

## Case Study on KOF Globalization Index for Greece, Czech Republic, Poland, Romania and Hungary

Anca Ioana Troto (Iacob)  
University of Craiova, Romania  
[anca\\_ioana\\_iacob@yahoo.com](mailto:anca_ioana_iacob@yahoo.com)

### Abstract

*Through the decision of the European Union to extend the borders of influence and, implicitly, through the accession to western values of the states previously under Soviet authority, the process of regionalization at European level and integration of the mechanisms of the economic and financial markets has gained momentum.*

*This study analyzes the evolution of the compositional indicators of financial integration at the level of the Euro from 1995 until 2018, highlighting their behavior in the key moments of the history of the European Union and the degree of integration of the markets emerging from within the European Union. Using the KOF globalization index, it analyzes the level of integration of Greece, the Czech Republic, Poland, Romania and Hungary, making a parallel of the evolution of these markets since the reference year 1990, as an arbitrary moment of the decision to westernize the economies of these states.*

**Key words:** the evolution of globalization, comparative analysis of KOF, regionalization of the European Union

**J.E.L. classification:** E60, F40, F62

### 1. Introduction

The internationalization of the economic and financial markets is a subject that permanently attracts the interest of the academic and business environment. In recent decades, this process is analyzed through the prism of specific indicators, in order to quantify the advantages of the phenomena of regionalization and globalization, as well as to draw forecasts based on which the business environment to capitalize on the internationalization of markets. Researchers permanently adapt the methodologies for analyzing this phenomenon, according to the factors of influence and the social and political changes at a global level. Moreover, the degree of internationalization of financial markets entails domestic economic growth, the association of developing and emerging states with developed markets generating obvious benefits.

This paper studies through the kof globalization indicator the evolution of globalization and regionalization phenomena, in the case of the emerging countries of the European Union - the Czech Republic, Greece, Poland, Hungary and Romania, the reference period being the years 1990-2018.

### 2. Theoretical background

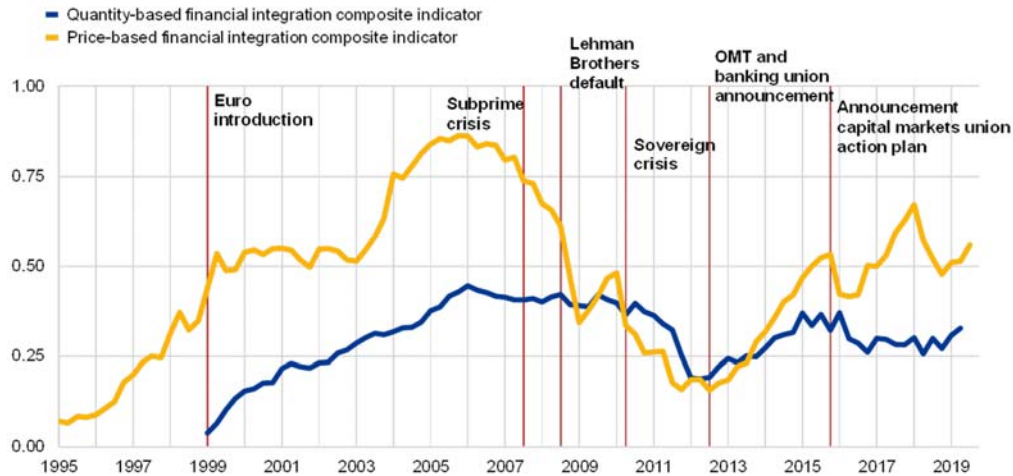
Looking at financial integration in the European Union region, a first observation is that the picture is the discrepancy when we look at the situation of Europe and non-EU states. The foreign assets of EU countries, given both those held in EU and non-EU countries, at the level of 2007, had increased by 350%. The period of 2008-2009, under the influence of the financial crisis, recorded a setback, and the recovery was made at a slower pace than the pre-crisis one.

For an analysis of the financial integration of the euro area, the financial integration indicators calculated by the European Central Bank can be used, which are based on several dozen aspects related to the integration of the business and financial environment (ECB, 2018; Hoffmann et al,

2019). In this respect, two indicators are noted: one is the one based on price, calculated according to the degree of dispersion of the return on assets between countries. The second is based on quantity and cumulating information related to foreign assets, for asset classes in different sectors (e.g. bonds or shares).

Looking at these two composite indicators, it is noted that EU countries have gradually become more financially integrated, with an accelerated growth rate since the introduction of the euro in 1999. A graphical highlighting of this trend can be found in Figure 1. It is noted that the political decisions taken in 2012 with the aim of redressing the crisis of previous years have helped to balance the financial markets and to stimulate a step-by-step recovery of financial integration. However, it should be noted that the level of recovery was still slow, as in 2019 the level was below that of 2007.

Figure no 1. Compositional indicators of financial integration in Europe in the period 1995-2019



Source: <https://www.ecb.europa.eu>

In this competition between globalization and deglobalization, international institutions bring their contribution in tilting the balance towards unification and integration. In the case of the European Union, currently the most complex integration project, we find in the permanent concern of international bodies the adaptation of economic and financial aggregation measures to the reality of the business environment. In the document prepared by the European Commission on harnessing globalisation opportunities (2017), the signatories state that "If we close our borders, others will do so too. That's how we would all be losers."

The same report draws attention to the fact that Europeans' view of globalisation is different. The report prepared in 2016 by the European Commission together with the Bertelsmann Stiftung shows that 45% of the population believed that from some point on, globalization poses a threat to economic opportunities, and 53% of respondents said that globalization is a threat to national identity. In our opinion, these figures are all the more worrying because the study was carried out before the health crisis, which exacerbated anti-Europeanism. Of course, financial mechanisms are not directly influenced by individual opinions, but when Euroscepticism goes beyond the boundaries of the free expression of a minority group, these ideologies cannot be ignored.

Thus, the abovementioned European Commission report discusses an adaptation of the globalisation process so that it remains competitive. A graphical representation of these trends can be found in Table 1.

Table no. 1. Globalization in the present and in future

Globalization so far	Trends influencing globalization
Material flows of physical goods	Non-material flows of data services
Demand for more and more diversified goods and services	Demand for fair trade products as well as for sustainable and local products
Global supply chains	Global value chains
Flows in particular between developed economies	Increased participation of emerging economies and metropolises
Flows from states and large multinationals	The growing role of small businesses, non-state actors and individuals
Monetary quantified transactions easily	The growing importance of open sources and shared content
Technology transfer from developed economies to emerging economies	Technology transfer in both directions

Sources: European Commission, McKinsey Global Institute, OECD.

In his research on globalisation and deglobalisation in Europe, Darvas (2020) shows that the European Union manages to keep the upward trend in terms of globalisation at a level far superior to other areas. In our opinion, this is primarily due to the joint effort coordinated by the international institutions and organizations, which have worked together in this regard. e Darvas notes in the European Union the support for globalisation, free trade and immigration among citizens are on the rise. On the other hand, the EU is facing negative social aspects, which are particularly visible in the countries that have weaker economic and financial results in the last decade and where the forecasts are not very optimistic. This state risks extending in the very likely event that in the coming years the EU will see a slowdown in economic developments, an increase in the unemployment rate and a slowdown in support of the globalisation process.

We find to remember the point of view of the mathematician and economist Thierry de Montbrial (2020), in which he believes that the evolution of financial integration at European level will go through several stages. Thus, in the short term, Member States will rely on mutual support, with the common aim of ending the covid-19 crisis and economic recovery; the eu's common denominator will be 'cooperation' and both developed and less developed markets will take policies in common directions. In the medium-long term, the arguments of economists will be for the free movement of capital and financial services, and it is necessary to broaden horizons, while in the long term the recovery towards globalisation will be based on institutional cooperation, the strengthening of international authorities and on financial support, exemplifying with the loans granted by the International Monetary Fund. Montbrial draws attention to the fact that without such measures Europe risks if a step backwards in terms of market integration, as a result of which the EU's two great challenges will be efficiency and democracy.

Piketty, looking at the European financial environment at the level of 2020, is of the opinion that the European Union is facing an increase in pressure on the financial markets, caused by a new sovereign debt crisis, as well as by a population with a reluctant voting right to the impositions and restrictions that Member States have implemented during the health crisis. In this regard, we share Piketty's view that the European Union is moving towards fiscal integration whose aim is to avoid a 'catastrophic bill'. However, we wonder whether it is a certainty that this integration will work in the spirit of equality or will particularly benefit the developed markets.

### 3. Research methodology

In order to quantify the degree of globalisation, the scientific environment has developed several calculation formulas. Among them we mention the ATKEP indicator, whose author, Keaney calculates the level of globalization using 12 variables including economic integration, social contact, technological interconnectivity and political approaches, considering a total of 62 states.

Another indicator used in scientific research is the G-Index composite globalization index, created by the World Markets Research Center (WMRC) and which quantified the level of globalization for 185 countries, based on the main variables telephone traffic, economy and Internet traffic. The NGI (New Globalization Index) was created by Vujakovic in 2009 (Vujakovic, 2010); it takes into account a database of 70 countries and 21 variables, calculating globalization since 1995. The CSGR Globalisation Index (GSCR) was proposed by the Center for Globalization and Regionalization Studies and was created with the aim of quantifying the economic, political and social dimension of globalization in the period 1982-2004.

The most used indicator in specialized studies, however, is the KOF Globalization Index (Potrafke, 2015). It is used to measure the phenomena of globalization, respectively deglobalization, in terms of economic, social and political dimensions. The KOF indicator "reflects the degree of economic, social and political globalization of the hazelnut country, without making positive or negative assessments on the result" (Adventage Austria, 2016), a composite index that incorporates different aspects of society into a single indicator that determines the state of affairs at a certain time.

KOF has been used in comparative and chronological analyses since 1970 until now, providing data whose extrapolation can support medium-term forecasts. The values of the KOF index fall within the scale 1-100, where 100 represents the maximum of a specific variable for the entire sample of the selected states, relative to the selected time period. This indicator integrates economic, social and political aspects, using equal weights, being calculated as an average of the global index of globalization KOF de facto and de jure.

#### 4. Findings

According to the FTSE Russell report, at the end of 2020 among the Member States of the European Union, the Member States that fall under emerging market status are the Czech Republic, Greece, Romania and Poland.

In the study of their degree of globalization / deglobalization, using the composite indicator KOF, we choose as the reference period the interval 1990-2018 (the study stops at the level of 2018, there are no more recent official data at this time), in order to encompass the entire post-communist period and to be able to observe the evolution of these markets in the context of the transition to capitalist markets.

As shown in Table 2., the evolution of the globalization index was unanimously on a positive trend. At the beginning of the period we were referring to, the level of the index is close in the case of Greece, Poland and Hungary. Even if for the period 1990-1992 there are no official data, we can add to this list the Czech Republic, arguing on similar figures reported since 1993. There was a lower level in the case of Romania, which confirms the more isolated economic and political environment from which it suffered during the communist period, compared to the other states. We note that the evolution is a constantly positive one, and the negative events that have influenced at the economic and financial level have not significantly influenced the growth rate.

Table no. 2. KOF Globalization Index 1990-2018

Year	Czech Rep.	Greece	Poland	Hungary	Romania	Global	Europe and Central Asia
1990		56	51	58	43	43	59
1991		63	52	60	47	43	52
1992		65	55	62	49	44	53
1993	66	67	58	64	52	46	55
1994	67	68	61	67	55	47	57
1995	69	68	62	68	57	48	58
1996	69	69	62	71	58	48	59
1997	71	70	63	73	60	49	61
1998	72	71	65	74	60	50	62

1999	74	73	65	75	61	51	63
2000	76	75	68	76	63	52	64
2001	77	76	68	78	64	53	65
2002	78	75	70	78	66	53	66
2003	78	77	71	78	67	54	66
2004	79	77	75	81	68	55	68
2005	80	77	75	82	72	56	68
2006	81	78	76	83	72	57	70
2007	82	80	78	84	76	58	72
2008	82	80	77	85	76	59	72
2009	82	79	77	85	76	59	72
2010	82	79	77	85	76	60	73
2011	82	80	77	85	77	60	73
2012	83	80	79	84	77	61	73
2013	83	81	79	84	78	61	73
2014	84	82	80	85	79	61	74
2015	84	81	80	84	80	61	74
2016	85	81	81	84	80	61	74
2017	85	82	80	84	80	62	75
2018	85	83	80	84	79	62	75

Source: <https://kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html>

For a comparative analysis of the KOF index of these countries, we include in the observation the values recorded at global and regional level (Europe and Central Asia). Thus, it is noted that in the early '90s, the Czech Republic, Gresia, Hungary and Poland had a level of globalization similar to that of Europe and Central Asia and much higher than the global average, while Romania was comparing itself to the global level, but was much lower than the European average.

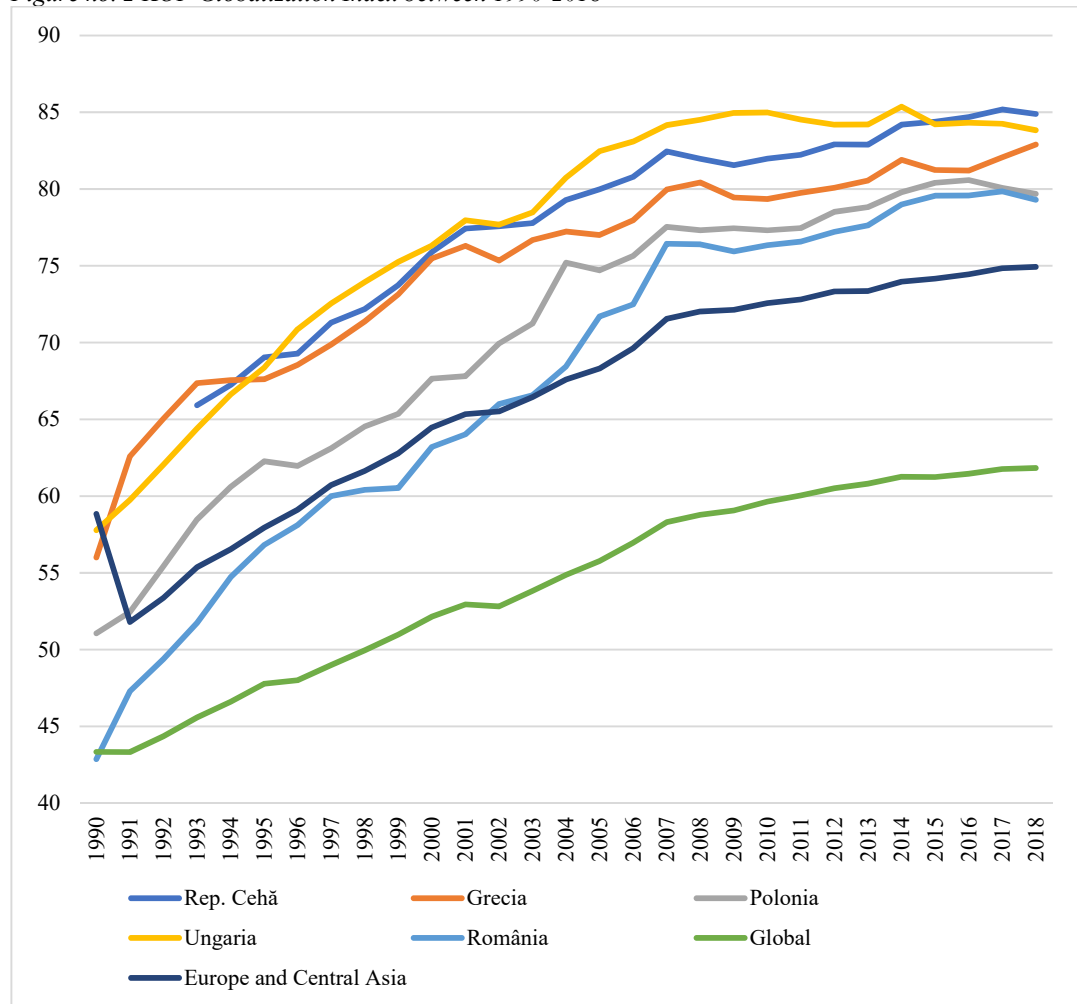
The period 1990-2020 represented for the current emerging markets of Europe an opportunity for great development, which is also demonstrated by the rapid upward pace of the KOF index. Analyzing Fig. 2. we can say that, in a favorable context and supported by the developed countries of the region in which they are located, the less developed countries have the capacity to expand globalization higher than the established markets, reaching a certain level from which the trend is no longer of significant growth and maintenance of that index.

In our opinion, among the countries studied, Romania represents the market that has taken the most advantage of the globalization process at the level of the European Union. Even if the KOF index registers lower values compared to the other emerging markets, Romania's ambitious evolution has reduced the value difference it had at the beginning of the analyzed period. It is noted that ten years after giving up being a communist market, Romania's KOF index reaches the European average, far exceeding the global index. The prospect of joining the European Union represented an impulse for the upward pace of the globalization of the Romanian market, so that the KOF index recorded in 2007 the biggest jump.

Comparing with the other European emerging markets that had a similar European path, we note that the Czech Republic's accession in 2004 to the EU did not have a significant benefit from the point of view of globalisation, unlike in Poland, for which the accession of the same year to the European market represented an impulse similar to that which Romania benefited.

At the level of 2018, there is still a difference in the KOF globalization index between Romania and the other emerging markets, but the gap is significantly reduced. It is worth mentioning that the indices recorded by all the countries declared to have emerging markets are above the European average.

Figure no. 2 KOF Globalization Index between 1990-2018



Source: author processing

## 5. Conclusions

Scientific researchers and business specialists must be aware that changes are inevitable and the solution lies not in censoring voices contrary to our ideologies, nor in ignoring them by continuing globalization policies without taking into account the social and economic reality.

From our point of view, in the event of an involution of the globalization process, determined by the economic, political and social context at global level, a solution would be the temporary compromise of regionalisation – a de-escalation of nationalist behaviors and the contracting of markets in within their own borders, by stimulating fiscal policies at regional level, thus preserving cross-border transactions, international capitals and, implicitly, a diplomatic and competitive environment in the positive sense. However, it is important to note that the process of regionalisation also has certain challenges. A regional concentration is made around several developed markets, which tend to gain advantages and an exaggerated authority over the other players in the market, and at the same time to enter into a dangerous competition with the dominant markets of the other regions. Recalling this fact, we cannot fail to recall the Cold War conflict and not draw attention to the negative aspects that the individualistic behavior of the markets in the developed countries can have on all those participating in the integrated economic and financial mechanisms.

In view of the above, we conclude that there is no ideal solution, a perfect mechanism remains a utopia, and fiscal policies must find ways of adapting to the economic reality and shaping financial mechanisms, for the purpose of efficiency, cooperation and tempering the extreme behaviors of the players in the market. From our point of view, a correct attitude on the part of the European Union institutions remains that of focusing on regional autonomy

Regarding the study of the KOF index in the period 1990-2018 for the emerging markets of the European Union, we conclude that their evolution is a net positive one, the values of the globalization index recorded in the last two decades giving confidence to optimistic prospects regarding the integration of these markets in the European and global mechanisms.

In conclusion, even if the academic and business environment bring to the fore more and more often the phenomenon of deglobalization as a real perspective of the immediately following period, the statistical figures show us that the trend remains a favorable one for globalization. We are not saying that deglobalization is an impossible phenomenon, but rather unlikely at global level, in the current context, and the challenges that society and the markets are facing at the moment, such as the health crisis, the immigration crisis, the situation of the Middle East or relations with China are not, in our view, fundamental factors and of long duration, which pushes in a short time horizon towards a new economic and financial order worldwide.

In our opinion, the phenomenon of globalization, in parallel with that of regionalization, remains the global trend in the long term as long as the economic and financial mechanisms will be governed by the common interest of efficiency and profit. We believe that in this system, emerging markets will have nothing to gain, and a radical change that will tilt the global balance towards deglobalization will not start from the economic and financial environment, but rather from political visions and ideologies.

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