

MEASURING ECONOMIC GLOBALIZATION – FACTS AND FIGURES

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Abstract:

Globalization is a very dynamic and complex phenomenon. It exerts a big influence at local, national and regional level through the interconnections between countries, institutions, people, etc. that result in important changes of economic, environmental, political, social and cultural nature. Although globalization is a multidimensional phenomenon, one cannot deny that some of its most visible aspects are of economic nature. The need to measure economic globalization is now of central concern both for academic circles as for the business environment, the mass, specialized mass media and policy makers. Although it is almost impossible to capture such a complex phenomenon in a single representative figure, this paper attempts to place a theoretical debate on more solid scientific basis (in terms of economic globalization indices).

In the first part of the paper, we present a brief literature review focusing on some of the different interpretations and beliefs regarding the concept of economic globalization (with reference to the economic literature to date) in order to facilitate future empirical approaches of its impact on national economies. In the second part of the paper, we highlight the extent of the process of economic globalization and the impact on the global economy (and on the Romanian economy), using three indicators quite new in literature: the KOF index of globalization, the globalization index proposed by A.T. Kearney/Foreign Policy and the CSGR Globalization Index. Also we have included in the paper other two important globalization indices – the M-GI and WMRC Index – paying attention to the economic dimension.

Keywords: economic globalization, the multidimensional globalization index, the index of economic globalization

JEL Classification: F15, F36, E02, C00

INTRODUCTION

During its evolution, mankind has passed through many stages of development, each stage involving specific socio-economic needs. Beginning with the early forms of a closed society, where individual needs were met by their own resources, over time, communities began to interact and subsequently, as a result of the process of exchange and specialization, some regions have come to dependent on others. Therefore what we are witnessing today is known for many as “the global community” in which each country is interlinked with the rest of the world forming a single organism. The phenomenon that makes all of this possible is, according to economic literature, labeled as *globalization*.

Although theoreticians and practitioners alike have not reached a common place regarding the definition of globalization, there is nonetheless a consensus about the fact that it is a reality, perhaps an irreversible and unpredictable one, yet inexorable. They have agreed also that it affects the entire world in many different ways. This cause and effect relationship as regards to globalization has been the subject of many theoretical debates, namely discussions without solid empirical evidence, thus leaving the correlation between globalization and its effects without an appropriate indicator. Designing such an indicator expressed in well-known measurement units or associated to a statistical index (accepted by academic circles as well as by practitioners), that measures the effects of globalization upon the economic, social, political and cultural environment might prove to be very useful in: developing and implementing economic policies, adopting strategic decisions, and also other types of economic and social analysis.

With regard to this specific issue (measuring globalization and in particular, economic globalization) this paper intends to go further than a simple listing of different variables that are being used in describing the extent to which an economy is globalized. Such a list could include, among many others: the ratio of imports to GDP for every country, the size and value of multinational and transnational companies' activities, the evolution of satellite communication, environmental issues or matters concerning national security and world peace.

The purpose of this paper is to highlight, within a theoretical framework provided by the economic literature to date, the characteristic of a particular set of indicators used by theoreticians as well as by practitioners to analyze and assess the extent of the process of economic globalization. This paper is just one in a series of papers centered on an analysis that evaluates the effects of financial crises (as a residual product of the phenomenon of economic globalization) on monetary policy instruments used by central banks worldwide to ensure financial and price stability.

SOME CONSIDERATIONS ON THE ECONOMIC DIMENSION OF GLOBALIZATION

Although the concept of "globalization" is often used, finding expression today in all the world's major languages, it is nevertheless a term without a clear delimitation, deprived of a precise and universally accepted definition. Paradoxically, in a knowledge society, as the society in which we live today, we don't know an exact definition of what globalization actually is that is widely recognized and accepted in all the fields where its effects are felt (political, legal, economic, sociological etc.). The meanings of globalization therefore tend to enrich rather than to reduce. In addition, we can cite Ulrich (2003: 37), who considers globalization as "the most widely used - and misused - keyword in disputes of recent as well as coming years; but [...] also one of the most rarely defined, the most nebulous and misunderstood, as well as the most politically effective".

The paper rests upon the following hypothesis: globalization comprises a multitude of complex processes that are very dynamic; among these processes there is one that implies the strengthening and expansion of relationships between national economies. Therefore, the economic dimension represents a key factor supporting globalization in all its other dimensions.

Many authors consider *economic globalization* as the main pillar, the foundation of globalization upon which all the other components are built on and developed. Problems that are of great concern do not regard only the causes and consequences of economic globalization but also the content and essence of the process. Although many authors have engaged in this activity, the views expressed prove to be somewhat contradictory, without reaching a consensus.

Like the whole itself, the component "economic globalization" knows many interpretations and definitions developed by theorists as well as by practitioners.

Some authors have gathered in a single paper the different interpretations that the concept of economic globalization knows. In Table no. 1 we present schematically such a synthesis:

Table no. 1. Interpretations of the concept of „economic globalization”

BARNET Richard, CAVANAGH John (1994)	a new era of global competition, which, like a bulldozer, removes everything from its path
DAHRENDORF Ralf (1995)	free movement of capital, where business agents everywhere are able to deposit and invest their money where they wish and are able to do so; a redefined world in which we are all interdependent in a global market;
CABLE Vincent (1995)	a trade regime where the tendency towards integration and the pressure of competitiveness has given rise to mega markets;
BLANK Stephen (1994)	geopolitics, product of the triumph of neoliberalism, capable of externalizing the national policies at global scale;
BAIROCH Paul (1996)	a larger significance of the export sector within national economies;
RODRIK Dani (1997)	the end of the keynesian economy and its international market strategies; as a new form (some say phase) of economic development, in which the role of the state must be redefined;

Source: Postelnicu and Postelnicu, 2000: 60-61

Furthermore, leading researchers within international organizations express different views regarding the content of economic globalization. Specialists from the International Monetary Fond (1997) define economic globalization as "a historical process, result of innovation and technological progress". It refers especially to "the growing economic interdependence of countries worldwide

through increasing volume and variety of cross-border transactions in goods and services, freer international capital flows, and more rapid and widespread diffusion of technology". According to World Bank specialists (WB), globalization is defined as "freedom and ability of individuals and firms to initiate voluntary economic transactions with residents of other countries". European Commission (1997: 45) refers to economic globalization as the process by which markets and production in different countries become increasingly interdependent due to the dynamics of trade in goods and services and capital and technology flows.

From our point of view, the economic dimension of globalization is, without doubt, of a very great importance. It represents a powerful motor for the other components of globalization which come on second place, i.e. components like culture, environment, society and politics. Nonetheless, when describing economic globalization one mustn't reduce its meaning to just the rapid integration of economies worldwide.

OPINIONS EXPRESSED AS REGARDS TO MEASURING GLOBALIZATION

Attempts to devise indicators that could yield empirical insight into the extent and effects of (economic) globalization are relatively recent. Among them, numerous international organizations have initiated various projects aimed at developing indicators and methodologies to measure economic globalization. Such institutions are: the World Bank (WB), International Monetary Fund (IMF), Bank of International Settlements (BIS), United Nations Conference on Trade and Development (UNCTAD), United Nations (UN), Organisation for Economic Cooperation and Development (OECD) and Eurostat. Unfortunately, apart from certain elements on which researchers and institutions tend to agree, we cannot relate to a widely accepted data base, mainly because they are missing or are profoundly heterogeneous, although measures are taken for their harmonization.

From this point forward, the paper pursues two related issues:

- on one hand, the article highlights some alternative approaches and statistical data used by well known international organizations to assess the extent and intensity of a countries' integration into the global system, focusing on the economic component;
- and, on the other hand, the paper highlights the most important synthetic indices devised to analyze and measure the globalization of national economies, emphasizing some comparisons between countries (for which data was available) including the case of Romania.

THE INVOLVEMENT OF INTERNATIONAL ORGANIZATIONS IN MEASURING ECONOMIC GLOBALIZATION

The *Organisation for Economic Cooperation and Development* (OECD) has put together a special group of experts to analyze the process of globalization in all its dimensions – economic, technological, commercial and financial – and to develop a manual (*Handbook*) with internationally comparable indicators. Thus, their work has led to the "Handbook on Economic Globalisation Indicators", an outcome in line with the existing methodological standards of United Nations (UN), European Commission (EC), and other international bodies. Researchers at the OECD founded the Handbook upon data bases and methodological work already published by other international institutions, such as: the "IMF Balance of Payments Manual" (or MBP5), the "OECD Benchmark Definition of FDI" (3rd edition, 1996), the "Manual on Statistics of International Trade in Services" (2002) and other manuals that cover information regarding R&D and technology balance of payments, like the "Frascati Manual" (OECD, 2002) and the "Technological Balance of Payments Manual" (OECD, 1990). The final results were:

- The *OECD Handbook on Economic Globalisation Indicators* for 2005 – this manual assesses: capital movements and foreign direct investment, the economic activity of multinational firms, the internationalization of technology and international trade;

- The *OECD Handbook on Economic Globalisation Indicators* for 2010 – this edition of the manual provides a wider variety of indicators that includes, among those from the first edition, some indices linked to the financial crisis, portfolio investments, environmental aspects and the emergence of global value chains.

The peculiarity of these manuals, genuine methodological works, consist in the fact that after identifying a set of relevant indicators that collectively provide insight information into the process of economic globalization, the same indicators are then broken down into their component variables, a technique called “reverse engineering”. Up until these manuals, for measuring the magnitude and intensity of economic globalization, researchers used economic variables with reference to (Bari, 2005: 72): exports and imports, the level of investment, levels of the external-debt and credit, involvement in regional and global financial markets, the dependency on foreign technologies in various industrial sectors, etc.

The *World Bank* (Eurostat, 2007: 6) publishes the annual World Development Indicators (WDI) that includes more than 900 indicators of globalization organized in six sections: World View, People, Environment, Economy, States and Markets, and Global Links. As regard to economic globalization the World Bank assesses a country's integration with the world economy on the basis of indicators like: indicators of the international commodity exchange, private capital flows and foreign direct investment flows. The economic indicators developed by the World Bank measure, in absolute or relative values, the production and trade level, aggregate demand and macroeconomic performances.

United Nations Conference on Trade and Development (UNCTAD) is an international body dealing, among others, with trade issues, investment and economic development problems and assists developing countries to integrate beneficially into the global economy. Special attention is given also to the phenomenon of (economic) globalization, given the fact that a new programme has been launched “Globalization and Development”.

Among last UNCTAD publications our attention is focused upon the „Trade and Development Report, 2010; Employment, globalization and development”. Using succinct explanations and key data laid down in easy-to-read tables and charts, the report surveys major developments over the past 40 years in the world economy in the context of globalization (with focus on economic globalization). According to the report this is more than just a actualization of last issues. The 2010 publication is aimed at the process of economic globalization with various analytical studies and explanations regarding new economic trends (UNCTAD, 2010).

International Monetary Fund (IMF) is another important international organization which uses various indices to illustrate how globalized are the goods, capital and people: trade (goods and services) as a percentage of global GDP has increased from 42.1% in 1980 to 62.1% in 2007; Foreign Direct Investment (FDI) to global GDP increased from 6.5% in 1980 to 31.8% in 2006; the level of international money demand (especially bank loans) as percentage of world GDP rose from around 10% in 1980 to 48% in 2006; the number of persons working abroad increased from 78 million people (2.4% of the world's population) in 1965 to 191 million people (about 3% of the world's population) in 2005 (IMF, 2008: 2).

The recently created website by the *Inter-Agency Group on Economic and Financial Statistics* (Principal Global Indicators), also known as IAG, provides internationally comparable data for the Group G-20. The information obtained is used to facilitate the monitoring of economic and financial developments for these economies. The website was launched in response to the global economic and financial crisis and is hosted by the IMF. Under the umbrella of IAG collaborate the following institutions: BIS, ECB, Eurostat, IMF (as Chair), OECD, UN, and WB (Inter-Agency Group on Economic and Financial Statistics, 2010).

THE USE OF INDICATORS TO MEASURE ECONOMIC GLOBALIZATION

The need to measure economic globalization is now of central concern both for academic circles as for the business environment, the mass, the specialized mass media and policy makers.

Although it is almost impossible to believe that such a complex phenomenon could be described by a single representative figure, this paper attempts to place a theoretical debate on more solid scientific basis (in terms of economic globalization indices).

The economic literature provides various instruments devised to measure the extent of how much an economy has been globalized but the most significant indicators are: the KOF Index Globalization (or Axel Dreher's Index), the indices formulated by A.T. Kearney (the ATKFP Index and M-GI), the Index of Globalization created by the Centre for the Study of Globalization and Regionalization (CSGR-Index of Globalization) and the Index of Globalization constructed by World Markets Research Centre.

A. The KOF Index of Globalization

Axel Dreher, a researcher at the *KOF Swiss Economic Institute*, has devised a composite index of globalization basing its work upon the following statement regarding the meaning of globalization: "it is a process that erodes national boundaries, integrates national economies, cultures, technologies and governance, and produces complex relations of mutual interdependence" (Dreher, 2006: 1092). First created by Dreher in 2002, the index was then revised in 2008 by Dreher, Gaston and Martens (2008). The index is considered to be one of the most significant measures of globalization proposed to date. The KOF Index for 2011, computed from 23 variables, offers information regarding the state of globalization for 208 countries for the period 1970–2008.

The KOF Index comprises three of the fundamental dimensions of globalization: economic, social, and political. Within these dimensions, Dreher took into consideration six sub categories. Regarding the sub-index for economic globalization it includes on the one hand long distance flows of goods, capital, services and information and, on the other hand, several restrictions.

The formula employed to calculate the KOF Index of Globalization is (1):

$$\text{The KOF Index of Globalization} = \sum_{i=1}^n w_i \left(\frac{V_i - V_{\min}}{V_{\max} - V_{\min}} \right) \times 10 \quad (1)$$

where, i indicates time periods,

w_i are the weights attached to each contributing variable,

V_i , V_{\min} and V_{\max} are normal, minimum and maximum values of respective variables.

The major disadvantage of the KOF formula for the 2002 version is that every a variables' actual weight in the index (w_i), is to some extent affected by its distribution. Therefore, the results were sometimes influenced by extreme outlying observations or missing values. In order to provide a better comparability over time in the updated version of the index (KOF 2006) the variables are normalized for the whole period and not for each particular year (like the case of the KOF 2002).

As regards to the economic dimension of globalization, the KOF Index for 2011 includes two components: on the one hand, it considers the actual flows, and on the other hand, it uses proxies for the restrictions on trade and capital (for details, see Appendix 1).

If we look at the KOF index for 2011, we can say that mankind has advanced greatly in the last 40 years. The world has become more globalized, while the United States continued to dominate for a long time the global arena. But not only that humanity as a whole has become more globalized, but many countries have gained access to the globalization. In terms of *economic globalization*, at global level, the KOF index has increased from 40.18 in 1970 to 64.23 in 2007, while for Romania, the KOF index gradually increased from 29.73 in 1970 to 75.04 in 2007 (an enormous increase of approximately 152%) as shown in Fig. no. 1.

In the context of the global economic crisis, effects upon the degree of economic globalization soon appeared, thus recording decreased values for Romania (the index value decreased by 2.8% in 2008 compared to 2007) as well as at global level (decrease 1.5% in 2008).

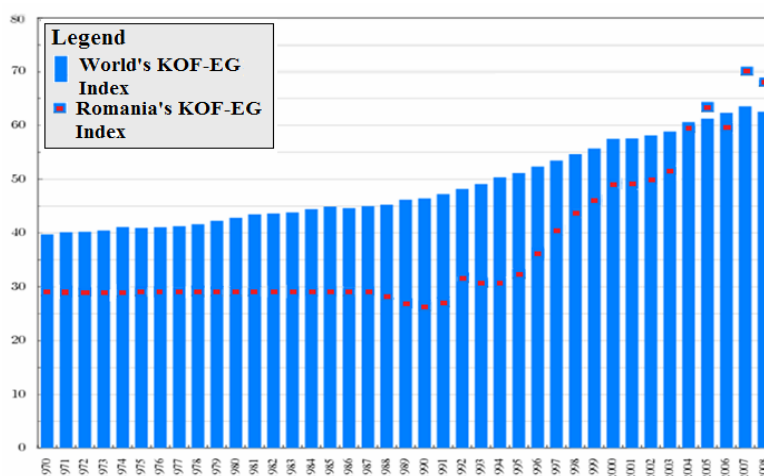


Figure no. 1. KOF Index of Economic Globalization for Romania and the world (period 1970-2008)

Source: graphs generated using data from <http://globalization.kof.ethz.ch/>

The KOF Swiss Economic Institute publishes annually country rankings using the KOF Index of Globalization as well as its sub-indices. Table no. 2 sets out the classifications of the 10 most globalized countries (and Romania's position) according to the KOF Index of Economic Globalization, for a period of five years (2004-2008). An important aspect that must be taken into consideration is the fact that, in the period 2004-2005 the dataset includes 122 countries, while later this was extended to 208 countries.

Table no. 2. Classification of the 10 most globalized countries (and Romania's position) according to the KOF Index of Economic Globalization (KOF-EG), for the period 2004-2008

Rank	KOF-EG 2007*	KOF-EG 2008°	KOF-EG 2009†	KOF-EG 2010□	KOF-EG 2011'
1	Luxembourg	Singapore	Singapore	Singapore	Singapore
2	Singapore	Luxembourg	Luxembourg	Ireland	Luxembourg
3	Ireland	Belgium	Ireland	Luxembourg	Ireland
4	Belgium	Malta	Malta	Netherlands	Malta
5	Estonia	Estonia	Belgium	Malta	Belgium
6	Netherlands	Sweden	Netherlands	Belgium	Netherlands
7	Austria	Finland	Estonia	Estonia	Hungary
8	Sweden	Hungary	Hungary	Hungary	Estonia
9	Portugal	Austria	Bahrain	Sweden	Bahrain
10	United Kingdom	Netherlands	Sweden	Austria	Sweden
ROU	<i>Romania (54)</i>	<i>Romania (43)</i>	<i>Romania (57)</i>	<i>Romania (44)</i>	<i>Romania (53)</i>

Note * based on data for the year 2004 ° based on data for the year 2005 † based on data for the year 2006 □ based on data for the year 2007 ' based on data for the year 2008

Source: generated by author using data from <http://globalization.kof.ethz.ch/>

One can note from table no. 2 that for the entire period, Romania is positioned almost at the middle of the ranking, as compared to the other countries (the indexes range from 0 to 100). In the period 2004-2005, it is present in the first half of the ranking with a KOF-EG index value of 62.18 in 2004 and 69.65 in 2005. Later, after including other 86 countries in the dataset, Romania's position improves, ranking the 44th place in 2007 with a KOF-EG index value of 75.04 (in the top 25% of the ranking). Nevertheless, after the outburst of the global crisis, Romania is ranked 53th, dropping 9 places.

B. The A.T. Kearney Globalization Index

The most well-known and cited index of globalization is the one produced by A.T. Kearney and published annually by the prestigious magazine Foreign Policy. The *A.T. Kearney/Foreign*

Policy Index (ATKFP) is used to make country rankings as to the extent of the process of globalization (economic also).

Unlike the KOF index, the ATKFP index comprises four of the fundamental dimensions of globalization: economic integration, technological connectivity, personal contact, and political engagement. To each of these dimensions are assigned two or more variables so that, the overall index uses in total 12 main variables (these variables refer to trade, foreign direct investments, movement of people across borders, telephone and internet traffic etc.).

The formula used to calculate the rating for each country (formula 2) involves the normalization of individual variables and subsequent aggregation using an ad hoc weighting system. This way, the index offers a true image of national economies:

$$\text{The A. T. Kearney Globalization Index (ATKFP - GI)} = \sum_{j=1}^J \omega_j \left(\sum_{m=1}^M \omega_m \left(\frac{X_{imjt} - X_{jm \ t}^{\min}}{X_{jm \ t}^{\max} - X_{jm \ t}^{\min}} \right) \right) \quad (2)$$

where, i and t indicate country and time periods,
 m and j are within and between major component variables,
 ω_m are the weights attached to each contributing X-value,
 ω_j are weights attached to each component,
 \min and \max refer to minimum and maximum values of respective variables across countries in a given year

According to the latest edition of the Globalization Index publication (2007), the fruit of a seven year collaboration between Foreign Policy Magazine and A.T. Kearney, the ATKFP Globalization Index is calculated for 72 countries (ten more than the 2006 edition) and corresponds to 97% of the global GDP and 88% of the world's population.

In terms of *economic globalization*, the A.T. Kearney/Foreign Policy index considers two key variables: trade and foreign direct investments (for details, see Appendix 1).

After computing the degree of economic globalization using the ATKFP index for a period of four years (2004-2007) one can see that Hong Kong ranks 1st place since its inclusion in the classifications. Another important shift is that of Holland's returning in the top three states for the first time since 2001. As regards to Romania, after a rapid rise from the 38th position in 2004 to the 11th place in 2006 plunged to 29th place in 2007 (Table no. 3).

Table no. 3. Classification of the 10 most globalized countries (and Romania's position) according to the economic dimension of the ATKFP Index for the period 2004-2007

Rank	ATKFP-EGI 2004	ATKFP-EGI 2005	ATKFP-EGI 2006	ATKFP-EGI 2007
1	Ireland	Singapore	Singapore	Hong Kong
2	Singapore	Ireland	Panama	Singapore
3	Netherlands	Panama	Malaysia	Estonia
4	Panama	Malaysia	Ireland	Netherlands
5	Slovakia	Netherlands	Czech Republic	Denmark
6	Czech Republic	Hungary	Slovakia	Ireland
7	Finland	Croatia	Hungary	Belgium
8	Malaysia	Slovakia	Denmark	Panama
9	Switzerland	Switzerland	Switzerland	Malaysia
10	Sweden	Austria	Chile	Jordan
ROU	Romania (38)	Romania (25)	Romania (11)	Romania (29)

Source: generated by author using data from the ATKFP-GI reports for the period 2004-2007,

<http://www.atkearney.com>

C. The CSGR-Index of Globalization

The Centre for the Study of Globalisation and Regionalisation (CSGR) has developed, under the expertise of A.T. Kearney, an index that measures the *economic*, social and political dimensions of globalization for many countries, on an annual basis over the period 1982 to 2004.

The *CSGR-Index of Globalization* combines three sub-indices and is computed following a five steps process (Lockwood, Redoano, 2005).

Regarding the *economic dimension of globalization*, the CSGR Globalization Index employs the following components: trade, foreign direct investments, portfolio investments, and income (for details, see Appendix 1).

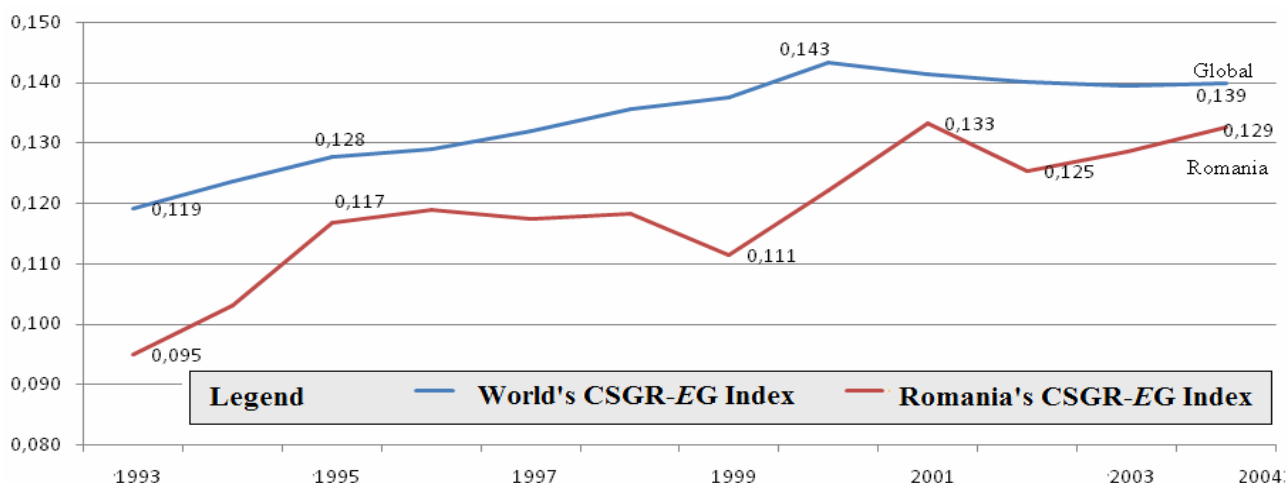


Figure no. 2. The CSGR Index of Economic Globalization for Romania and the world (period 1993-2004)

Source: graphs generated using data from de <http://www2.warwick.ac.uk/fac/soc/csgr/index/>

As we can see in Fig. no. 2, the value of the economic dimension of the CSGR Index of Globalization (CSGR-EG) has increased during the analyzed period, both for Romania as well as for the entire world. Unlike the KOF Index where we can see an uptrend in the period 1998-1999, the CSGR Index registers a downtrend, this because of the different composition of the indices.

D. The Modified Globalization Index (MGI)

A complex phenomenon, that encompasses several components that together have a greater effect than the sum of their parts, must be assessed as a whole. Globalization is an example of such complex phenomenon. This is the premise from which Martens and Zywiets (2006) started their work and proposed a composite index to measure globalization.

Although indices such as the ones we have analyzed – ATKFP Globalization Index and CSGR Globalization Index – can provide valuable information, they present nevertheless a significant weak point: as regard to the economic dimension of globalization, both indices are focused only on a very specific point of view, namely the neoliberal one (Martens and Zywiets, 2006: 333). This restrictive point of view stems from the narrow definitions of globalization that both indices use (for example, globalization is seen as the “ever closer knitting together of a one-world economy”) (Randolph, 2001: 5).

The Modified Globalization Index or the „MGI” or „The Maastricht Globalisation Index” (Dreher and others, 2008: 29) created by Martens and Zywiets (in a four step process) is considered to be a composite index that provides a comprehensive picture of globalization. The index is considered to be valuable because of the conditions that it fulfills: relevance, robustness, transparency and it adds value (it is not redundant).

The MGI Index is based upon the ATKFP-GI index, but is improved both conceptually and operationally and uses data for 117 countries, from a variety of resources and data bases. Unlike the ATKFP-GI index, the two researchers included in their index two new variables: “environment” and “trade in conventional arms”. In regards to the similarity of the MGI Index with the KOF Index, there are many resemblances but there are also methodological differences. For example, while the MGI Index explicitly includes the environmental component, the KOF Index excludes it from the formula because it is considered the result of the other components.

In terms of *economic globalization*, the MGI index considers the following sub/indices (for details, see Appendix 1): global trade (the sum of imports and exports of goods and services as a share of GDP) and global finance (with FDI and gross private capital flows).

E. The Globalization Index developed by the World Markets Research Centre

The World Markets Research Centre (WMRC) is a company with headquarters in London and provides information regarding the business environment (of 185 countries) for directors of multinational corporations, financial institutions and governments worldwide. Researchers at WMRC have developed in 2001 the "G-Index". Unfortunately, since then, the database has been updated. However, it has a notable feature for which it was heavily criticized: although the index claims to measure globalization as a whole, it is in fact focused almost exclusively (90%) on the economic dimension of the phenomenon (only 5% of the index is based on telephone traffic and the remaining 5% on Internet traffic).

In an attempt to measure the depth and magnitude of a country's economic links with the world, the WMRC analysts reduce the world economy to the two categories of "old economy" and "new economy" (Randolph, 2001). The *a priori* weights of the "G-Index" lean heavily towards trade and exports, so that the components "international trade" and "service exports" make up 70% of the overall index weight. These features are not to be at all neglected, because they raise the ranks of small trading nations that have huge (transit) trade volumes with respect to their internal economy.

CONCLUSIONS

The lack of a consensus regarding the existence of clear anchors, which can describe the phenomenon of globalization, is due not to the fact that nobody has ever defined globalization, but because there are too many definitions in the economic literature. Given these circumstances, can we be more successful in finding a better measurement of the phenomenon of globalization than the attempt to define it? Can we capture it in a single representative figure?

Although economists and statisticians alike do not agree upon a definition of globalization, they agree however on the level of difficulty of the process of measuring it. Because it is such a complex and multidimensional phenomenon, it is almost impossible to extract only the effects of the *economic dimension of globalization* (we could accidentally overlook the effects of the correlation between this component and the others).

Despite all, attempts to measure globalization as a whole, or just the economic dimension, are made and this paper focuses upon some of these attempts: on one hand, the article highlights some alternative approaches and statistical data used by well known international organizations to assess the extent and intensity of a countries' integration into the global system, focusing on the economic component; and, on the other hand, the paper highlights the most important synthetic indices devised to analyze and measure the globalization of national economies, emphasizing some comparisons between countries (for which data was available) including the case of Romania.

Thereby, the paper succeeds in providing a comprehensive picture of the extent of the process of economic globalization and the impact on the global economy (and on the Romanian economy) using three indicators quite new in the economic literature: the KOF Globalization Index, the globalization index proposed by A.T. Kearney/Foreign Policy (a starting point for the works of other indices in Andersen and Herbertsson (2003) or Lockwood (2003)) and the CSGR Globalization Index. Also we have included in the paper other two important globalization indices – the M-GI and WMRC Index – paying attention to the economic dimension.

We will continue our research by looking for new ways of measuring economic globalization that will assess, among other things, the process of "forced takeover" of an economy of a country by foreign capital and the degree of expansion of capital abroad. To achieve this, we will use the findings in this paper as a start point (and moreover we will analyze the strengths and weaknesses of the indices already studied).

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REFERENCES

1. Andersen, T., Herbertsson, T. T. (2003), *Measuring Globalization*, Discussion Paper, no. 817. Bonn, Institute for the Study of Labor.
2. Bairoch, P. (1996), *Globalization Myths and Realities: One Century of External Trade and Foreign Investment*, in Boyer, R., Drahe, D. (eds.), *States Against Markets. The Limits of Globalization*, London: Routledge.
3. Bari, I. (2005), *Globalizarea economiei*, București: Editura Economică.
4. Barnett, R.J., Cavanagh J. (1994), *Global Dreams: Imperial Corporations and the New World Order*, New York: Simon and Schuster Publishing House.
5. Blank, S. (1994), *The United States on the Eve of the 21st Century*, Global Business Policy Council, no. 71.
6. Cable, V. (1995), *The Diminished Nation State. A Study in the Loss of Economic Power*, Daedalus, vol. 124, no. 2, pp. 23-54.
7. Dahrendorf, R. (1995), *A Precarious Balance: Economic Opportunity, Civil Society and Political Liberty*, The Responsive Community.
8. Dreher, A. (2006), *Does Globalization Affect Growth? Evidence from a new Index of Globalization*, Applied Economics, no. 38, vol. 10, pp. 1091-1110.
9. Dreher, A., Gaston, N., Martens, P. (2008), *Measuring globalisation: gauging its consequences*, New York: Springer.
10. Lockwood, B. (2003), *How Robust is the Foreign Policy/Kearney Index of Globalization?* Working Paper, 7901, University of Warwick, Centre for the Study of Globalization and Regionalisation.
11. Lockwood, B., Redoano, M. (2005), *The CSGR Globalisation Index: an Introductory Guide*, Working Paper, Centre for the Study of Globalisation and Regionalisation, no. 155/04.
12. Martens, P., Zywiets, D. (2006), *Rethinking Globalization: A Modified Globalization Index*, Journal of International Development, no. 18, pp. 331-350.
13. Postelnicu, G., Postelnicu, C. (2000), *Globalizarea economiei*, București: Editura Economică.
14. Randolph, J. (2001), *G-Index: 'globalisation measured*, World Markets Research Centre.
15. Rodrik, D. (1997), *Sense and Nonsense in the Globalization Debate*, Foreign Policy, no. 107.
16. Ulrich, B. (2003), *Ce este globalizarea? Erori ale globalismului – răspunsuri la globalizare*, București: Editura Trei.
17. *** „World Economic Outlook” (may 1997), Fondul Monetar Internațional.
18. *** „Second European Report on S&T Indicators” (1997), Comisia Europeană, Brussels.
19. *** „Focus on: Measuring globalisation” (2007), *Selected Readings*, Eurostat, p. 6, disponibil la http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/LN-SR122007/EN/LN-SR122007-EN.PDF
20. *** „Trade and Development Report, 2010; Employment, globalization and development” (2008), *United Nations Publication*, UNCTAD, New York and Geneva, disponibil la adresa

<http://www.unctad.org/Templates/webflyer.asp?docid=13740&intItemID=2093&lang=1>

21. *** „Globalization: A Brief Overview” (2008), *International Monetary Fund Issues Brief*, IMF Staff, no. 2.
22. *** „Principal Global Indicators” (2010), Inter-Agency Group on Economic and Financial Statistics, disponibil la adresa <http://www.principalglobalindicators.org/default.aspx>.
23. *** „World Development Indicators (WDI)” (2010), Banca Mondială, disponibil la adresa <http://data.worldbank.org/data-catalog/world-development-indicators/wdi-2010>.
24. *** http://www.oecd.org/home/0,2987,en_2649_201185_1_1_1_1_1,00.html

APPENDIX 1

Components of the KOF, ATKFP, CSGR, M-GI and WMRC Globalization Indices – the economic dimension

Index	Components / Variables	Definition (methodology)
The KOF 2011 Globalization Index	Actual Flows	
	Trade	Exports and Imports of Goods and Services, % of GDP
	Foreign Direct Investment Flows	FDI Inflows and Outflows, % of GDP
	Foreign Direct Investment Stocks	Stocks of FDI, % of GDP
	Portfolio Investments	Inflows and Outflows of Portfolio Investments, % of GDP
	Income Payments to Foreign Nationals	Total sum of Income Payments to Foreign Nationals, % of GDP
	Restrictions	
	Hidden Import Barriers	-
	Mean Tariff Rate	-
	Taxes on International Trade	Total sum of Taxes on International Trade, % of GDP
Restricționări ale contului de capital	-	
The ATKFP 2008 Globalization Index	Trade	Exports and Imports of Goods and Services, % of GDP
	Foreign Direct Investment	FDI Inflows and Outflows, % of GDP
The CSGR 2011 Globalization Index	Trade	Exports and Imports of Goods and Services, % of GDP
	Foreign Direct Investment	FDI Inflows and Outflows, % of GDP
	Portfolio Investments	Inflows and Outflows of Portfolio Investments, % of GDP
	Income	Employee compensation paid to non-resident workers plus employee compensation paid to resident workers working abroad, % of GDP
The Maastricht 2011 Globalization Index	Global Trade (Trade)	Exports and Imports of Goods and Services, % of GDP
	Global Finance	
	Foreign Direct Investment	Stocks of FDI, % of GDP
	Capital	Gross Private Capital Flows, % of GDP
The WMRC Globalization Index	New Economy	3 variables
	Old Economy	3 variables