means for the country the loss of foreign exchange earnings and a decrease in the incomes of banks serving them
3	The slowdown in economic growth	Decrease in the rates of economic growth leads to a deterioration in the solvency of the country, as well as bank borrowers on debt
4	Current account deficit in the balance of payments	A significant current account deficit is considered by investors as a threat of solvency on external debt
5	High external debt / to GDP, in %	High external debt is considered by investors as a factor of financial instability
6	State budget deficit	Significant funds for servicing the public debt lead to underfunding of other budget items and slowing economic growth
7	Inflation	High inflation leads to a real appreciation of the national currency
8	The sharp appreciation/ depreciation of the national currency	Because of the high share of foreign currency in the balances of banks, corporations, in the savings of the population, sharp fluctuations in the exchange rate can destabilize the system of prices and incomes. High devaluation expectations can provoke withdrawal of deposits by bank depositors
9	High level of financial risks in the banking system	The inadequacy of the amount of capital to the risks accepted, the imbalance between currency assets and liabilities, the high proportion of overdue loans in the banks' loan portfolio can cause both a bankruptcy of a separate bank and a large-scale banking crisis

Source: developed by the authors

The direction of the Republic of Moldova on increasing involvement of the national economy in the system of global economic relations, thereby increasing its dependence on global dynamics and conjuncture, carries with it increasing risks of a financial and economic system malfunctioning. The distinctive characteristics of imbalances for small countries with open economies are:
• Greater cyclicity;
• Greater variation in the length of the business cycle;
• High risks of changes in budget revenues;
• Significant current account deficit;
• The need for an anchor currency to maintain the exchange rate;
• Increasing the role of cost inflation (IMF, 2015).

The impact of external conditions on the characteristics of economic development is carried out in several directions. Firstly, this is a direct impact on the dynamics of exports and imports; secondly, mediated through the impact on the income level of the population, business and the state on the relevant elements of final demand; thirdly, the impact on price dynamics and through it on all other variables that somehow depend on prices (Uzyakov et al., 2003).

In 2017 the trade turnover of the Republic of Moldova grew by 19.6% and amounted to 7.256 billion USD. At the same time, exports increased by 0.41 billion USD, and imports - by 0.84 billion USD. In 2016 the negative trade balance reached 1.98 billion USD and in 2017 around 2.406 billion USD; its volumes were equal to the volumes of the annual export of goods (Figure no. 1).
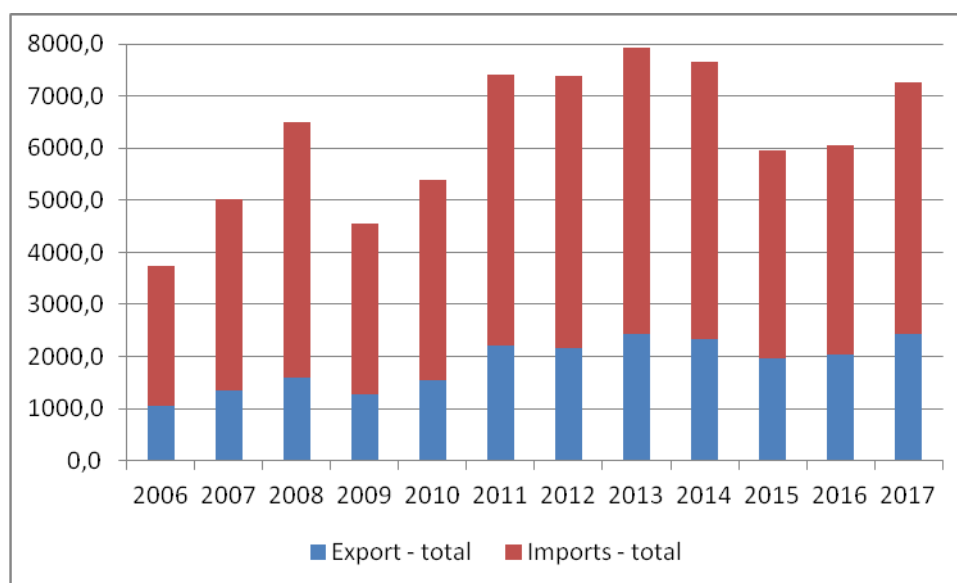
Figure no.1. Export and import growth of the Republic of Moldova, millions USD
Source: elaborated by the authors based on NBM data

The growth of imports outstrips the growth of exports in many countries. However, the trade balance deficit in Moldova is significant compared to other countries with economies in transition. At the same time, the terms of trade in the Republic of Moldova or the ratio of import and export prices are the worst in comparison with those of the main trading partner countries of the Republic of Moldova. According to the data for 2016, the volume of exports in relation to GDP in the Republic of Moldova is 43.6%, and imports -71.8% to GDP. The level of exports and imports to GDP in Romania is 41.3% and respectively 42.3% of GDP, in Russia -25.7% for exports and 20.5% for GDP for imports. The table no.2 shows the turnover of Moldova with the main trading partners in 2017.

Table no. 2. Moldova's goods turnover with major trading partners in 2017

	Romania		Russia		Italy		Germany		Turkey	
	mln. USD	%	mln. USD	%	mln. USD	%	mln. USD	%	mln. USD	%
Export	660,6	25,1	254,5	11,4	236,0	9,7	166,1	6,2	104,1	3,1
Import	694,5	13,7	571,7	13,3	331,2	7,0	390,6	7,9	304,3	6,8

Source: elaborated by the authors based on NBS and BNM data.

The tension in the external sector is due to the low level of export opportunities of the Moldova's economy. The main share of growth in exports represents agricultural raw materials (grain and sunflower seeds) and products on give-and-take raw materials. According to data for 2016 re-export[1] of foreign goods is 1/8 of total exports. A significant share in the import of the Republic of Moldova represents food and consumer goods.

A slight increase in exports of domestic goods compared with the growth of imports suggests a low efficiency of trade in the Republic of Moldova. At the same time, the decrease in the volume of foreign trade is characterized by an increase in the competitiveness index calculated as the level of coverage of imports by export deliveries[2]:

• The global competitiveness indicator increased from 44.2% in 2013 to 50.8% in 2017;

• The competitiveness indicator calculated for the zone of the CIS member countries has significantly decreased from 55.2% in 2013 to 40.3% in 2017;

• The competitiveness indicator calculated for the EU countries increased from 46.0% in 2013 to 67.5% in 2017.

The most significant impact on the economy of the Republic of Moldova is provided by operations on current transfers. About 60% of current transfers are personal remittances, received (current US $). Remittances are of particular importance to the national economy, partially contributing to the deficit of trade balance. Due to remittances, current expenses on imports are covered in a significant proportion (Figure no. 2). The import penetration factor (imports of goods and services / domestic demand) exceeds the level of 67,4% (in 2017), i.e. imports cover a large and growing share of aggregate domestic demand.
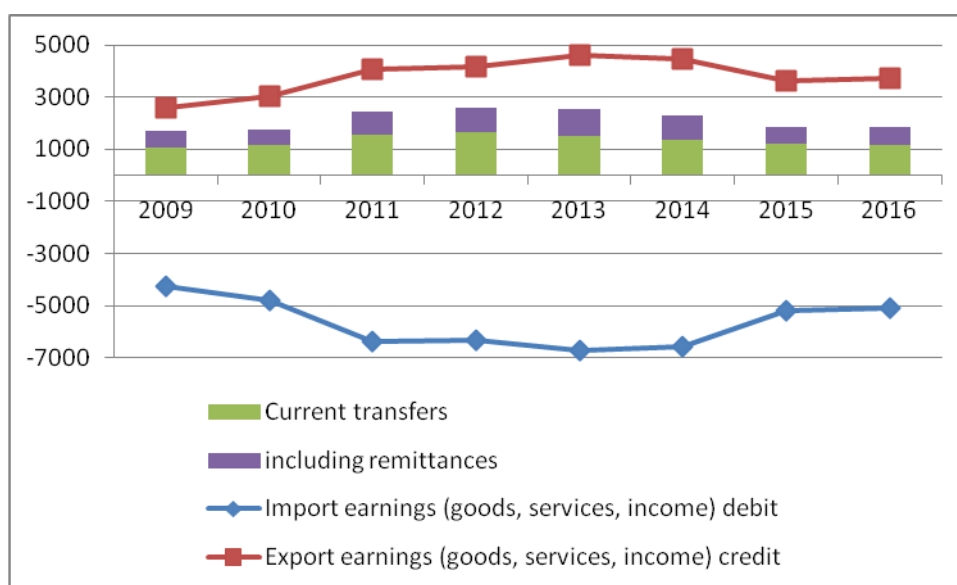
Figure no. 2. Current transfers in the Republic of Moldova, millions USD, 2009-2016
Source: elaborated by the authors based on BNM data

Despite the fact that remittances are used mainly for consumer purposes, they turned out to be drivers of GDP growth. Risks associated with the dynamics of the external

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[1] In accordance with the methodology of the UN Statistical Commission, re-export refers to the export of foreign goods that were previously accounted for as imported goods; and re-exported goods are defined as goods that have already been imported into the country and exported to a third country without any significant processing. http://www.un.org/en/publications/pdfs/intl_trade_concepts_2010_eng.pdf

[2] the ratio of the export of goods of Republic of Moldova to the countries of the corresponding zone and the import of goods from the countries of the same zone

economic environment are generated by signs of the restoration of economic growth in the countries that are the main trading partners of the Republic of Moldova (Figure no. 3).
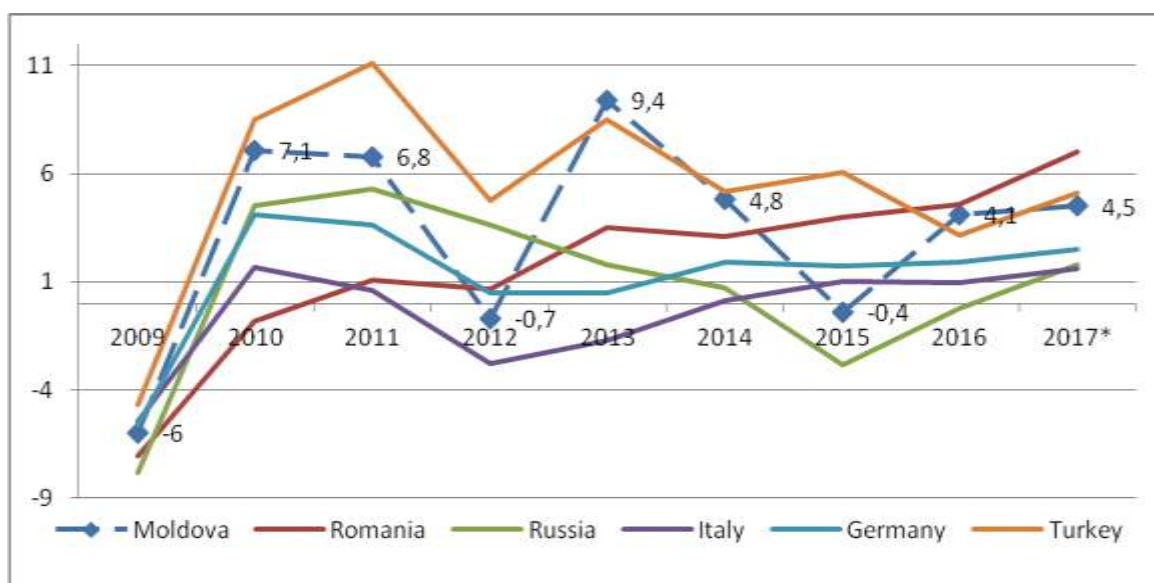

Figure no. 3. GDP, the economic growth rate of the main partner countries of the Republic of Moldova

*estimation
Source: Source: elaborated by the authors based on World Bank data

The demand for consumer goods and real estate caused by remittances contributes to the growth of such sectors of the Moldovan economy as: retail trade, construction, transport, financial intermediation and insurance, real estate and legal activities, household and other personal services, food industry, furniture and building materials production and thus contribute to the restructuring of the economy. Nevertheless, their potential to increase the monetary resources of the national banking system through savings accounts and, consequently, to stimulate economic growth through lending support in the small and medium-sized business sector is significantly underutilized due to low confidence in the banking system.

Most labor-exporting countries experience the consequences of the crisis with a certain lag. This situation is related both to the low efficiency of the financial sector, and to the preservation of the model for the development of the national economy, oriented to external economic factors of development. The main mechanism for the crisis transmission to the economy of the Republic of Moldova is affected by the fall in remittances. External imbalances are reflected in the country's balance of payments.

By international standards, Moldova represents the worst case of the current account:
• Imports exceed exports;
• National savings are less than investments;
• The country has a budget deficit (expenditure> income).

The stability of the current account imbalance should be considered, firstly, as operational stability for assessing the risks of the onset of currency and debt crises in the short run and, secondly, as intertemporal solvency in order to assess future sources of service and repayment of external debt in the medium- and long-term periods.

The possibility of taking corrective measures to achieve a secure position on external payments (deficit of goods, services and incomes) is financed through private and formal transfers, financial flows and the use of reserve and other financial assets or through the

import of foreign savings (borrowings). Thus, the state budget of the Republic of Moldova for 2017 by 1/3 is provided by external financial sources[1].

A low level of economic growth, a high level of imports of energy resources and an increase in the cost of servicing external debt are a key threat to the stability of the financial and economic system of the Republic of Moldova.
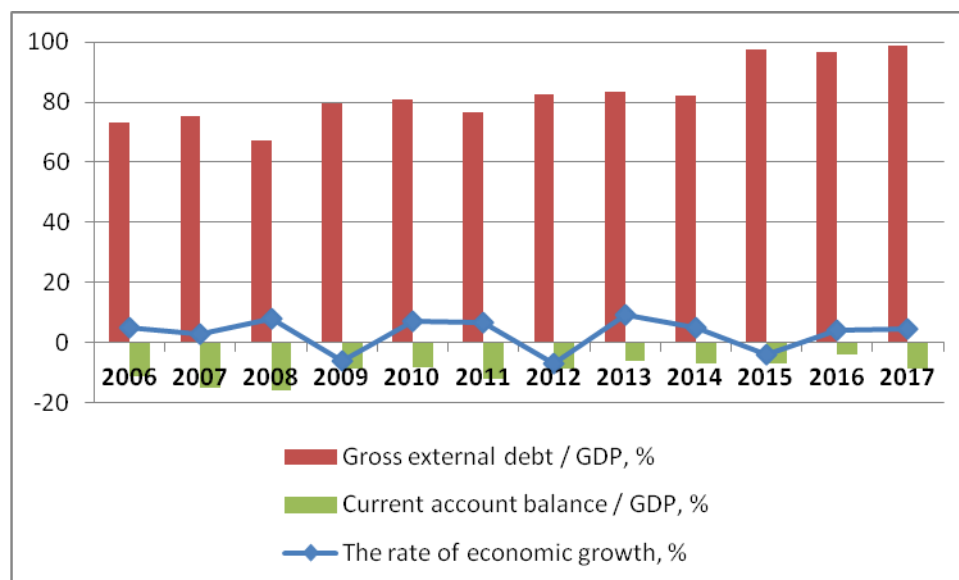
Figura no.4. Dynamics of gross external debt growth relative to GDP growth and external economic balance of the Republic of Moldova, %
Source: calculated by the authors based on BNM and NBS data

After the 2008 crisis, the total external debt of the country is growing at a rate exceeding GDP growth. At the end of 2017 gross external debt of the Republic of Moldova amounted to 6.75 billion USD and exceeded the country's GDP. In today's realities of the high degree of interdependence of most of the world's economies, the critical level of external debt represents a real threat to financial security.

Table no. 3. The total volume of loans received by the Republic of Moldova from the IMF, at the end of November 2017, in special drawing right

Type of arrangement / resources	Approval date	Expiration or Cancellation Date	Approved amount (million, SDR)	Amount Involved (million SDR)
CCFF	15-Jan-93 and 19-Dec-94	--	25,70	25,70
STF*	16,-Sep 1993	15-Sep, 1994	45,00	45,00
Stand-by	17-Dec, 1993	16-Mar 1995	51,75	51,75
Stand-by	22-Mar, 1995	21-Mar, 1996	58,50	32,40
EFF	20-May, 1996	19-May, 2000	135,00	87,50
PRGF	21-Dec, 2000	20-Dec, 2003	110,88	27,72

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[1] In accordance with the concept of the external debt adopted in the IMF, it is advisable to classify the debt of the country only in those categories of the balance of investments that are not related to equity participation, that is, excluding direct investments and including reinvested earnings and securities ensuring participation in the capital

PRGF**	5-May, 2006	4-May, 2009	110,88	88,00
EFF	29-Jan, 2010	30-Apr, 2013	184.80	149.12
ECF	29-Jan, 2010	30-Apr, 2013	184.80	170.88
EFF	07-Nov, 2016	06-Nov, 2019	86.30	27.80
ECF	07-Nov, 2016	06-Nov, 2019	43.10	13.90

* STF was an interim IMF funding mechanism that provided assistance to member countries experiencing balance of payments difficulties caused by significant trade and payment system irregularities as a result of the transition from non-market trading practices to multilateral trade on a market basis.
** PRGF was replaced by ECF in 2009.
Source: IMF Republic of Moldova, 2017.

As of the end of November 2017, the total amount of outstanding loans and loans received from the IMF amounted to 261.3 million SDRs (about 370 million US dollars). The lack of sufficient funds to cover international obligations indicates the presence of serious internal imbalances. The volumes of outstanding loans together with a high share of debt in relation to GDP increase financial risks and reduce the potential for external borrowing of Moldova in conditions of acute shortage of financial opportunities for the implementation of reforms in a transforming economy.

The existing vulnerabilities caused both desirable and not desirable adjustments in the Moldova's economy. The desired adjustments in the opinion of the National Bank of Moldova include the redistribution of capital flows and the reduction of exchange rates, which help to alleviate the existing problems of competitiveness. Before 2013, FMI experts estimate the exchange rate of the Moldovan currency as overvalued. Moldovan leu began to depreciate rapidly against the major world currencies starting from 2014, with a loss of 34% of the value to the dollar for the year was registered in 2015. According to IMF experts (IMF Republic of Moldova, 2017), depreciation of the Moldovan leu leads to an increase in prices for goods and services. At the same time, the volatility of the national currency and the risk of excessive adjustment restrain investment and economic growth.
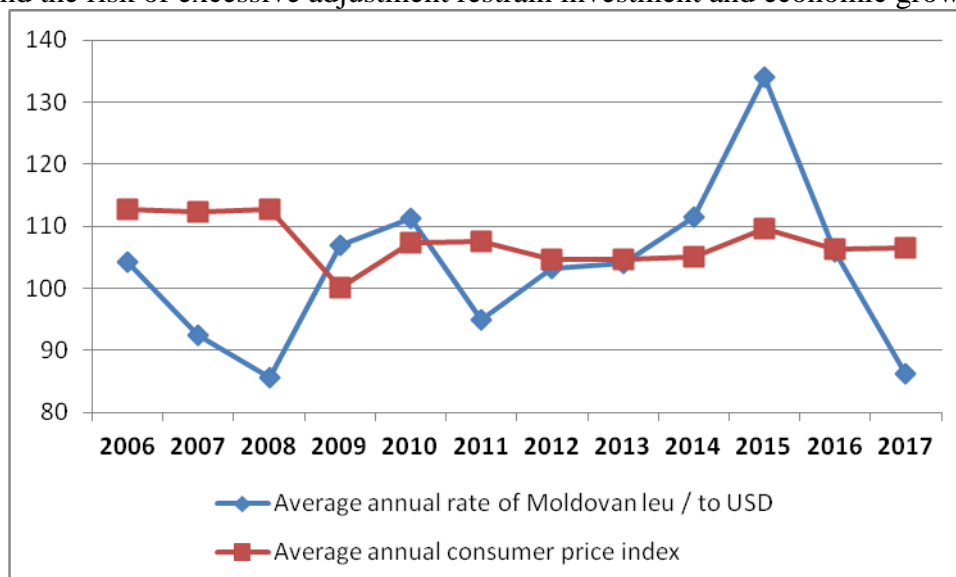

Figure no.5. The volatility of the Moldovan leu against the CPI, %
Source: calculated by the authors based on BNM and NBS data

The currency crisis of 2015 in the Republic of Moldova was manifested in fluctuations in the exchange rate of the Moldovan leu; decrease in the level of the country's

foreign exchange reserves; loss of public confidence in the national currency; falling prices for domestic financial assets; a decrease in trust in state institutions and banks. As a result, cash savings could not be used to invest in the real sector of the economy, led to a breakdown in the country's financial system and financial instability in the economy.

The most important form of monetary regulation of BNM provides a stable level of inflation within the range of ± 1.5 pp from the target of 5%. Average annual price (CPI) increase in 2000-2009 was about 16.2%; in 2010-2011 7.5%; from 2012-2013 4.6%; in 2014 5.1%. In 2015, the growth of the CPI was 9.7%, exceeding the envisaged interval of targeting. Over the past 2 years, inflation was maintained at 6.4-6.7%. In transition economies in the long-term, inflation is approximately 50% dependent on the nominal effective depreciation of the national currency, by 40%: from unit labor costs and 10% from utility prices. Each percentage by which the money supply constitutes effective broad money exceeds the demand for the same money supply leads to an increase in inflation to 3.7% (МВФ Доклад по стране № 04/316). Increasing inflation increases credit risks and can cause further reduction of investments in the economy of Moldova.

Inflation is closely related to the dynamics of the money supply in circulation and the devaluation of the national currency. In turn, the dynamics of the exchange rate and the money supply are determined by the fluctuations of each other and the previous dynamics of inflation. The IMF estimates "the threshold level of inflation, above which inflation significantly slows growth, in 1-3% for industrialized countries, and for 11-12% for developing countries. Inflation and GDP growth are positively correlated if inflation is at low rates" (МВФ Доклад по стране № 04/316).
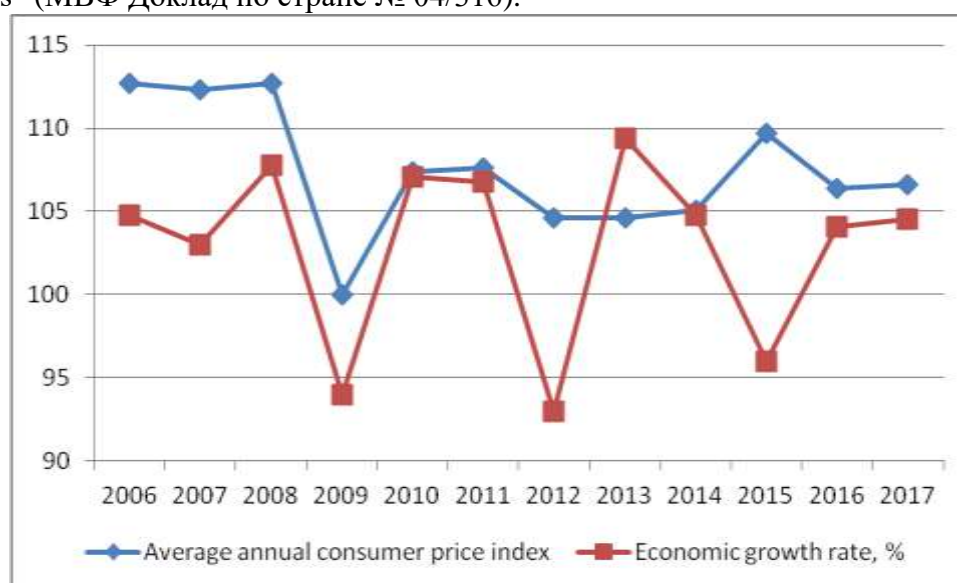
Figure no.6. Gross Domestic Product correlation with Consumer Price Index in the Republic of Moldova, 2006-2017, %
Source: calculated by the authors based on NBM data.

The existence of a model for the development of a labor-oriented economy, along with a weak financial system, makes the real sector vulnerable to external shocks and does not allow achieving sustainable economic growth. A significant amount of foreign currency causes a disproportionate increase in domestic demand. The growth of domestic aggregate demand increases imports. To the extent that this growth worsens the trade balance, it is a factor either of expanding the balance of payments deficit, or of the depreciation of the national currency.

Financial crises of recent years have caused the importance of timely information on the state of external assets and liabilities of the country as a significant indicator of external vulnerability. The imbalance of the current account of the balance of payments is a resource gap and is estimated by the size of the country's net investment position.
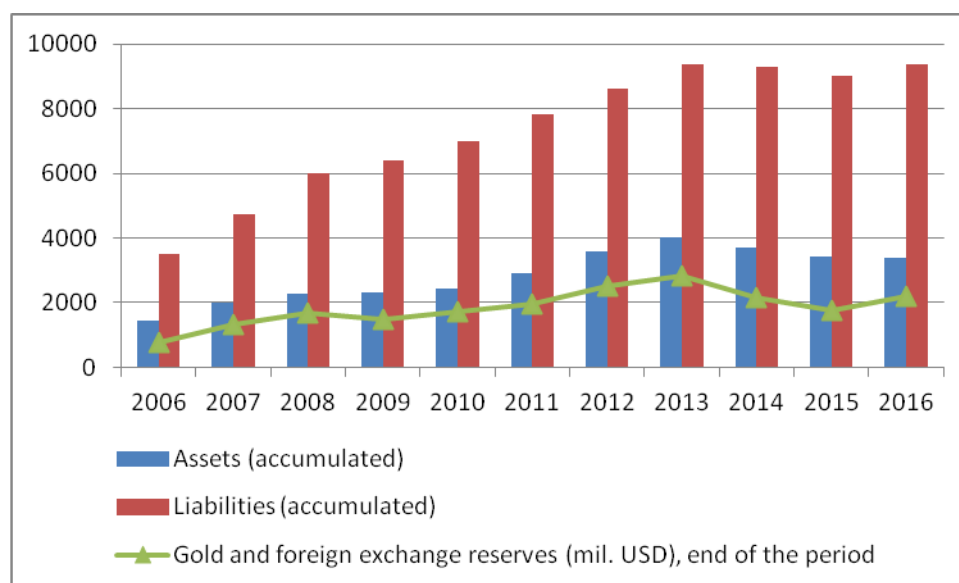
Figure no.7. Financial assets and liabilities, international investment position (IIP) of the Republic of Moldova, millions USD
Source: Source: calculated by the authors based on BNM data

The net international investment position (NIIP) (stock of external assets minus the stock of external liabilities) shows the difference between what the country owns and what it owes. "NIIP, in conjunction with the stock of the country's non-financial assets, constitutes the pure national wealth of the economy in question" (IMF, 2004).

Since 2013, the Republic of Moldova has seen a decline in the level of assets (mainly due to a reduction in the level of international reserves) and liabilities, including through a fall in the level of FDI in the national economy.

A high proportion of long-term foreign currency loans combined with the devaluation of the national currency caused an increase in unproductive loans, which led to serious liquidity constraints in the banking system. This, in turn, complicated the crisis of the monetary and financial system in 2015 and currently holds back the economic recovery of the Republic of Moldova.

4. Conclusions and contributions

The main risk factors for the instability of the external economic sector of the Republic of Moldova:
• Reduction of foreign exchange earnings (income from exports, remittances and foreign aid) leads to a decrease in consumption and investment, which in turn will lead to a reduction in overall government revenues.
• The current account deficit in the Republic of Moldova is significant, despite the support of the balance of payments from the IMF.
• The current account deficit reflects the increase in the country's debt to other countries. It is required to replenish it by selling goods for the currency or receiving stabilization loans.
• Unstable conditions of foreign trade do not stimulate export growth;

• The disincentive factor of exports is the discrepancy between the assortment of local products and European quality standards.

• Limited internal financial sources will be replaced largely by external resources; there is an increase in external debt and the related increase in budget expenditures for its repayment.

Thus, the existing threats of the external economic subsystem of the national economy of the Republic of Moldova are characterized by a high probability of the emergence of a new crisis situation. Political uncertainty also creates risks for reform and reorientation of economic policy programs, including in connection with the upcoming elections.

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AN ANALYSIS OF THE EFFECT OF PURCHASING POWER PARITY ON NATIONAL COMPETITIVENESS AND HUMAN DEVELOPMENT IN 21 EUROPEAN COUNTRIES

Lecturer Ph.D. Andreea-Daniela GANGONE
"Constantin Brâncoveanu" University of Pitești, Romania
E-mail: andreeagangone@yahoo.com
Associate Professor Ph.D. Mariana-Cristina GĂNESCU
"Constantin Brâncoveanu" University of Pitești, Romania
Associate Professor Ph.D Mihaela ASANDEI
"Constantin Brâncoveanu" University of Pitești, Romania

Abstract. *The purchasing power parity is an indicator that facilitates the analysis of price differences between national economies, enabling comparisons in terms of level of development. In order to test this scientific hypothesis, we used the Big Mac Index to assess the purchasing power of the national currencies of 21 European countries between 2011 and 2017. We used statistical correlation to analyse the relationship between the strength of the national currency and the competitiveness of the national economy, on one hand, and the relationship between the strength of the national currency and the level of human development achieved by the countries included in the study, on the other hand. The two statistical correlations generated positive results, thus validating the initial hypothesis. All the correlation indices recorded positive values, higher than 0,5, throughout the entire period of analysis, supporting the idea that the strength of the national currency does influence the competitiveness and level of human development of the studied countries.*

Keywords: *Purchasing Power Parity, The Big Mac Index, The Global Competitiveness Index, The Human Development Index, European Union.*

JEL Classification: *E31, O15, O52.*

1. Introduction

Purchasing Power Parity (PPP) is a concept with a rich history in scholarly economic research.

First introduced by Cassel and used to develop the exchange rate determination model, the PPP theory states that changes in the nominal exchange rate between a pair of currencies should be equal to the inflation differential between the two countries (Cassel, 1918). In other words, purchasing power parity helps express the number of foreign currency units required to buy the same volume of goods and services that a unit of the country's currency used as a basis for comparison can purchase.

Purchasing power parities are helpful tools used internationally to study the differences in prices between countries, which help analyse the level of development of countries. They work like currency conversion rates to express costs defined in national currencies, analysed in an artificial common currency, thus eliminating the impact of price differences between countries (Eurostat, 2014).

Therefore, the general idea behind purchasing power parity is that a unit of currency should be able to buy the same basket of goods in one country as the equivalent amount of foreign currency can buy in another country, at the current exchange rate, so that there is parity in the purchasing power of the unit of currency across the two economies.

On these bases, The Economist calculated and published The Big Mac Index, which is an assessment of the price of a uniform basket of goods, McDonald's Big Mac burger, in a specific country compared to the USA price. This involves using the price of a Big Mac hamburger at home and abroad as the price ratio that reflects the underlying value of the currency. When compared to the actual exchange rate, the BMI purports to give an

indication of the extent to which a currency is over or undervalued according to the law of one price (Clements, et al., 2007, p. 1).

Based on the idea that the power of the national currency determines the level of economic development of a country, we used statistical correlation to analyse how the strength of the national currency against the US dollar, expressed through The Big Mac Index, influences the competitiveness of the country's economy, expressed through the Global Competitiveness Index, as well as the human development level of that country, expressed through The Human Development Index between 2011-2017.

The results we obtained on a sample of 21 European countries supported the initial assumption, all the correlation indices recordind positive values, higher than 0,5, throughout the entire period of analysis.

2. The purchasing power parity

The Purchasing power parity (PPP) hypothesis, a highly explored topic in international macroeconomics research, postulates that the nominal exchange rate between two national currencies should adjust to changes in the price levels of the two countries, keeping the real exchange rate unchanged, because exchange rates are "anchored" by price levels. In other words, while the exchange rate meanders around the price ratio, over time it has a tendency to revert to this trend value, so the ratio can be thought of as the "underlying value" of the currency (Clements, et al., 2007, p.1).

The general idea behind purchasing power parity is the law of one price (LOOP). LOOP states that a unit of currency should be able to buy the same basket of goods in one country as the equivalent amount of foreign currency, at the going exchange rate, can buy in a foreign country, so that there is parity in the purchasing power of the unit of currency across the two economies. If the same goods enter each country's market basket used to construct the aggregate price level, and with the same weight, then the Law of One Price implies that a PPP exchange rate should hold between the concerned countries (Taylor and Taylor, 2004).

Possible objections to this line of reasoning are immediate. For example, the presence of transactions costs—perhaps arising from transport costs, taxes, tariffs and duties and nontariff barriers—would induce a violation of the Law of One Price. Moreover, not all goods are traded between all countries, and the weight attached to similar goods in aggregate price indices will differ across countries. In addition, different countries tend to produce goods that are differentiated rather than perfectly substitutable, because they reflect differences in tastes, traditions and cultures. Some of these problems could be addressed, at least in principle, with better data. Also, since PPP is based on traded goods, it might be more usefully tested with producer price indices that tend to contain the prices of more manufactured tradable elements, rather than consumer price indices, which tend to reflect the prices of relatively more non-tradable elements, such as many services. Recent theoretical and empirical literature discussed below has attempted to allow for short-run deviations from PPP arising from sources such as these, while retaining PPP in some form as a long-run average or equilibrium point (Taylor and Taylor, 2004).

Thus, due to factors like transaction costs, imperfect competition, taxation, subsidies and trade barriers, PPP might not hold in the short-run. However, given that international goods market arbitrage should be traded away over time, PPP is expected to hold in the end. This implies that the real exchange rate is expected to return to a constant equilibrium value in the end (Yildirim, 2017, pp. 39-45).

The purchasing power parity at European level is the result of the European Comparison Programme (ECP) launched in 1979 as part of the International Comparison Program. The ICP is an international statistics initiative designed to collect comparative

prices and estimations of conventional currencies to use instead of the exchange rates existing on the market, thus allowing a comparison in real terms of economies and of the inhabitants` well-being.

According to the Eurostat (2014), two different methodologies are used in purchasing power parity calculation:

A. The expression of macroeconomic aggregates in comparable volume aggregates. In particular, purchasing power parities are used to compare the gross domestic product (GDP), one of the most important macroeconomic aggregates, in different countries, without distorting the price levels in these countries.

B. The analysis of relative price levels between countries. In this regard, PPP is divided by the nominal exchange rate to achieve a price level index. This expresses the price level of a country in relation to the other countries.

The purchasing power parities are calculated both at product level and at product group level, and for every level of aggregation up to GDP. The Eurostat method of calculating purchasing power parity does not reflect the actual growth recorded in the analysed economies, as it only works as an instrument of comparison to a reference system (EU with 28 countries included representing the basis of comparison = 100).

In international macroeconomics, purchasing power parity is employed to predict the exchange rate and specify whether a currency is over or undervalued (Holmes, 2001; Sarno, 2005), set exchange rate parities, compare national income levels and establish the degree of misalignment of the nominal exchange rate. Also, PPP has been viewed as an equilibrium condition, as an exchange rate determination tool and as a basis for international comparison of income (Sideris, 2006). Moreover, PPP is a useful tool for converting analysed macroeconomic indicators of analysed countries expressed in a currency, so comparisons between countries become relevant. Comparisons of results are in volumes, removing the price component. The implementation of this calculation tool helps compare information on the price level between countries, having in the same time, the disadvantage of being unable to provide an effective measure of the price level nationwide (Vîlcu, 2015). Finally, purchasing power parity is a vital structure block of numerous macroeconomic models so that the PPP hypothesis is important for policy makers of central banks, multinational firms and exchange rate market participants (Rogoff, 1996; Taylor, 2009).

The PPP hypothesis is one of the most tested theories in international economics literature. The different types of empirical studies on PPP can be categorised as follows: correlation studies, unit root tests studies, and co-integration studies (Acaravci and Acaravci, 2007). However, the empirical findings of these researches are mixed and contemporary researchers do not yet agree on the validity of the PPP. The PPP hypothesis existing in empirical literature and the inconsistent results can be explained by the fact that past studies indirectly accept that exchange rate behaviour is naturally linear. Thus, most of these studies suggest that, although the PPP theory has uncertainty in the short run, it holds in the long-run, since the price differentials between two countries are unsustainable in the long-run.

On the other hand, one must take into consideration that, although the PPP hypothesis has been extensively tested for developed economies and is abundant in developing countries (Taylor 1988, 2003, 2009; Taylor and Taylor 2004), some authors consider that the validity of PPP in transition economies remains an unsolved issue (Acaravcı and Ozturk, 2010).

In Romania, several researchers tested the PPP hypothesis, also with mixed results. Thus, Barlow and Rădulescu (2002), analysed Purchasing Power Parity by comparing the Romanian Leu against the US Dollar, but found no evidence to sustain their hypothesis.

Solakoglu (2006) found strong evidence to sustain the purchasing power parity hypothesis for transition economies, including Romania, by using the panel approach. By using nonlinear panel unit root test, Chang et al. (2011) also found strong evidence for the long-run purchasing power parity in Central and Eastern European countries. Oguz Ocal (2013) applied the Zivot-Andrews unit root test to re-examine the validity of PPP for Romania 1991-2012, and his results proved that PPP doesn't hold in Romania. Finally, in 2015, Vîlcu Roxana Cristina analysed the purchasing power parities in Romania in the context of EU integration.

In conclusion, although international studies do not fully support the validity of the method, the purchasing power parity theory reinforces the idea that on long-term and very long-term international exchange through exports/ imports is supported. This idea leads to the conclusion of price levelling worldwide, with the expansion of trade between countries.

3. The Big Mac Index

The Big Mac Index (BMI) was invented by *The Economist* in 1986 as a light-hearted guide to whether currencies are at their "correct" level. It is based on the theory of purchasing-power parity (PPP), the notion that in the long-run exchange rates should move towards the rate that would equalize the prices of an identical basket of goods and services (in this case, a burger) in any two countries (The Economist, 2017).

Applications and empirical tests of PPP often refer to a broad "market basket" of goods that is intended to be representative of consumer spending patterns. The attractive feature of the Big Mac as an indicator of PPP is its uniform composition. With few exceptions, the component ingredients of the Big Mac are the same everywhere around the globe.

Moreover, though just a single good, a McDonald's Big Mac hamburger has a variety of tradable ingredients such as ground beef, cheese, lettuce, onions, bread, etc., and non-tradable ingredients such as labour, rent, and electricity, as well as other ingredients such as cooking oil, pickles and sesame seeds (Clements, et al., 2007, p. 7). Therefore, it can account for a sound good basket of goods and services.

The calculation method requires that a country's Big Mac hamburger native currency price is divided by the Big Mac hamburger native currency price of the other country, and then the quotient and the actual exchange rate between the two countries are compared. The deviation of this price ratio from the nominal exchange rate of the two currencies gives an approximation of the over/undervaluation of that currency. If the quotient is lower than the actual exchange rate, it means that the exchange rate of the former country is undervalued; on the contrary, if it is higher than the actual exchange rate, the exchange rate of the former country is overvalued (He, 2013, pp. 83-86).

Recently, The Economist introduced the Adjusted Big Mac Index, which considers GDP in currency valuation. This adjusted index addresses the criticism according to which you would expect average burger prices to be lower in poor countries than in rich ones because labour costs are lower. PPP signals where exchange rates should be heading in the end, as a country like China gets richer, but it says little about today's equilibrium rate. The relationship between prices and GDP per person may be a better guide to the current fair value of a currency. The adjusted index uses the "line of best fit" between Big Mac prices and GDP per person for 48 countries (plus the euro area). The difference between the price predicted by the red line for each country, given its income per person, and its actual price gives a supersized measure of currency under and overvaluation (The Economist, 2017).

As a measure of absolute PPP, The Big Mac Index has been praised for its advantages and criticized for its limitations.

Advantages of The Big Mac Index:

- In order to measure the purchasing power of a currency, you need a product that is homogenous and widely available. Since McDonald's market presence extends to over 120 countries around the world and standards are rigorously regulated, the Big Mac seems to be a great product to use. Even though the burger itself can't be shipped between countries, its components are internationally traded. Subsequently, under the law of one price, the composition of these traded goods should tend towards parity in the end (Roj, 2014);

- The index is also simple to compile due to the data required being readily available. McDonald's prices are easy to access because of its global presence. The company is a leader in global market share so its data will therefore always be up to date and trustworthy. The BMI as a tool is thus reliable, based on the data it crunches, and can be regularly updated to depict timely trends. This makes it a good indicator of shifts in PPP over short periods, especially in response to short-run price changes (Clements et al., 2007, p.10);

- As a measure of absolute PPP, where prices of the same composition of goods are compared, the index does relatively well. Mac prices reflect a well-known empirical regularity according to which exchange rates are more volatile than prices (Clements, et al., 2007, p.11);

- Although the index suffers from a substantial bias, once the bias is allowed for, the index tracks exchange rates reasonably well over the medium to longer term in accordance with relative purchasing power parity theory. The index is at least as good as the industry standard, the random walk model, in predicting future currency values for all but short-term horizons (Clements et al., 2007, p.1);

- Even though the Burgernomics field was never intended as a precise gauge of currency misalignment, The Big Mac Index has done well to predict some currency movements, notably forecasting that the euro, initially overvalued, would eventually depreciate (The Economist, 2017);

- Also, the adjusted Big Mac estimates of intrinsic foreign exchange rates have been better forecasts of actual foreign exchange changes than those of the original "raw" Big Mac index (O'Brien and de Vargas, 2017, pp.70-85);

- Because it is simple and easy to understand, The Big Mac Index has become a global standard. It has been widely used in academia, it has been included in several economic textbooks and has been considered the main index to evaluate the exchange rate of each country at present (He, 2013; Mazumder, 2016).

Limitations of the Big Mac Index:

- There are three versions of PPP: (i) absolute PPP; (ii) relative PPP; and (iii) stochastic deviations from relative PPP. The Big Mac Index (BMI) uses absolute parity, which ignores barriers to international trade, such as tax or business competition, in the context of a single-good basket (Clements et al., 2007, p.7);

- Some researchers argue that the Big Mac index cannot seriously be a test of PPP, since we consume far more goods and services than just Big Macs (Mazumder, 2016), while others highlight the fact that there are substantial, sustained and significant deviations of exchange rates from the BMI. In this context, the under and overvaluations of currencies based on the Big Mac Index published by The Economist cannot be accepted as a reliable measure of mispricing and The Big Mac Index needs to be enhanced before it has substantial practical power (Clements, et al., 2007, p.7);

- PPP is based on relative prices of tradable components, which is where a lot of shortcomings become apparent. Tradable goods such as bread, beef and sesame

seeds form only part of the Big Mac price. McDonald's has to employ workers, pay rent, utility bills and serve customers. All these are part of the non-tradable component of a Big Mac, which influences price. Ong (1997) states that non-tradable goods account for 94% of the price of a Big Mac while Clements, et al. (2012) estimate that in developed economies, non-traded goods constitute around 70% of GDP. These weights vary worldwide. Wages in Asia are much lower than in the West and this may have a big impact on how Big Macs are priced in the East. Productivity differentials may also drive a wedge between prices and thus distort PPP values that the BMI yields (Pakko and Pollard, 2003, pp. 9-28);

- A further weakness of the BMI is that it examines a market where competition is clearly imperfect. According to Pakko (2003), a key assumption for PPP to hold is that markets are perfectly competitive. Due to the size and prestige of McDonald's as a global business, it is likely to have a degree of price making power wherever it sets up. Also, since fast-food culture is seen as more of a norm in the West, McDonald's will clearly be a bigger player there. The firm will be able to take advantage of their larger market power in the West and price their goods accordingly. With a larger market share, they will inevitably be able to foster the relatively inelastic demand for their products and charge higher prices (Roj, 2014);

- Although the theory of PPP serves as a useful benchmark for thinking about long-term equilibrium in foreign exchange markets, it generally does poorly as a predictive tool. A great deal of research effort has been put into testing PPP and in constructing price measures for consistent bundles of commodities across countries. It is interesting to find that a simple collection of items including the Big Mac sandwich does just as well (or just as poorly) at demonstrating the principles and pitfalls of PPP as do more sophisticated measures (Pakko and Pollard, 2003, pp. 9-28).

4. Research methodology and results

Purchasing power parity (PPP) is a useful tool for the international comparison of prices between countries, used to analyse economic development. Purchasing power parities are indicators that express the main macroeconomic aggregates in a common currency for all the countries subject to international comparisons.

The hypothesis of this paper is that the power of the national currency directly influences the degree of competitiveness and the level of human development of a country. We therefore used the statistical correlation method to analyse the relationship between the power of the national currency and competitiveness on one hand, and, on the other hand, the relationship between the power of the national currency and the level of human development in the countries of the European Union over a period of seven years, between 2011 and 2017.

In line with the theory of purchasing power parity, to assess the strength of the national currencies of EU countries, we used the percentage of under or overvaluation of the national currency against the US dollar, as calculated by The Economist (2017). The Big Mac Index published by The Economist excluded Bulgaria, Croatia, Cyprus, Luxembourg, Malta, Slovakia and Slovenia, leading to their exclusion from the list of countries analysed in our paper. Although Romania is not included among the Big Mac Index countries, we kept it in the sample as we found data on the evolution of the Big Mac price during the analysed period (Roşca, 2015) and based on this data, we calculated the percentage of under or overvaluation of the national currency (leu) against the US dollar (Tabel 1).

Tabel 1. Percentage of under or overvaluation of the RON against the USD in Romania during 2011-2017

Year / Indicator	2011	2012	2013	2014	2015	2016	2017
Big Mac Sandwich Price in Romania (RON)	9	9,3	9,5	9,9	8,7	8,9	9,1
Big Mac Sandwich Price in United States (USD)	4,07	4,33	4,56	4,795	4,79	5	5
Purchasing Power Parity RON/USD (a)	2,21	2,15	2,08	2,06	1,82	1,78	1,82
Exchange rate RON/USD	3,05	3,47	3,33	3,35	4,01	4,06	3,89
Percentage of under or overvaluation of the RON against the USD (aa)	**-27,54**	**-38,04**	**-37,53**	**-38,5**	**-54,6**	**-56,05**	**-53,2**
Calculation methods	*(a) = Big Mac Sandwich Price in Romania (RON) / Big Mac Sandwich Price in United States (USD)*						
	*(aa) = Purchasing Power Parity RON/USD * 100 / Exchange rate RON/USD*						

Source: Created by authors

We also decided to reduce the analysis period to seven years (2011-2017), as a ten-year analysis would have further reduced the group of countries under analysis. Table 2 shows the percentages of under or overvaluation of national currencies relative to the US dollar in 21 countries of the European Union for 2011-2017.

Table 2. Percentage of under or overvaluation of national currencies in 21 European countries during 2011-2017, according to The Big Mac Index

Current number	Country	2011	2012	2013	2014	2015	2016	2017
1	Austria	8,98	-10,63	-4,34	-4,81	-18	-21,4	-26,74
2	Belgium	32,26	6,46	4,4	3,89	-10,05	-13,7	-12,74
3	Czech Republic	0,18	-22,79	-23,4	-27,94	-39,06	-39,4	-38,09
4	Denmark	34,87	7,34	7,83	7,31	12,23	-11,9	-13,09
5	Estonia	-22,41	-42,85	-22,4	-18,57	-29,85	-32,3	-32,13
6	Finland	32,26	5,06	15,69	15,12	-0,83	0,5	-1,75
7	France	23,44	0,85	10,05	9,51	-5,66	-10,04	-11,66
8	Germany	19,91	1,97	2,71	3,05	-11,23	-17,2	-15,97
9	Greece	14,97	-24,84	-26,64	-14,36	-26,22	-26,8	-27,82
10	Hungary	-0,59	-19,49	-17,39	-21,44	-33,84	-37,5	-39,45
11	Ireland	34,02	-2,23	-2,37	-2,01	-15,58	-12,6	-12,31
12	Italy	23,44	0,85	5,81	8,1	-6,87	-8,3	-9,51
13	Latvia	-20,44	-32,01	-32,12	-37,5	-43,96	-49,16	-37,4
14	Lithuania	-25,44	-36,71	-29,72	-27,22	-40,76	-46,26	-35,08
15	Netherlands	14,62	-5,31	-2,65	-3,13	-16,55	-24,6	-22,22
16	Poland	-24,09	-39,23	-40,01	-37,53	-48,18	-52	-48,62
17	Portugal	2,28	38,67	-16,76	-15,77	-27,43	-33,4	-29,97
18	Romania	-27,54	-38,04	-37,53	-38,5	-54,6	-56,05	-53,2
19	Spain	23,44	-1,95	-1,24	2,49	-11,71	-23,5	-18,12
20	Sweeden	87,94	32,38	35,12	24,17	3,73	3,7	9,79
21	United Kingdom	-4,62	-3,82	-11,78	2,71	-8,81	-21,8	-22,43

Source: Created by authors based on data from The Economist, 2018. Interactive currency-comparison tool, Available at http://www.economist.com/content/big-mac-index.

To assess the competitiveness of the analysed European countries between 2011 and 2017 we have employed an indicator that enjoys wide recognition and credibility, namely the Global Competitiveness Index (GCI). Table 3 summarizes the GCI values for the 21 countries surveyed over the six-year period.

The GCI combines 114 indicators capturing concepts that matter for productivity and long-term prosperity. These indicators are grouped into 12 pillars: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. These pillars are, in turn, organized into three sub-indexes: basic requirements, efficiency enhancers, and innovation and sophistication factors. The three sub-indexes are given different weights in the calculation of the overall index, depending on each economy's stage of development, as shown by its GDP per capita and the share of exports represented by raw materials. The GCI includes statistical data from internationally recognized organizations, notably the International Monetary Fund (IMF), the World Bank and

various United Nations' specialized agencies, including the International Telecommunication Union, UNESCO, and the World Health Organization. The Index also includes indicators derived from the World Economic Forum's Executive Opinion Survey that reflect qualitative aspects of competitiveness, or for which comprehensive and comparable statistical data are not available for a sufficiently large number of economies (Schwab and Sala-i-Martín, 2017, pp. 5-6).

Table 3. The Global Competitiveness Index in 21 European countries in 2011-2017

Current number	Country	2011	2012	2013	2014	2015	2016	2017
1	Austria	5,14	5,22	5,15	5,16	5,12	5,22	5,25
2	Belgium	5,2	5,21	5,13	5,18	5,2	5,25	5,23
3	Czech Republic	4,52	4,51	4,43	4,53	4,69	4,72	4,77
4	Denmark	5,4	5,29	5,18	5,29	5,33	5,35	5,39
5	Estonia	4,62	4,64	4,65	4,71	4,74	4,78	4,85
6	Finland	5,47	5,55	5,54	5,5	5,45	5,44	5,49
7	France	5,14	5,11	5,05	5,08	5,13	5,2	5,18
8	Germany	5,41	5,48	5,51	5,49	5,53	5,57	5,65
9	Greece	3,92	3,86	3,93	4,04	4,02	4	4,02
10	Hungary	4,36	4,3	4,25	4,28	4,25	4,2	4,33
11	Ireland	4,77	4,91	4,92	4,98	5,11	5,18	5,16
12	Italy	4,43	4,46	4,41	4,42	4,46	4,5	4,54
13	Latvia	4,24	4,35	4,4	4,5	4,45	4,45	4,4
14	Lithuania	4,41	4,41	4,41	4,51	4,55	4,6	4,58
15	Netherlands	5,41	5,5	5,42	5,45	5,5	5,57	5,66
16	Poland	4,46	4,46	4,46	4,48	4,49	4,56	4,59
17	Portugal	4,4	4,4	4,4	4,54	4,52	4,48	4,57
18	Romania	4,08	4,07	4,13	4,3	4,32	4,3	4,28
19	Spain	4,54	4,6	4,57	4,55	4,59	4,68	4,7
20	Sweeden	5,61	5,53	5,48	5,41	5,43	5,53	5,52
21	United Kingdom	5,39	5,45	5,37	5,41	5,43	5,49	5,51

Source: Created by authors based on data from Schwab, K. and Sala-i-Martín, X. (2017). *The Global Competitiveness Report 2016-2017*, World Economic Forum, Retrieved September 04, 2017, from www.weforum.org/gcr.

Human development is the development of people through building human capabilities, by the people through active participation in the processes that shape their lives and for the people by improving their lives. It is broader than other approaches, such as the human resources, the basic needs, or the human welfare approaches.

To evaluate the level of human development in the 21 analysed European countries, we used the Human Development Index (HDI) published by the United Nations Development Program, a widely accepted and validated indicator employed in numerous studies and analyses. The composite Human Development Index integrates three basic

dimensions of human development. Life expectancy at birth reflects the ability to lead a long and healthy life. Mean years of schooling and expected years of schooling reflect the ability to acquire knowledge. Gross national income per capita reflects the ability to achieve a decent standard of living (Jahan, 2016, p. 2).

The human development approach also provided the analytical bedrock of the Millennium Declaration and the Millennium Development Goals — the time bound development objectives and targets agreed on in 2000 by 189 heads of states and governments to reduce basic human poverty by 2015. It also informed and influenced the 2030 Agenda and the Sustainable Development Goals (Jahan, 2016, p. 3).

Table 4 shows the 2011-2016 HDI values for the analysed European countries.

Table 4. The Human Development Index in 21 European countries, in 2011-2016

Current number	Country	2011	2012	2013	2014	2015	2016
1	**Austria**	0.88	0.884	0.887	0.892	0.892	0.893
2	**Belgium**	0.884	0.886	0.889	0.89	0.895	0.896
3	**Czech Republic**	0.861	0.864	0.865	0.871	0.875	0.878
4	**Denmark**	0.91	0.922	0.924	0.926	0.923	0.925
5	**Estonia**	0.838	0.85	0.856	0.86	0.863	0.865
6	**Finland**	0.878	0.884	0.887	0.89	0.893	0.895
7	**France**	0.882	0.885	0.887	0.89	0.894	0.897
8	**Germany**	0.912	0.916	0.919	0.92	0.924	0.926
9	**Greece**	0.86	0.858	0.86	0.862	0.865	0.866
10	**Hungary**	0.821	0.823	0.824	0.834	0.834	0.836
11	**Ireland**	0.909	0.895	0.902	0.91	0.92	0.923
12	**Italy**	0.872	0.877	0.876	0.877	0.881	0.887
13	**Latvia**	0.81	0.812	0.814	0.822	0.828	0.83
14	**Lithuania**	0.826	0.83	0.834	0.841	0.846	0.848
15	**Netherlands**	0.911	0.921	0.922	0.923	0.923	0.924
16	**Poland**	0.829	0.834	0.838	0.85	0.852	0.855
17	**Portugal**	0.818	0.824	0.827	0.837	0.841	0.843
18	**Romania**	0.798	0.797	0.794	0.797	0.798	0.802
19	**Spain**	0.867	0.871	0.874	0.877	0.882	0.884
20	**Sweden**	0.901	0.903	0.904	0.906	0.909	0.913
21	**United Kingdom**	0.902	0.898	0.899	0.904	0.908	0.91

Source: Created by authors based on data from, Jahan, S. (2016). *Human Development Report 2016. Human Development for Everyone*, Published for the United Nations Development Programme (UNDP), Retrieved September 04, 2017, from http://hdr.undp.org.

To calculate the correlation index between the under or overvaluation of the national currency and the global competitiveness index and between the under or overvaluation of the national currency and the human development index at national level, we aggregated the 2011-2016/2017 values of the three indicators. To maintain order and relative distance between the scores of different countries included in the analysis, we normalized the values using the min-max method.

We performed data analysis using statistical correlation and the Data Analysis module in MS Excel. Figures 1 and 2 show the results of the two statistical correlations.
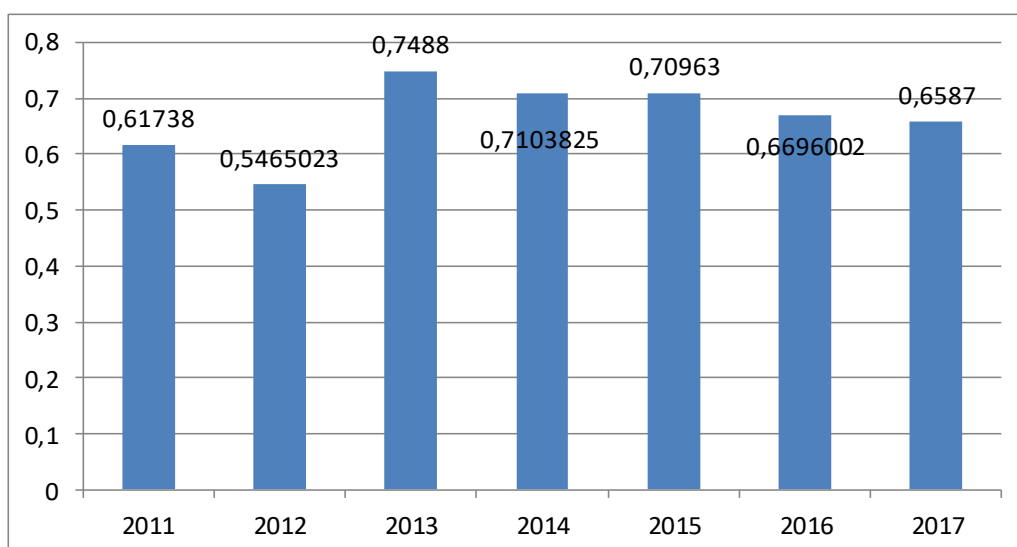

Figure 1. The statistical correlation between the percentage of under or overvaluation of the national currency and the National Competitiveness Index
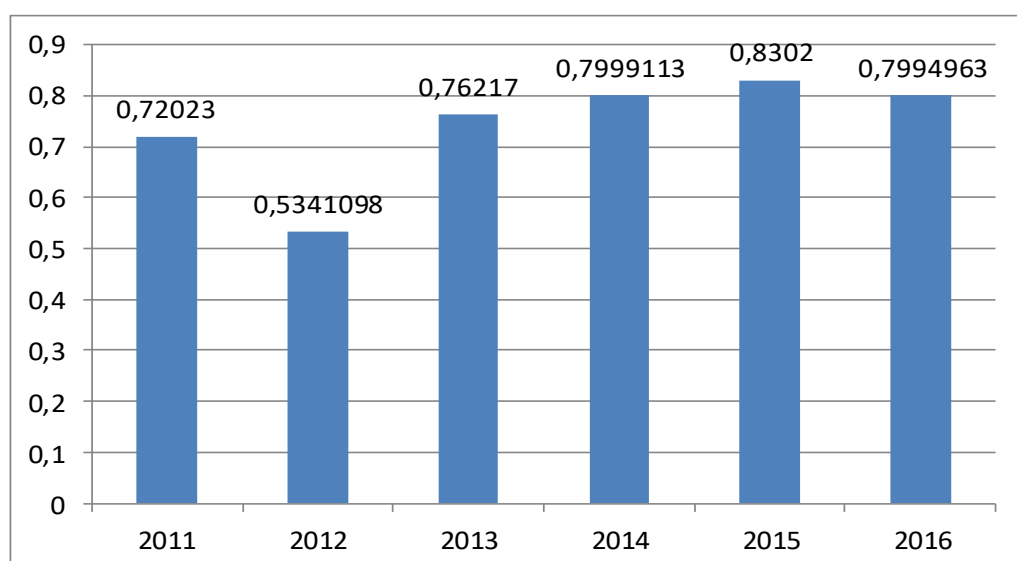*Source*: Created by authors

Figure 2. The statistical correlation between the under or overvaluation of the national currency and the National Human Development Index
Source: Created by authors

As shown in the two figures above, all the correlation indices recorded positive values, higher than 0.5, throughout the entire period of analysis, which means that the percentage of under or overvaluation of the national currency in relation to the US dollar moderately influences competitiveness and the level of human development in the analysed countries. Some of the results of the correlation between the under or overvaluation of the national currency and the National Human Development Index are even higher than 0.75, which means that the percentage of under or overvaluation of the national currency in relation to the US dollar strongly influences the level of human development in the analysed countries. Thus, the results of the two statistical correlations

support the initial scientific hypothesis according to which the strength of the national currency against the US dollar is a measure of the competitive capacity of a country's products and services on the international or global market. In addition, a strong national currency will support a higher human development of its citizens.

5. Conclusions

The hypothesis of this paper was that the power of the national currency directly influences the degree of competitiveness and the level of human development of a country. The methodology used to test this assumption required the creation of two statistical correlations between the under or over-assessment of the national currency based on The Big Mac Index, and the Global Competitiveness Index, on the one hand, and the Human Development Index, on the other hand, for 21 selected European countries between 2011 and 2016/2017.

The two statistical correlations support the initial assumption of the survey for the entire period of time, since they recorded moderate positive values (between 0.5 and 0.75), or strong positive values (between 0.75 and 1), which means that the under or overvaluation percentage of the national currency in relation to the US dollar does influence the competitiveness and the level of human development in the analysed countries.

It would be interesting to check if the trend in the values of the correlation indices will persist in the future, thus allowing a ten-year analysis. Such results would support the assumption that a strong national currency relative to the US dollar in any of the 21 European countries under consideration could play a role in increasing national competitiveness and human development in these countries. Also, the methodology of the study could be applied on a larger sample of countries, or even on a worldwide level.

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THE ROLE AND FUNCTION OF PERSONAL REMITTANCES OF UKRAINIAN AND MOLDAVIAN LABOUR MIGRANTS FOR DEVELOPMENT OF UKRAINE AND MOLDOVA

Associate Professor Ph.D. Oksana KOSHULKO
Polotsk State University, Novopolotsk, Belarus
E-mail: oksanakoshulko2015@gmail.com

Abstract: This paper presents the results of research concerning the personal remittances of Ukrainian and Moldavian labour migrants from abroad during the period 2000-2016, using data from the World Bank. The paper also compares the personal remittances sent to Ukraine and Moldova with the total Gross Domestic Product of Ukraine and Moldova, and the role and function of personal remittances of Ukrainian and Moldavian labour migrants for public and private finance in their countries of origin. The following stages of research were used: analysis of benefits for the socio-economic development of Ukraine and Moldova gained from personal remittances of Ukrainian and Moldavian labour migrants abroad; drawing conclusions about the importance of remittances both for the families of Ukrainian and Moldavian labour migrants and for the states, as well as the general socio-economic development of the countries and its public and private finance in particular.

Keywords: Ukraine, Moldova, personal remittances, labour migrants.

JEL Classification: F2, F22, J6.

1. Introduction

This paper presents the results of research concerning personal remittances sent back to Ukraine and Moldova by Ukrainian and Moldavian labour migrants working abroad during 2000-2016.

Data from the World Bank concerning personal remittances sent from abroad by Ukrainian and Moldavian labour migrants during 2000-2016 have been used.

This paper is the continuation of a series of publications concerning labour migration abroad in recent years, and children of labour migrants. Among these publications are the papers "Human capital depreciation of female immigrants and ways to restore lost human capital" (Koshulko, 2018); "Children of female immigrants in Turkey: numerical analysis of data" (Koshulko, 2017a); "Research into the dilemmas concerning the employment of immigrants in their professions abroad and the depreciation or restoration of their human capital" (Koshulko, 2017b); "Slavic women in Turkey: from past to present" (Koshulko, 2017c); Challenges of Ukrainian female immigrants and their children in host countries" (Koshulko and Kobets, 2017); Women from North move to South: Contemporary migration from the Former Soviet Union countries to Turkey (Koshulko, 2016a); Discourse about Women-Immigrants from Former Soviet Union Countries as a Special Social Group in Turkey" (Koshulko, 2016b); "The role of Ukrainians in the economic growth of Poland" (Koshulko and Koshulko, 2016); "Gender inequality as one of the largest problems of Slavic women in Islamic world" (Koshulko, 2016c); "Reflections on the features of accumulation of the Human Capital of representatives of female and male genders" (Koshulko, 2016d); "Ukrainians in the Light of Migration Crisis in Europe" (Koshulko, 2016e); "Exploring of the Human Capital Depreciation of Ukrainian Labor Migrants Abroad: Results of a Survey" (Koshulko, 2015a); "Issues in countries of the former Soviet Union as the driving force for female migration to Turkey" (Koshulko and Onkal, 2015); "The "Value of Life and Labor" of Ukrainian Migrants Abroad" (Koshulko, 2015b); "The positive and negative aspects of Ukrainian labor migration for Ukraine and Receiving Countries" (Koshulko, 2015c).

2. The personal remittances of Ukrainian and Moldavian labour migrants from abroad according to data and explanations of the World Bank

This research on the personal remittances sent from abroad by Ukrainian and Moldavian labour migrants is very important and topical because it shows the full amount of the remittances and real benefits for the socio-economic development of Ukraine and Moldova overall and for families of Ukrainian and Moldavian labour migrants in particular.

According to explanations of the World Bank, "personal remittances are the sum of personal transfers and compensation of employees. Personal transfers, a new item in the Balance of Payments Manual 6th Edition, represents a broader definition of worker remittances. Personal transfers include all current transfers in cash or in kind between resident and nonresident individuals, independent of the source of income of the sender (and regardless of whether the sender receives income from labour, entrepreneurial or property income, social benefits, and any other types of transfers; or disposes assets) and the relationship between the households (regardless of whether they are related or unrelated individuals)".

Table no. 1 shows the amount of personal remittances received (% of GDP) in Ukraine and Moldova during 2000-2016, using data from the World Bank (The World Bank, 2018a; The World Bank, 2018b).

Table no. 1. Personal remittances, received (% of GDP) in Ukraine and Moldova during 2000-2016, using data from the World Bank

Years	Moldova (% of GDP)	Ukraine (% of GDP)
2000	13,783	1,34
2002	19,412	2,812
2004	26,994	2,887
2006	34,499	2,879
2008	31,182	3,768
2010	30,161	4,805
2012	27,269	4,807
2014	26,003	5,508
2016	21,694	6,589

Source: The World Bank [16-17]

Using data from the World Bank (The World Bank, 2018a; The World Bank, 2018b), it is possible to analyse the amount of personal remittances to Ukraine and Moldova during 2000-2016 as a percentage of annual GDP of the countries.

The amount of personal remittances to Moldova was 13.783% of GDP in 2000, in 2002 - 19.412%, in 2004 - 26.994%, in 2006 - 34.499%, in 2008 - 31.182%, in 2010 - 30.161%, in 2012 - 27.269%, in 2014 - 26.003%, and in 2016 - 21.694%.

This shows that personal remittances to Moldova amount to a significant part of the country's GDP, rising from 13.783% of GDP in 2000 to 21.694% in 2016.

The amount of personal remittances to Ukraine was 1.34% of GDP in 2000, in 2002 - 2.812%, in 2004 - 2.887%, in 2006 - 2.879%, in 2008 - 3.768%, in 2010 - 4.805%, in 2012 - 4.807%, in 2014 - 5.508%, and in 2016 - 6.589%.

This also shows that personal remittances to Ukraine amount to a significant part of the country's GDP, rising from 1.34% in 2000 to 6.6% in 2016.

It is possible to conclude that the amount of personal remittances in 2000 to Ukraine was 1.34% of GDP and to Moldova 13.783% of GDP; in 2002 to Ukraine it was 2.812%, and to Moldova - 19.412%; in 2016 to Ukraine it was 6.589%, and to Moldova - 21.694%.

3. Comparison of personal remittances to Ukraine (data of the World Bank) and Moldova during 2000-2016, using data from the World Bank (% of GDP)

Data from the World Bank show significant rises in the amount of personal remittances received in Ukraine and Moldova during the period 2000-2016, as the remittances have increased from 1.34% of GDP in 2000 to 6.6% of GDP in 2016 to Ukraine, and from 13.783% of GDP in 2000 to 21.694% of GDP in 2016 to Moldova (Figure no. 1).

Figure no. 1. Differences in personal remittances during the period 2000-2016 (% of GDP)
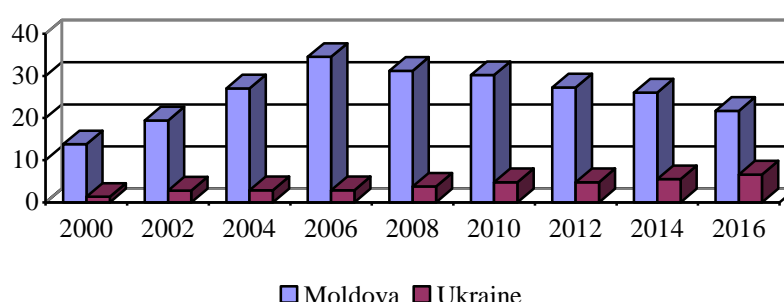
Source: The World Bank [16-17]

So, the personal remittances to Ukraine and Moldova make a significantly additional part to GDP of the countries - from 1.34% in 2000 to 6.6% in 2016 to Ukraine, and from 13.783% of GDP in 2000 to 21.694% in 2016 to Moldova.

4. The importance of the remittances for both the families of the Ukrainian and Moldavian labour migrants and the socio-economic development of Ukraine and Moldova

The importance of the remittances for the families of the labour migrants is very high because sometimes only the remittances is a source of surviving for the families of the labour migrants. In this case, the remittances for the families of the labour migrants allow them to survive in conditions of unemployment or low salaries in comparison to high living expenses, or to have better conditions of life in Ukraine and Moldova. Therefore, the importance of the remittances for the families of the labour migrants is very high.

The importance of the remittances for the socio-economic development of Ukraine and Moldova is a very high too because it can be used as investment for opening a small and a middle-size business in Ukraine and Moldova, and thanks to the remittances from abroad, some of families of Ukrainian and Moldavian labour immigrants and ex-labour immigrants can also invest money in some innovative projects for Ukraine and Moldova, such as solar panels, for example, with the aim of the socio-economic development of Ukraine and Moldova and their families.

5. Explanations of types of transfers of the personal remittances to Ukraine and Moldova

Explanations of the types of transfers of the personal remittances to Ukraine and Moldova are:

The official channel of sending personal remittances through the Ukrainian and Moldavian banking systems and those of other countries within the banking system of the World Bank;

The unofficial channel of sending personal remittances through the hands of the Ukrainian and Moldavian migrants, via members of their families or friends, or via intermediaries.

It seems that the latter, unofficial, way is more common and acceptable for the Ukrainian and Moldavian labour migrants because this avoids the payment of additional fees for transfer of the remittances.

6. Conclusions

The paper presents the results of research based on the data of the World Bank concerning analysis of personal remittances to Ukraine and Moldova during the period 2000-2016.

Thus, according to the results of the research, the percentage of the personal remittances to Ukraine compared to GDP of Ukraine in 2000 was 1.34% of GDP, in 2002 - 2.812%, in 2004 - 2.887%, in 2006 - 2.879%, in 2008 - 3.768%, in 2010 - 4.805%, in 2012 - 4.807%, in 2014 - 5.508%, and in 2016 - 6.589%.

The amount of personal remittances to Moldova was 13.783% of GDP in 2000, in 2002 - 19.412%, in 2004 - 26.994%, in 2006 - 34.499%, in 2008 - 31.182%, in 2010 - 30.161%, in 2012 - 27.269%, in 2014 - 26.003%, and in 2016 - 21.694%.

The personal remittances to Ukraine and Moldova make a significantly additional part to GDP of the countries from 1.34% in 2000 to 6.6% in 2016 to Ukraine, and from 13.783% of GDP in 2000 to 21.694% in 2016 to Moldova.

The importance of the remittances for the families of the Ukrainian and Moldavian labour migrants is a very high because sometimes only the remittances is a source of surviving for the families of the labour migrants.

In this case, the remittances for the families of the labour migrants allow them to survive in conditions of unemployment or low salaries in comparison to high living expenses, or to have better conditions of life in Ukraine and Moldova.

The importance of the remittances for the socio-economic development of Ukraine and Moldova is a very high too because it can be used as investment for opening a small and a middle-size business in Ukraine and Moldova, and thanks to the remittances from abroad, some of families of Ukrainian and Moldavian labour immigrants and ex-labour immigrants can open a legal business in Ukraine and Moldova or invest money in some innovative projects for Ukraine and Moldova such as solar panels, for example, with the aim of the socio-economic development of Ukraine and Moldova.

There are the official channel of sending personal remittances through the Ukrainian and Moldavian banking systems and those of other countries within the banking system of the World Bank, and the unofficial channel of sending personal remittances through the hands of the Ukrainian and Moldavian migrants, via members of their families or friends, or via intermediaries. It seems that the latter, unofficial, way is more common and acceptable for the Ukrainian and Moldavian labour migrants because this avoids the payment of additional fees for transfer of the remittances.

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