GLOBALIZATION- FACTOR THAT INFLUENCE THE COMPETITION PROCESS

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ABSTRACT

The concept of globalization has become a reality, reaching economic, social and political environment. Globalization is reflected in the increasingly interdependence of largest national economies, as determined by reducing or eliminating barriers of all sorts of way of international flows of capital, labor, goods and services.

Between globalization and competitiveness undoubtedly there are many connections. Globalization cause pressure to change and competition. Global competitiveness of national economies and companies has become a necessity and an essential condition for survival and evolution from one stage of development to another.

The research objectives are: the presentation of the concepts of globalization and competitiveness, of the indicators through which is measured their intensity and to emphasize the interdependence between both of them. To demonstrate the connection between these concepts there are used statistical methods of research such as the graphic method and the correlation method.

KEYWORDS: *competition, competitiveness, globalization*

JEL CLASSIFICATION: *F60, M10, M21*

1. INTRODUCTION

In a global economy, the competition is manifested at three levels: competition between nations (countries need to integrate into the global economy with a higher speed than the others, to achieve economic growth and combat poverty), competition between firms (firms need to become more adaptable to customer requirements, to buy and sell products globally), competition between individuals (citizens may have higher incomes if they have knowledge and skills as good as or better than others from anywhere in the world).

The issue of national economies competitiveness has become a concern in scientific debates, in practical actions of governments and companies. There are numerous individual points of view, but their systematization and synthesis is not yet realized.

From the multitude of the variables that influence the competitiveness of national economies, globalization occupies an important place. To demonstrate the cause - effect relationship between globalization and competitiveness is necessary to demonstrate the cause - effect relationship between the most representative indicators characterizing both phenomena respectively the Globalization Index and the Competitiveness Index.

2. LITERATURE REVIEW

The term of globalization first entered in a dictionary (Webster) in 1961 and from the mid-80s gained considerable attention.

One of the most common definitions of globalization is given by (Barrie, 1995): "globalization is the process by which geographic distance becomes a less important factor in the establishment and

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development of cross-border economic, political, social and cultural relations. Networks of relationships and dependencies acquire a growing potential to become international and global."

In the globalization process the distance has become irrelevant in establishing and sustaining cross-border connections, the economic, social and political relations due to information and communication technologies.

Globalization process characteristics include internalization of production, new international division of labor, the new competitive environment that generates these processes and the internalization of the state, as Bari (2005) emphasize.

According to (Garelli, 2008) globalization and competitiveness evolves in waves. Each wave has its own business logic and mode of operation. Each wave disappears when it is replaced by another. Actors can be the same but play different roles. (see figure 1).

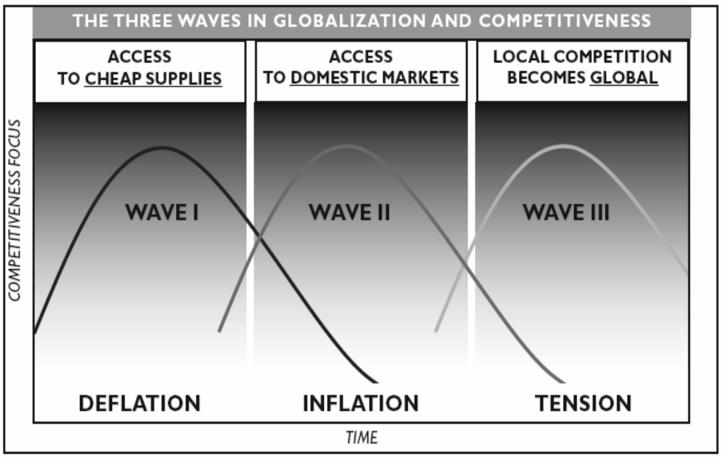

Figure 1.Three waves of globalization and competitiveness

Source: Garelli S, New waves in globalization and competitiveness, 2008

Stephane Garelli considers that the complexity phenomenon is reflected in the three waves of globalization.

For the first wave of globalization (1985-2000) is typical deflation process: Western companies access to resources and logistical means lowers the cost price of goods produced (egg. electronics, computers and mobile phones are cheaper today than they were 20 years ago). Another trend typical for this phenomenon is the brain drain from countries like China, Russia and India.

The second wave of globalization (2000-2020) focuses on the development of this phenomenon in domestic markets in Asia, Russia, Central Europe, South America and Gulf region as well as the emergence of a middle class, willing to buy branded products. The period is characterized by rising prices, particularly oil price, which has repercussions on consumer purchasing power, one of the effects being the emergence of inflation. Companies, especially those of medium size, will need to expand and improve their connections with customers, focusing on innovative aspects relevant to customers and increased impact on them. The actors of the third wave of globalization will be the new competitors from regions above what will aim to stand out globally. Thus a partnership relationship between local and global companies can turn into a relationship of competition and tension. Competition between industrialized nations and developing countries will be very fierce and close, the tension will be in economic and political levels. Because these global players are increasingly becoming more competitive and powerful, it is very likely that companies in the industrialized nations to use illegal anticompetitive practices to maintain market positions acquired and competitive advantages.

Issue of competitiveness of national economy is highly disputed in economic theory and practice. Beyond the many debates and diversity of the criteria used, we believe that the economy is competitive if its market share increases (in particular, its export share in the world), thanks to its

price with a relatively favorable development compared with those of competitors (so, it has a competitive, price, and consequently inflation, below) and the quality, diversity and timeliness of goods offered.
Michael Porter, a world well-recognized personality in the field of competitiveness emphasizes that “the productivity of a country is ultimately set by the productivity of its companies. An economy cannot be competitive unless companies operating there are competitive, whether they are domestic firms or subsidiaries of foreign companies” (Porter, 2008).

3. RESEARCH METHODOLOGY

Given the importance of the globalization and the competitiveness nowadays, I have decided to present in this paper the ranking of global corporations and the ranking of the most innovative global companies extracted from Forbes, The Global 2000.
To demonstrate the connection between globalization and competitiveness I have studied the relationship between The Globalization Index and The Competitiveness Index.
I have taken the values of the two indices for ten countries ranked according to The Globalization Index from 2011. The data obtained were analyzed by statistical methods such as the graphic method and the correlation method. To emphasize the connection between the two indices I have also calculated the correlation ratio.

4. GLOBAL COMPETITIVENESS AT THE ORGANIZATIONAL LEVEL

Complexity of globalization concerns the technological aspects, economic, social and political environment in which firms are acting and competing. Company must make its presence felt in international markets emphasizing control and coordination as marketing activities (see Table 1). The complexity of the two activities increase as the company extends on local market.
In conditions of globalization the competition intensifies and aims primarily to create high added value for the customer. In the first stage firms compete with local competitors, while in the second phase competition intensifies, becoming more dynamic and diversified. Competitive strategy is adapted to allow firms to cope with new and existing competitors. As the interdependence between markets is high, the actions form one market affect another market, companies must focus on competitive advantage.

Table 1. The ranking of global corporations

Rank	Company	Country	Sales (mld $)	Profits (mld $)	Assets (mld $)	Market Value (mld $)
1	JPMorgan Chase	U.S.A	115.5	17.4	2117.6	182.2
2	HSBC Holdings	United Kingdom	103.3	13.3	2467.9	186.5
3	General Electric	U.S.A	150.2	11.6	751.2	216.2
4	ExxonMobil	U.S.A	341.6	30.5	302.5	407.2
5	Royal Dutch Shell	Netherlands	369.1	20.1	317.2	212.9
6	PetroChina	China	222.3	21.2	251.3	320.8
7	ICBC	China	69.2	18.8	1723.5	239.5
8	Berkshire Hathaway	U.S.A	136.2	13	372.2	211
9	Petrobras-Petroleo Brasil	Brazil	121.3	21.2	313.2	238.8
10	Citigroup	U.S.A	111.5	10.6	1913.9	132.8

Source: Extracted from Forbes, The Global 2000 (values calculated in 2011) , http://www.forbes.com

For global competitors, innovation has become one of the factors that help companies to maintain competitive (see Table 2). Baseline from which to start is the development of skills and abilities.
One way to use knowledge and skills in innovative ways is to create new products thereby achieving better market position or even new markets. Another way is to create an innovative organizational structure by maintaining a balance between structure and strategy adopted by the company.

Table 2. The ranking of the most innovative global companies

Rank	**Company**	**5 year average sales growth (%)**	**5 year average net income growth (%)**	**Enterprise Value (mld $)**	**Innovation Premium***
1	Salesforce.com	39.5	78.7	20.7	75.1
2	Amazon.com	32.0	37.6	92.7	58.9
3	Intuitive Surgical	43.4	36.4	13.4	57.6
4	Tencent Holdings	69.0	75.4	46.5	52.3
5	Apple	35.1	60.7	303.4	48.2
6	Hindustan Unilever	10.0	4.0	15.5	47.7
7	Google	35.0	37.1	138.1	44.9
8	Natura Cosmeticos	17.0	13.5	10.2	44.5
9	Bharat Heavy Electricals	27.2	25.0	19.5	43.6
10	Monsanto	13.4	44.7	41.3	42.6

* The Innovation Premium is a measure of how much investors have bid up the stock price of a company above the value of its existing business based on expectations of future innovative results (new products, services and markets) . Members of the list must have $10 billion in market capitalization, spend at least 1% of their asset base on R&D and have seven years of public data.

Source: Extracted from Forbes (values calculated in 2011)
http://www.forbes.com

5. GLOBAL COMPETITIVENESS AT THE NATIONAL LEVEL

Beyond the specific of the company and industry specific economic factors, in recent years globalization has highlighted the importance of country-specific factors as determinants of performance. As an example we mention the following specific factors influencing the performance of a country: institutional and regulatory framework, access to markets, resources, labor costs and inputs, financial and technological infrastructure etc. Different dimensions of competitiveness are strongly interrelated: for example, the factors of competitiveness of a country determine the international competitiveness factors of the firm.
For over thirty years, World Economic Forum published annually the Global Competitiveness Reports studying and comparing factors that determine national competitiveness. The goal is to find the best strategies and policies to improve national competitiveness. Since 2005, the World Economic Forum analyzed the competitiveness based on the Global Competitiveness Index (GCI). This indicator examines and evaluates the potential of global economies, noting areas of sustainable growth on medium and long term being centered on three basic elements: a stable macroeconomic environment in each country analyzed the quality of public institutions and their policies and technological efficiency in country level. Global Competitiveness Index includes components which measure different aspects of competitiveness. These components are grouped into 12 pillars of competitiveness as: institutions, infrastructure, macroeconomic environment, health and primary

education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological development, the market size, business sophistication, innovation.

These 12 pillars of competitiveness are not independent, they support each other and a weakness in one of the areas has a negative impact on other areas. For example, a strong capacity for innovation (pillar 12) cannot be obtained without a healthy workforce, better educated (pillar 4 and 5), without appropriate technological development (pillar 9) or without sufficient funding (pillar 8).

In the following table is presented the hierarchy of the most competitive countries in 2011 according to the Global Competitiveness Index.

Table 3. The Global Competitiveness Index in 2011

Rank	Country	Score
1	Switzerland	5.74
2	Singapore	5.63
3	Sweden	5.61
4	Finland	5.74
5	U.S.A	5.43
6	Germany	5.41
7	Netherlands	5.41
8	Denmark	5.40
9	Japan	5.40
10	United Kingdom	5.39

Source: The Global Competitiveness Report 2011-2012

In the classification made by World Economic Forum, Romania ranks 77 of 142 with a score of 4.1 down 0.01 points from 2010.

Ernst & Young has produced a ranking of the most open countries to globalization in 2011 (see table no.4) according to an index which measures and monitors the performance of 60 countries according to 20 indicators that show the essential aspects of business integration.

The 20 indicators are grouped into five broad categories: openness to trade, capital movements, the exchange of technology and ideas, cultural integration.

Table 4. The ranking of countries according to the Globalization Index

Rank	Country	Globalization Index in 2011	Growth rate compared to 2010
1	Hong Kong	7.42	-0.24
2	Ireland	7.24	0.13
3	Singapore	6.88	-0.14
4	Belgium	5.81	-0.07
5	Sweden	5.72	-0.11
6	Denmark	5.70	0.21
7	Netherlands	5.58	0.09
8	Switzerland	5.46	-0.19
9	Finland	5.39	-0.09
10	Hungary	5.19	0.06

Source: Ernst & Young- The 2011 Globalization Survey

In the ranking realized by Ernst & Young, Romania ranks 32 of 60 with a Globalization Index of 4.05 points, up 0.05 points from 2010.

Comparing Table 3 with Table 4 it is found that the most competitive countries are the most open to globalization.

6. THE STATISTICAL ANALYSIS BETWEEN THE GLOBALIZATION INDEX AND THE COMPETITIVENESS INDEX

I have considered the Globalization Index as the independent variable which is defined by X and the Competitiveness Index as the dependent variable defined as Y. The data to be used in the statistical study are presented in the table below.

Table 5. The Globalization Index and The Competitiveness Index in 2011

Country	The Globalization Index	The Competitiveness Index
Hong Kong	7.42	5.36
Ireland	7.24	4.77
Singapore	6.88	5.63
Belgium	5.81	5.20
Sweden	5.72	5.61
Denmark	5.70	5.40
Netherlands	5.58	5.41
Switzerland	5.46	5.74
Finland	5.39	5.47
Hungary	5.19	4.36

Source: Ernst & Young- The 2011 Globalization Survey, The Global Competitiveness Report 2011-2012

To determine the type of the relationship between the two variables I have used the graphical method. Studying Figure 2 we can see that there is a parabolic connection between the variables. This hypothesis will be demonstrated further through the correlation method.

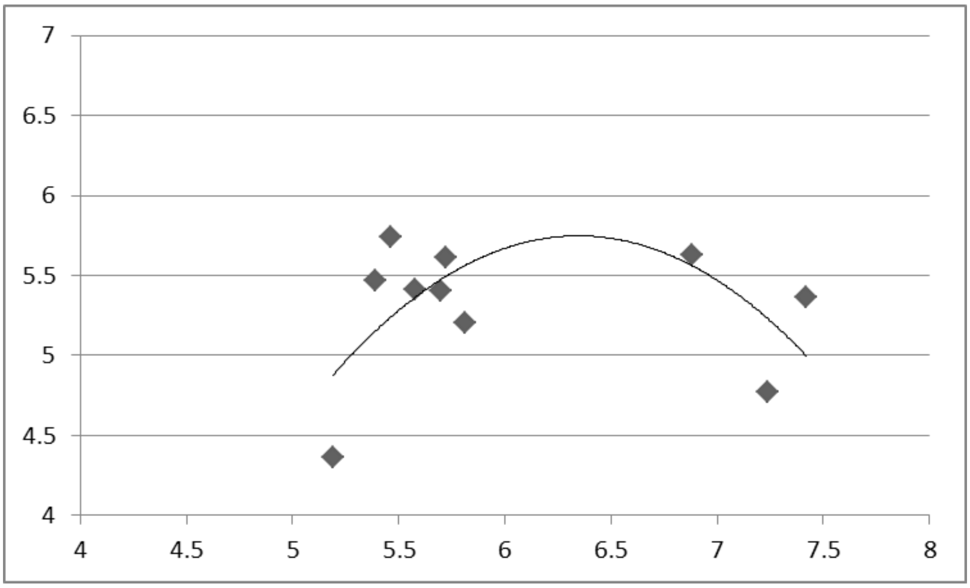

Figure 2. The evolution between The Globalization Index and The Competitiveness Index

The equation of parabolic model is:

$$\hat{y}_i = a + b \cdot x_i + c \cdot x_i^2, \forall i = \overline{1,n} \quad (1)$$

In order to determine the parameters of the model, the following equations system will be solved through the Cramer method:

$$\begin{cases} n\cdot a + b\cdot\sum_{i=1}^{n} x_i + c\cdot\sum_{i=1}^{n} x_i^2 = \sum_{i=1}^{n} y_i \\ a\cdot\sum_{i=1}^{n} x_i + b\cdot\sum_{i=1}^{n} x_i^2 + c\cdot\sum_{i=1}^{n} x_i^3 = \sum_{i=1}^{n} x_i\cdot y_i \\ a\cdot\sum_{i=1}^{n} x_i^2 + b\cdot\sum_{i=1}^{n} x_i^3 + c\cdot\sum_{i=1}^{n} x_i^4 = \sum_{i=1}^{n} x_i^2\cdot y_i \end{cases} \quad (2)$$

Table 6.Processed data

No.	x_i	y_i	x_i^2	x_i^3	x_i^4	$x_i \cdot y_i$
1	7.42	5.36	55.0564	408.518488	3031.207181	39.7712
2	7.24	4.77	52.4176	379.503424	2747.604790	34.5348
3	6.88	5.63	47.3344	325.660672	2240.545423	38.7344
4	5.81	5.20	33.7561	196.122941	1139.474287	30.2120
5	5.72	5.61	32.7184	187.149248	1070.493699	32.0892
6	5.70	5.40	32.4900	185.193000	1055.600100	30.7800
7	5.58	5.41	31.1364	173.741112	969.475405	30.1878
8	5.46	5.74	29.8116	162.771336	888.731495	31.3404
9	5.39	5.47	29.0521	156.590819	844.024514	29.4833
10	5.19	4.36	26.9361	139.798359	725.553483	22.6284
Sum	60.39	52.95	370.7091	2315.049399	14712.710377	319.7615

Table 7. Processed data

No.	$x_i^2 \cdot y_i$	$y_i - \bar{y}$	$(y_i - \bar{y})^2$	$\hat{y}_i$	$y_i - \hat{y}_i$	$(y_i - \hat{y}_i)^2$
1	295.102304	0.065	0.004225	4.984080	0.375920	0.141316
2	250.031952	-0.525	0.275625	5.214840	-0.444840	0.197883
3	266.492672	0.335	0.112225	5.550000	0.080000	0.006400
4	175.531720	-0.095	0.009025	5.551605	-0.351605	0.123626
5	183.550224	0.315	0.099225	5.483880	0.126120	0.015906
6	175.446000	0.105	0.011025	5.467400	-0.067400	0.004543
7	168.447924	0.115	0.013225	5.357600	0.052400	0.002746
8	171.118584	0.445	0.198025	5.229080	0.510920	0.261039
9	158.914987	0.175	0.030625	5.145465	0.324535	0.105323
10	117.441396	-0.935	0.874225	4.871465	-0.511465	0.261596
Sum	1962.077763		1.627450	52.855415		1.120378

Using the Cramer method and the data from the Table 6 and 7 we obtain the following determinants:

$$\Delta = \begin{vmatrix} 10 & 60.39 & 370.7091 \\ 60.39 & 370.7091 & 2315.049399 \\ 370.7091 & 2315.049399 & 14712.710377 \end{vmatrix} \Rightarrow \Delta = 72.365$$

$$\Delta_a = \begin{vmatrix} 52.95 & 60.39 & 370.7091 \\ 319.7615 & 370.7091 & 2315.049399 \\ 1962.077763 & 2315.049399 & 14712.710377 \end{vmatrix} \Rightarrow \Delta_a = -1477.862$$

$$\Delta_b = \begin{vmatrix} 10 & 52.95 & 370.7091 \\ 60.39 & 319.7615 & 2315.049399 \\ 370.7091 & 1962.077763 & 14712.710377 \end{vmatrix} \Rightarrow \Delta_b = 596.807$$

$$\Delta_c = \begin{vmatrix} 10 & 60.39 & 52.95 \\ 60.39 & 370.7091 & 319.7615 \\ 370.7091 & 2315.049399 & 1962.077763 \end{vmatrix} \Rightarrow \Delta_c = -47.020$$

$$a = \frac{\Delta_a}{\Delta} \Rightarrow a = -20.422$$

$$b = \frac{\Delta_b}{\Delta} \Rightarrow b = 8.247$$

$$c = \frac{\Delta_c}{\Delta} \Rightarrow c = -0.650\,.$$

The equation of the parabolic model becomes : $\hat{y}_i = -20.42 + 8.247 \cdot x_i - 0.65 \cdot x_i^2 \forall i = 1{,}10$.
The correlation ratio is used to measure the intensity of the relationship between the two variables:

$$R_{Y/X} = \sqrt{1 - \frac{\sum_{i=1}^{n}(y_i - \hat{y}_i)^2}{\sum_{i=1}^{n}(y_i - \bar{y})^2}} \Rightarrow R_{Y/X} = 0.558\ .$$

The value of the correlation ratio demonstrates that between the Globalization Index and the Competitiveness Index exists a connection of medium intensity which is justified by the fact that competitiveness is determined by several factors, not only by the level of globalization.

7. CONCLUSIONS

Globalization on the one hand contributes to the intensification of competition, giving dynamism, and on the other hand enables companies to gain competitive advantage through the use of strategies and methods that sometimes can be based on anticompetitive practices to eliminate or reduce competitors.

The correlation between the Globalization Index and the Competitiveness Index demonstrates the connection that exists between these two concepts: globalization and competitiveness. However competitiveness of a country is influenced by a multitude of factors besides globalization. As an example we mention the following specific factors that influence a country's performance: institutional and regulatory framework, access to markets, resources, labor and production factors' costs, financial and technological infrastructure, etc. Different dimensions of competitiveness are strongly linked: for example, the competitiveness factors of a country determinate the factors of international competitiveness of a company.

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