A report on the impact of Globalization in the Economy, Health Systems and World Welfare State: Special reference of the Spanish case

Pedro Antonio Martín Cervantes[1] and Salvador Cruz Rambaud[2]

Abstract

At the end of the 70s of the last century, P. Krugman warned of the advent of a new economic phenomenon, the so-called globalization, which, if due measures were not taken, sooner or later would end up dominating the international economic concert, as finally happened. In this report, we analyze how the extreme internationalization of economies has contributed to the rethinking of the different Western Welfare State models within an analytical context, in which even macroeconomic paradigms have had to be reconsidered.

Elements in principle attached to economic globalization, such as migratory movements, the progressive technification of economies, or the growing investment in research and development are highlighted, gauging their impact in relation to the sustainability of health systems in developed countries. It is true that an aura of negativity looms over economic globalization which this paper aims to demystify, insofar as several starting points are offered to reduce its effects, in the same way that we present a good number of original research lines which surely would serve as a guide in the deepening of its study.

Keywords: Human Capital, International Economics, Economic Impacts of Globalization, Economic Development, Government Expenditures and Welfare Programs.

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[1] **Corresponding author:** Departmento de Economía y Empresa, Universidad de Almería, Almería, Spain. pmc552@ual.es.

[2] Departmento de Economía y Empresa, Universidad de Almería, Almería, Spain, scruz@ual.es.

1. Introduction

The present study aims to demystify the term globalization by going back to the definition originally proposed by Krugman (1979). According to this scholar and other sources, that concept obeys more to a certain global conjuncture of the financial markets than a socio-cultural process led by the increase of migratory flows. Obviously, migratory movements would be the most visible face of this phenomenon; however, they are far from being the only ones.

In effect, according to Krugman's perspective, globalization is practically a quasi-*Darwinian process* of natural selection, according to which the strongest or the once most powerful economies will not survive, but rather those that best adapt to the dictates of contexts. These circumstances are not other than the increasing offshoring and decentralization of the production centers, the advance of new technologies, the thrust of the new economic models defined in the Third Industrial Revolution as the Hydrogen Economy of Rifkin (2003) and so many that, in one sense or another, will have a strong ascendancy in the maintenance of the Welfare State.

Our paper is organized as follows: Section 2 dissects the State of Art, distinguishing in turn two fundamental aspects: what we have called "collaterality of globalization" (Subsection 2.1) or how globalization can be measured conveniently starting from synthetic indices (Subsection 2.2) which provide us a sufficiently objective view of the real scope of this phenomenon. In Section 3, we conducted an empirical analysis to test the hypothesis of the globalization according to Krugman (1979) as well as it is analyzed the long term-relation between the globalization and the Welfares State. This paper ends with a series of conclusions and proposals of future lines of research (Section 4).

2. State of the Art

A first sketch of the problem that comes from combining macroeconomics with the permanent influence of the internationalization of the world economies, increasingly integrated and open to the exterior (Gandolfo and Federici, 2016), is the one pointed out by Sassen (2006), arguing that the limits of the economies are no longer the transnational borders, but the whole world itself, which means a radically opposed approach to the classic: the so-called New Economic Geography of P. R. Krugman.

This tendency, one of the *ad hoc* alternative approaches proposed by Arestis (2018) to enrich the scope of macroeconomic studies, has its origin in the hypothesis of Krugman (1979). According to this scholar, in a theoretical scenario characterized by the total mobility of the productive factors, those economic agents (or representative individuals) operating in an integrated economy (in turn, formed by different geographic markets) will experience exactly the same changes, as long as a degree of perfect substitutability between the respective trade of productive factors and the trade of goods.

However, in a mutual free trade context, all agents win, not so in the case of the simple mobility of productive factors, in which both the economic activity and the inherent wealth of free trade are necessarily accumulated in one or a few countries, from a process of cumulative causation (Myrdal, 1957).

Probably, the influence of the New Economic Geography of Krugman is the reason whereby this topic has progressively specialized in the different areas or regional markets of importance. Starting from this large list of works, we can highlight, among others, the implementation of macroeconomics from a net and exclusively European perspective of Dullien et al. (2017), the analysis of the (re)financing of social security subject to the consequent labor reform, referred to the same geographical area of Addison and Welfens (1998), or the stagnation of the Japanese economy from a macroeconomic point of view, "paradigmatic" in the opinion of Werner (2005), in which the effects of globalization undoubtedly became apparently sooner than in any other geographical area.

Whilst for Koo (2018) the globalization is almost the common "Manifest Destiny"[3] which, sooner or later, all economies would have to undertake, for Krugman and Venables (1995), in brief synthesis, it involves the creation of monopolies and international oligopolies in which the plausible transport costs of the goods would be compensated, or overcome in the long run, by the presence of reduced labor costs in certain areas, a process that would end up fostering even more asymmetries and interregional differences, according to Lustig (2000), at the same time that, in line with Welfens (1999), it would increase unemployment and foment structural imbalances in the more developed areas.

At an analytical level, the functioning of social security finds its *quid pro quo* in Stiglitz (2000) in the context of incomplete markets, insisting on the impossibility that, materially, there are not complete markets *per se* capable of taking charge of assuming the totality of the inherent risks related with present and future exchanges. Therefore, the presence of these markets is justified in high transaction costs as well as in the appearance of information asymmetries.

For a better understanding of the effects of globalization on the German, European and Welfare States of the OECD countries, the copious bibliographical production of P. J. Welfens in this regard is essential. Just to mention some of his works, we must underline Welfens (2008), which imminently addresses the necessary reform of the post-crisis European financial sector in favor of the public social security systems maintenance, or Tilly and Welfens (2000), monographic paper which analyzes the specific role plaid by the international economic organizations to adapt the economies to the threats of a globalized world.

Special mention deserves Welfens (2013), a concise and descriptive study of the repercussions of globalization on the Western Welfare States in which, unlike the majority position of literature, pragmatically proposed solutions are bold to ensure its future viability. We consider essential to point out, summarily, the following three points:

1. The ambivalent effects of economic-financial globalization.

Globalization presents a dual character: On the one hand, it has served to generate appreciable economic growth at an international level, however, inducing social inequality in several areas of the planet or the reduction of the salary of the least qualified workers of the OECD, process that, more than likely, will become even more acute in the future. *A priori*, one of the solutions would be to increase public investment in the formation of human capital and recycling. Although this possibility is constrained seriously in the government budgets of the developed nations, forced to generate substantial public expenses to cover the retirement insurance of their respective populations, in general terms, increasingly older.

2. Tax reforms and loss of credibility of the banking sector.

In order to capitalize the system and derive resources towards qualification and recycling, Welfens (2013) proposed that the accrual of tax payments on retirement benefits be designed as a negative function of the participation of qualified workers, seeking in the long term the internalization of the benefits of higher education, also included in this section, and the secondary (positive) effects of the formation of human capital in any sector.

Whatever the explicit role of the banking sector in the financial crisis of 2007-2008, there is no doubt that the degree of trust or credibility of the citizenship towards this particular sector has declined ostensibly during the post-crisis stage. In addition to eradicating short-termism (of global banking and of its regulatory institutions), it is necessary to make it ultimately responsible for its acts by means of a new direct taxation system which, on the one hand, inhibits the speculative practices that led to the crisis and, on the other, make the bank system, as a whole, to be involved in the maintenance of a lasting Welfare State, from which it also benefits. Consequently, Welfens (2013) suggests a new tax, radically different from the classic banking benefits tax, in which financial companies would have to detract part of their margins in direct function of the volatility shown by those markets where they are listed.

3. The new global geopolitical and demographic trends.

The international division of labor, in the medium term, will end up fragmenting the international economy in two major axes, North and South, in which, respectively, world production and services shall be concentrated. Contributions to social security will have to be programmed taking into account the strong demographic decline of Europe and Japan, extending the average periods of contribution per worker as far as possible, and just in those sectors where it could be feasible.

In spite of everything, it is not convenient to describe an excessively fatalistic scenario since, by 2050, when China has consolidated itself as the world's largest economy, its demographic gap with the European Union will have been substantially reduced, that is, this nation will face a kind of problems very similar to the ones currently suffered currently in the western countries.

In practice, for Ciarniene and Kumpikaite (2008) globalization supposes the creation of a transnational single market guided by the principles of free trade, enhanced by a dynamic flow and exchange of information, which offers the opportunity for organizations and individuals to carry out practically any kind of economic transaction, without having to be subordinated to national borders.

McDonald (2016) proposes to reconsider the principles of classical macroeconomics in the face of the concurrence of several factors, among which globalization is mainly envisaged, bearing in mind that a large part of these also have an impact, in one sense or another, on the survival of modern welfare states. To begin with, the predominant environments in the international economic context have for a long time ceased to be "munificent" but rather are, in some way, prey to global uncertainty. The external opening and internationalization of economies is no longer relative but total. Likewise, the progressive technologization, as R. M. Solow predicted, has turned out to be an essential element of economic growth, not exclusively in the hands of the developed nations but extendable to nations not long ago developing, where the constancy, sacrifice and the reduction of the production costs have consecrated new actors or economic partners, thus fostering a competitiveness never seen before.

2.1 The "collaterality" of globalization: migratory movements and technologicalization of economies

Following an approach in principle similar to the conception of the process of cumulative causation (Myrdal, 1957), we can consider the globalization as a concatenation of multiple causal relationships between all kinds of (quantitative and qualitative) variables, many of which, even without being of a strictly economic nature, can come to condition key aspects of international economies such as the aggregate production of a country, the structure of its productive fabric, or the sustainability of its Welfare State. Among all these variables[4], the most likely to be taken into account are the processes of liberalization-deregulation and the migratory movements. In this regard, Potrafke (2010) argues that the ideological component has been of great influence in the global deregulation of product markets (but not in the labor market[5]).

[4]Other factors commonly related to globalization are: the consequences of climate change, the attitude of the affirmations and denials of the Kyoto Protocol, the phenomenon of "export of pollution", the animal micro-emigration of exogenous species sometimes associated with human migration that can lead to viral infections or the erosion of productive systems, the tax evasion or "global money laundering", and a long etc.

[5]This is not an excessively significant fact either, given that, in some specific sectors, the deregulation of product markets may imply the corresponding deregulation of the labor market.

In turn, Potrafke (2013), using panel data from 140 countries, analyzes the relationship between globalization and the deregulation of labor markets. In general terms, he does not find that globalization is *a priori* a determining factor in labor deregulation, regardless its negative connotation or that, by itself, worsens the vital conditions of unskilled workers.

Nevertheless, it seems that the pernicious effects of globalization did not affect so much those areas in which specific measures were previously taken in this regard (Western Europe and Scandinavia, mainly). Oppositely, Bergh and Nilsson (2010), also analyzing panel data (in this case, 80 countries), were very close to Boulhol (2009)'s thesis, corroborating that, jointly, liberalization and globalization increase income inequality.

The remarkable increase of international migratory flows is usually one of the most immediately visible aspects of globalization. However, in all cases it does not seem to be that migrations are only cause or the main factor of this phenomenon, but the current demographic tendency of each of the host nations of the foreign population. Therefore, a causal treatment seems pertinent. From this perspective, the analysis should be: 1) are migratory movements a cause of economic globalization?, 2) is economic globalization cause of migration?, or 3) the causal relationship, already existing, could be bi-directional? Ciarniene and Kumpikaite (2008) adhere to the first scheme, let's call it the "traditional", while Czaika and Haas (2015) describe an intermediate scenario in which globalization is simultaneously a consequence of the technological progress, and of changes of political and ideological order that since the 80s increased the migratory flows throughout the planet.

If we insist that the net increase in migration is due more to the demographic trend than to the process of economic globalization in itself, it is for something very simple and obvious: the demographic "Baby boom" of the western countries (1950-1980) turned into negative vegetative balances at the beginning of the 90s, conforming in almost all the member countries of the OECD, population structures were increasingly aging. Italy and Spain exemplify this process clearly: both with twin population-pyramids aged, both gateway to Europe, and both presenting low R&D investment indices, one of the type indicators of globalization: These nations would begin to receive an increasingly large contingent of emigrants as their populations were aging, not so much for the extent of the internationalization of their economies.

In Spain, this process had (and has) its own dyes, which directly affect the strength of its Welfare State. It is obvious to mention that the negative population growth endangers the foundations of the system, but at this point we have to add that, usually, the population of foreign origin was directly assimilated by the primary sector and construction, performing, in relative terms, a representative group of very low qualification and remuneration.

The contributions as a whole of this population segment were partly limited to continue guaranteeing a universal social security system. On the other hand, unlike in other countries such as Germany (Falk and Koebel, 2004), ICTs, which in themselves imply synergistic technological progress which increases the demand for skilled labor (Welfens, 2013), they were not used to replace non-skilled workers which would induce the marginal productivity levels quite below the European context.

At the opposite pole, the skilled workforce, on which the stability of the system revolves according to Welfens (2013), in the Spanish case was not suitably supported by adequate R&D&I policies, that is why, since the beginning of the 21st century and facilitated by the free circulation of the labor factor in the European Union[6], there was a "brain drain" which would be accentuated during the financial crisis of 2007-2008. Consequently, Spanish social security was deprived of a large number of contributors who, quantitatively, contributed more to the system than non-qualified skill workers (nationals and immigrants), whilst the productive structure of the country resented negatively the emptiness left by the meager application of new technologies in the Spanish Economy.

2.2 Objective measurements of globalization

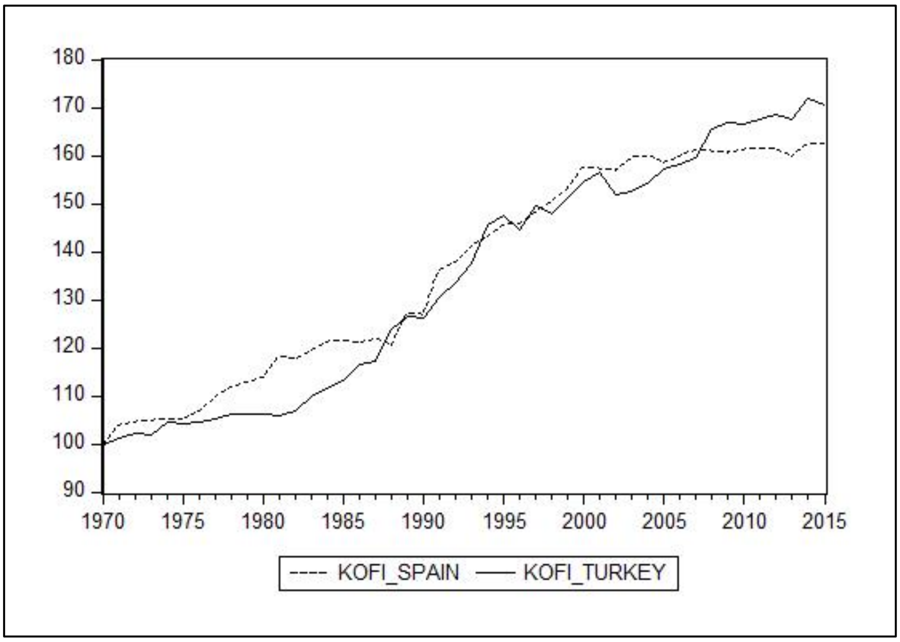
In view of the subjective character surrounding any conceptualization of globalization, Dreher et al. (2008) propose different procedures aimed at how to measure it in an appropriate way, expressly inclining for its indexation, either in terms of the KOF Index (Dreher, 2006) or the Maastricht Index (MGI) (Martens and Zywietz, 2006). In the same way, they delve into three fundamental points for their analysis: their repercussion with "dis-unionization", with inequality and with the environment. Inequality, amongst nations or within the borders of the same nation, is according to Milanovic (2016) a concrete cause of globalization which conceives, with certain dyes of radicalism, in relation to the birth of a middle class and a "plutocratic" class. In consonance with this position, unfailingly, the future of public sanitary systems must go through to marry the conflicting interests of both social classes.

Beyond radical conceptions such as the one exhibited by Milanovic (2016), globalization is usually represented, at an analytical level, by any of the two aforementioned indices. However, since 2006 the KOF Index has become a standard reference[7], systematizing this phenomenon in three different dimensions: economic, political and social, despite the fact that (Gozgor, 2018) does not consider it a sufficiently robust measure when using non-real, but nominal, values of the commercial activity experienced by each of the countries analyzed by this index. In Figure 1 we can see a joint comparison of the evolution of the KOF Index for Spain and Turkey (1970 = 100). Among other significant events we can find, as a matter of fact, how the importance of the political dimension within this index is undeniable.

[6] While the transfer of skilled and specialized labor of Spanish origin was not limited to the European Union, but encompassed other areas such as the United States, Canada, Australia, etc.
[7] See the latest revision of the KOF Index by Gygli et al. (2018).

In fact, the greatest differential on the part of Spain is reached due to the entrance of this country to the NATO (1981), whilst in the Turkish case it is much closer in time, coinciding with the recent massive arrival of emigrants from several areas of the Middle East (2015).

Figure 1: KOF Index Spain vs. Turkey (1970-2015).



Source: Own elaboration based on data provided by the KOF Swiss Economic Institute.

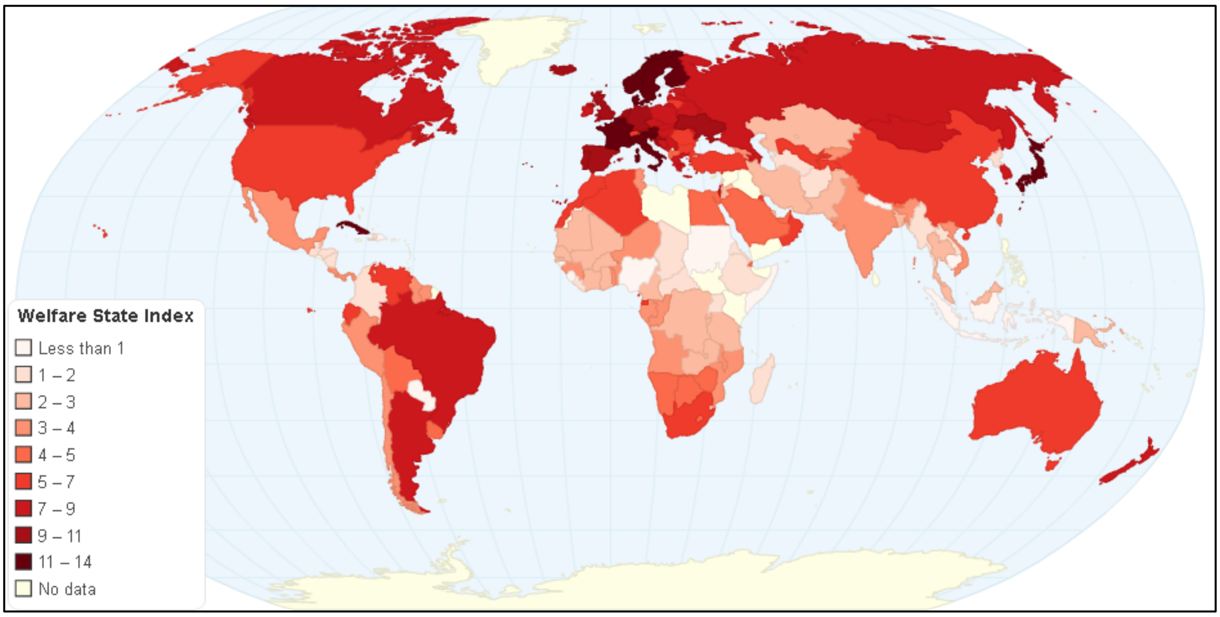
The largest world economies do not necessarily have to be the most globalized according to the KOF Index. Hence, in 2014, none of the hegemonic economic powers leads this index but, in this order, medium sized developed economies as the Netherlands, Ireland, Belgium, Austria and Switzerland. Oppositely, the least globalized countries are small and non-developed countries as Solomon Islands, Eritrea, Equatorial Guinea, Micronesia and the Comoros.

Nor could it be said that countries with the highest GNP are those that precisely hold higher levels of protection derived from the efficiency of their corresponding Welfare States. According to another index, the McGill-Welfare State Index (McGill, 2016) which explicitly analyzes the overall performance of the Welfare State using four dimensions[8] (taxation, government spending, universal healthcare and paid maternity leave), as shown in Figure 2, only Japan and certain specific areas of Continental Europe such as Scandinavia, France and Italy, reached the maximum level of Welfare State efficiency, whist other industrial nations such as the United States or the emerging BRIC countries[9] show, in relative terms, low-middle levels of social protection.

[8] Weighted from 0 to 4.

[9] Brazil, Russia, India, China and South Africa.

Figure 2: McGill-Welfare State Index corresponding to the year 2016.



Source: Taken from McGill (2016).

Again, taking Spain and Turkey as points of reference, we can observe that the first, according to the McGill-Welfare State Index, is in the second upper step of this index, whist the Ottoman nation, in principle, possesses levels of efficiency pretty similar to United States, Australia or the aforementioned BRIC countries.

Congruently, a plausible first conclusion derived from the McGill-Welfare State Index, is that the establishment, evolution and efficiency of the Welfare State depends not so much on the relative wealth of countries but on the will of the public authorities to create an egalitarian context, in which, citizens see their basic needs for education and health care covered. This exercise, of course, constitutes a substantial expenditure in present time that, in the future, has to be transmuted into intangible social incomes. However, in our opinion, nowadays the prevalence of the Welfare State is measured more from the political-ideological perspective than from the purely economic perspective.

Whereas for Krugman (2005) social security constitutes, practically, a civic right, Feldstein (1974) argues that it induces to the quasi-premature retirement of the labor force which interacts in part discouraged by the perspective offered by the widespread protection of the Welfare State, an effect which has quite negative consequences on the aggregate savings rate of future retirees.

3. Empirical analysis

We have pursued to expand the theoretical content of this article by applying two econometric procedures. On the one hand, we proceed to empirically test the hypothesis of the economic globalization of P. Krugman by analyzing through the non-homogeneous causality test of Dumitrescu-Hurlin (Dumitrescu and Hurlin, 2012) the plausible causal relationship between globalization, measured from the KOF index, and the variables “gross national wealth per capita” (GDP) and “importation” (IMPT), under the assumption that the last variable behaves as a proxy related to the offshoring and international decentralization of production centers.

Then, through the DOLS methodology of Stock and Watson (1993), we will analyze the long-term behavior of the relationship between health expenditure per capita (HEALTH), variable that in this case has been considered as a proxy of the Welfare State by combining all the health expenses incurred (public and private) and the variable globalization, again conceptualized according to the KOF index.

In both cases, we have used panel data (on logarithmic basis) from the World Bank and the OECD, belonging to six different developed nations: Australia, Germany, Japan, Spain, Turkey and USA. Table 1 summarizes the two applied procedures:

Table 1: Econometric approaches implemented in this paper

	Implemented approach	**Time horizon**
1.Contrast of P. Krugman globalization hypothesis	Non-homogeneus causality test (Dumitrescu-Hurlin)	1970-2015
2. Long-term relationship Health Expenditure vs. Globalization	Dynamics OLS	1975-2015

Note:

For the sake of brevity, we include the most relevant results of both procedures without extending the analytical statement of each of them.

For the same reason, we have chosen not to include several tests (fundamentally, panel unit root tests, and panel cointegration tests) in addition to the corresponding descriptive statistics. Obviously, they are available upon request to the authors.

1. **Contrast of P. Krugman globalization hypothesis.**

Previously, we infer that globalization could be considered as a "concatenation of causal relationships", hence we have used the Dumitrescu-Hurlin procedure as a basis to extrapolate the plausible causal relationship between the variables "globalization", "income per capita" (in USD) and the "total level of imports" (in USD) by considering that, specifically, the last variable would be a *proxy* for the delocalization of production in other specific geographic areas with lower labor costs.

According to this test (Table 2) and considering a number of lags from 2 to 5, we find that, indeed, there is a bilateral causal relationship in the sense of Granger (Granger, 1969) in all variables except in imports, as outlined in Table 3, from which it follows that, in no case, globalization is consequence of the level of imports of each of the six economies included in this analysis.

Table 2: Pairwise Dumitrescu-Hurlin panel causality given the variables KOFI, GDP and IMPT

	L = 2			*L* = 3		
Null Hypothesis:	**W-Stat.**	**Zbar-Stat.**	**Prob.**	**W-Stat.**	**Zbar-Stat.**	**Prob.**
IMPT does not homogeneously cause GDP	3.68639	1.73728	0.0823	5.79672	2.30141	0.0214
GDP does not homogeneously cause IMPT	3.5071	1.53992	0.1236	5.64963	2.17221	0.0298
KOFI does not homogeneously cause GDP	4.22491	2.33005	0.0198	7.03409	3.38821	0.0007
GDP does not homogeneously cause KOFI	3.17199	1.17106	0.2416	4.67253	1.31401	0.1888
KOFI does not homogeneously cause IMPT	6.76268	5.12347	3.00E-07	10.8921	6.77673	1.00E-11
IMPT does not homogeneously cause KOFI	1.89739	–0.23195	0.8166	2.63369	–0.47674	0.6335
	L = 4			*L* = 5		
Null Hypothesis:	**W-Stat.**	**Zbar-Stat.**	**Prob.**	**W-Stat.**	**Zbar-Stat.**	**Prob.**
IMPT does not homogeneously cause GDP	7.05545	2.07155	0.0383	8.58693	2.0726	0.0382
GDP does not homogeneously cause IMPT	5.95123	1.25384	0.2099	7.36508	1.28853	0.1976
KOFI does not homogeneously cause GDP	7.44299	2.35854	0.0183	8.21328	1.83283	0.0668
GDP does not homogeneously cause KOFI	6.148	1.39956	0.1616	7.06848	1.09819	0.2721
KOFI does not homogeneously cause IMPT	11.6315	5.46025	5.00E-08	8.3376	1.9126	5.58E-02
IMPT does not homogeneously cause KOFI	2.81703	–1.06713	0.2859	5.22328	–0.0859	0.9315

Source: Own elaboration based on data provided by the KOF Swiss Economic, OECD and World Bank and KOF Swiss Economic Institute.

Table 3: Pairwise Dumitrescu-Hurlin Causality matrix

	KOFI	**GDP**	**IMPT**
KOFI	**---**	→	→
GDP	→	**---**	→
IMPT	**No Causa**	→	**---**

Source: Own elaboration based on data provided by the KOF Swiss Economic, OECD and World Bank and KOF Swiss Economic Institute.

In other words, at least for the countries and the analyzed time horizon, the hypothesis of P. Krugman regarding the genesis of globalization via delocalization of productive factors would be refuted. Therefore, not so "economic globalization", but the same variable, in general terms, is probably a joint result of other factors previously mentioned, such as the readaptation of economies to new technologies, the population deficits of developed countries or the increasingly persistent global competitiveness caused by the appearance in the economic scene of the so-called BRIC countries.

2. Long-term relationship Health Expenditure vs. Globalisation.

Next, we are going to analyze the long-term relationship between "health expenditure per capita" (HEALTH) and "globalization" (KOFI), following a taxonomization of the variables similar to Dogan et al. (2017). Regardless of whether public or private expenditure is included in the HEALTH variable, it is a priori a fundamental indicator when it comes to objectively measuring the scope of the Welfare State in each specific country, also on the basis that greater public health expenditure does not necessarily have to correspond with a greater efficiency of the Welfare State. This long-term relationship has been hypothesized from the specification of model (1), in which the dependent variable is HEALTH, KOFI is the independent, β_0 and β_1 represent the coefficients of the regression and ε_{it} the random perturbation:

$$\ln(\text{HEALTH})_{it} = \beta_0 + \beta_1 \ln(\text{KOFI})_{it} + \varepsilon_{it} \tag{1}$$

Having used natural logarithms in both variables, the Dynamic-OLS procedure will allow us to establish the long-term relationship between HEALTH and KOFI as a function of the marginal effects of the independent variable on the dependent variable, that is, it allows us to perform an analysis of its elasticity (2) in accordance with Table 4, in which we can find a pretty high linear relationship between the variables according to the statistical measures R-Squared and Ajusted R-Squared, very close to the unit, low standard error, and a t-statistic value which determines a significant linear relationship between HEALTH and KOFI:

$$\frac{\partial \text{HEALTH}}{\partial \text{KOFI}} = 0.444787 \tag{2}$$

Table 4: Health vs. KOFI. Panel Dynamic Least Squares (DOLS)

Dependent variable: HEALTH				
Independent variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
KOFI	0.444787	0.378234	1.175959	0.2412
R-squared	0.995228	**Mean dependent var**		7.186209
Adjusted R-squared	0.99407	**S.D. dependent var**		1.01687
S.E. of regression	0.078305	**Sum squared resid**		1.060792
Long-run variance				0.010638

Source: Own elaboration based on data provided by the KOF Swiss Economic, OECD and World Bank and KOF Swiss Economic Institute.

The economic significance of (2) is equally relevant, since it denotes that the marginal effect of globalization (KOFI) on the welfare state (HEALTH) is clearly positive in terms of elasticity, indicating that an increase in the KOFI Index of 1% it has to correspond with an increase of the HEALTH variable of 4.44%. This conclusion is even more important taking into account that, precisely, the average rate of change of the KOFI Index for the period 1970-2015 is precisely very close to 1% (0.97%).

4. Conclusions and future research lines

4.1 Conclusions

Probably, a primary conclusion to be drawn from this manuscript is that there could be no differentiation between globalization in general terms and economic globalization, nor to infer that there are diverse subtypes of globalization: this phenomenon should be studied in a unitary way, within the specific context of the immediate present of the world economies, which cannot be compared with any other epoch of the recent past.

The specific conjuncture in which globalization has taken root is that of the internationalization of economies, the triumph of new technologies, the growing migratory flows that have accentuated, even more the economic inequality between developed and non-developed countries and, especially, the relative aging of western countries. Although this process has multiple negative connotations, per se, it is neither positive nor pernicious; it is simply inevitable, as it is inevitably given by the current socioeconomic context.

In itself, globalization implies an intricate network of relationships between macroeconomic variables, before which the precepts of classical macroeconomics are rendered inoperative. This relational network, in principle, would merit a causal treatment elaborated on the basis of the "cumulative causation" (Myrdal, 1957), a similar scheme to which Krugman (1979) would use to enunciate the New Economic Geography. However, on an empirical level, this paper argues that the delocalization of production (using the level of imports as a proxy) is not a cause of globalization whilst there is a bilateral causal relationship in the sense of Granger (1969) between income per capita and the level of imports per analyzed country.

Precisely, the fact that globalization does not exclusively include factors of economic nature but many other related aspects, has led us to use the KOFI Index as an essential point of reference in this study in order to obtain the most complete image of all that globalization implies.

When linking the effects of globalization to the sustainability of the Welfare State, the application of the DOLS methodology shows that public expenditure on health is positively linked to an increase in globalization. Therefore, what is the reason for the widespread negative connotation of globalization?

It is very likely because the supposed inaction or lack of success of the sates and supranational organizations is often obscured in the resolution of certain problems already entrenched in society, such as the lack of success of birth policies, global pollution, the reconversion of economies to new environments of extreme competitiveness, the establishment and coordination of efficient migration policies, etc. All these failures have been systematically associated with globalization when, in reality, not always nor in all cases, are a direct consequence of this phenomenon.

Perhaps the most important task, still pending, is the mentalization of the society. We are talking about a phenomenon that "has come to stay". As a matter of fact it is considered necessary that the population as a whole be aware of what it supposes. From the point of view of the developed countries, the generation of production with a high added value (via new technologies) will be one of the few alternatives to mitigate the strong external competitiveness of the "newcomers" and, obviously, to guarantee sustainability of the long-term welfare state. With regard to the developing countries and given the prospect that their population will also tend to decline, sooner or later they will have to reduce their competitiveness if in the not too distant future they aspire to create social security systems similar to those that illuminated Europe at the end of the 19th century.

4.2 Future research lines

Globalization has been densely studied both theoretically and empirically from multiple perspectives; however, there are several approaches that can enrich its analysis. For example, starting from the basis that globalization begins to be conceived since Krugman (1979) as a process in which production, intrinsically, is externalized according to the degree of interchangeability of productive factors, which, in an environment free trade may give rise to positive or negative circumstances, including among the latter the accumulation of capital in a few hands, the asymmetric growth of economies or the deterioration of the labor factor, we can see that this scheme is very similar to the conception of Wallerstein's Economics-World Approach (Wallerstein, 2004), a specific approach in the explanation of economic cycles in which the "contradiction" of short-term and long-term interests, fixed by economic agents, is passed directly to a "crisis" that deteriorates the foundations of the system, and give rise to the advent of a new global economic power. Therefore, it would be interesting to relate, to the extent possible, the approaches of Krugman (1979) to Wallerstein's Approach Economy-World.

In the same way, from the beginning, we have underlined how globalization, to a certain extent, has influenced the most elementary macromagnitudes and their basic relationships and identities. It would be useful to analyze if it could have led to a new configuration of the "stylized facts" of N. Kaldor (1957).

Welfens (2013) based on how the short-term measures that characterized banking during the period 1995-2007, generated an enormous volatility in the financial markets that had a very negative effect on private retirement plans, and on the financing of public social systems. To avoid the repetition of such situation, Welfens (2008) raises the need to change banking taxation depending on the volatility that each entity presents during a given fiscal period, that is, to pass from the current tax rate associated with the tax on profits banking, to an increased one, in which it would correspond to the variability or volatility of each financial institution in particular.

In this way, due to the self-interest of each entity and resulting in the benefit of public and private pension systems, a good number of speculative practices that caused the collapse of financial markets and endangered the foundations of the Welfare State would be eliminated. As far as our knowledge is concerned, no work has yet been done to implement, at the empirical level, the fiscal adjustment described by Welfens (2008). Equally, it would be beneficial to carry out a work based on this perspective, since only after audacious measures like this, will the long-term maintenance of the Welfare State be possible, as well as facing the most critical attacks of globalization.

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[10] Université Paris Nanterre.
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