

Does globalization impact citizens' trust?

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ABSTRACT

This paper studies the relation between a political decision such as the globalization of a country and individuals' trust. Based on some results obtained in social trust literature, we modeled a theoretical individual trust function and test its conclusions with an empirical model. Our results come to say that globalization has a impact (normally positive) on individual trust. The different regressions show that at the individual level, trust depends on individual characteristics and on both a geographical aspect, and cultural or historical background of the society in which it lives. Analyzing the time variations, we observed that globalization not only impacts individuals' trust, it also changes the individual's characteristics of the individuals' trust over time.

1. INTRODUCTION

This paper analyzes if something such as trust in others at an individual level, may be affected by globalization. In an economic way, we want to see if the macroeconomic decision taken by a country to globalize economically, socially, and politically has a direct impact on trust at an individual (microeconomic) level.

It has been proven how important trust is at a microeconomic level for a well-functioning of a country at a macroeconomic level (Guiso, Sapienza, & Zingales, 2008b; Zak & Knack, 2001). Even if is comprehensible to think that this works both ways, there is not a clear causality which proves that the macroeconomic behavior of a country influences the level of trust of its citizens, which is the base of social capital.

Since Robert Putnam (1993) defined social capital as “features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions”, it has been normalized as a social capital concept which over time has had many definitions. Even if there is no clear definition about what social capital is, there are many papers in political sciences, economics and psychology which study the effect of social capital measured as trust on economic growth, political sciences, and social behaviors (Coleman, 1990; Knack & Keefer, 1997; Guiso, Sapienza, & Zingales, 2004; Algan & Cahuc, 2010; Rothstein & Stolle, 2001; Marschall & Stolle, 2004; Ferrara, 1997). Just to mention some examples; from economics, Horváth (2013) proved that trust is one of the top determinants of long

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term economic growth; from economic psychology, Kugler et al. (2007) found that groups are less trusting than individuals, but just as trustworthy; from political sciences, Porta et al. (1999) showed that trust promotes cooperation (very important for large organizations), while it is lower in countries with dominant hierarchical religions. Nowadays it is accepted by many people that trust is one of the main engines for the wellbeing of any society (Fukuyama, 1995). In fact, some authors argue that countries with higher trust are those with better institutions and also the ones with a lower macroeconomic volatility (Sangnier, 2013; Acemoglu et al., 2003; Knack & Keefer, 1997).

Interesting aspects of this paper are that it proposes a theoretical individual trust function explaining how globalization may affect trust; it also changes the approach generally used in social trust literature by directly analyzing the effect between globalization, which is a macroeconomic decision, and individual trust, instead of studying how trust works in order to improve it in a society. Based on some results of this literature, we propose a theoretical trust function which explains how trust at the individual level is built and works both in closed and globalized societies; to then test it with an empirical model. The empirical model is a simple equation which uses the KOF global index variables as measures of globalization and the World Value Survey as a database for the individual controls; it tests if there exists any relation between globalization and individual trust. In short, through a simple comparative analysis, we try to understand a little bit more human behavior based on different social sciences like psychology, politics, and economics.

From the theoretical function, we concluded that individual trust is higher in closed societies, but the steady state, defined as a situation in which there is no more possibility to improve a given level of trust, is achieved earlier in globalized environments. While in the closed societies the macroeconomic stability will be very important for individuals trust, in the globalized ones, an updated education will drive trust in others and there will be a social component which will change the perception of trust over time. Society will have a huge impact on individual perception of trust in closed environments. That impact will decrease in globalized countries as a consequence of the mobility factor which allows people to choose where to live.

The empirical results show that globalization in any of its three forms (Economic, social, and political), has generally an impact on individual perception of trust. While for both the social and the political aspect of globalization impact differs, the economic aspect when significant has always a positive impact on individual perception of trust. For all countries and periods considered, the political globalization is positively significant. In other words, the improvements made by any country for a greater diffusion of its policies have a positive impact on individuals trust. When we differentiated by continents, we observed a regional component which diversifies

globalization impact. In fact, while in America and Asia only the political and economic globalization variables were respectively significant, in the other continents the three globalization variables were significant, but with different coefficients and effects on individuals' trust. Splitting a little bit more the sample we observed that in addition to the regional component, there exists a historical or cultural component which also mattered. Through a temporal comparison, we observed that globalization not only impacts individuals' trust but it seems like it also changes the trust characteristics of individuals over time. For example in 2000's, both education and wealth lose their importance while unemployment becomes an important determinant of individuals' trust.

Based on our results and the context in which we study trust, it may be said that trust is like a fish that bites its tail. In fact, the social capital literature has shown the main role played by trust at a microeconomic level for a well running of a society at a macroeconomic level; this paper proves that individuals trust (microeconomic level) is directly affected by a macroeconomic decision (globalization). These findings increase the responsibility of government or institutions to fulfill correctly their obligations because the policies and decisions they will take, have a direct impact on individuals' trust, which is what in turn is necessary for the macroeconomic stability on the long run.

The structure of the paper will be the following; in the literature we will do a brief summary about what has been written in social trust and social capital literature; from that we will present our trust function in the theoretical framework; in the data analysis, we will explain which data we use and which are the main variables of our model; we will then spend some time explaining our regression model, explore the results, and finish with the general conclusions.

2. LITERATURE

Interested on the relation between political decisions with an influence on entire countries and trust at an individual level, is indispensable to explain the theoretical framework in which we will be moving.

The concept of generalized trust has been analyzed by the social trust literature, which is the heart of social capital. One objective of social trust literature has been to understand how trust works in order to create a precise definition of what it is. On the contrary, the social capital literature is focusing on how to improve general trust in a society. This complementarity relationship makes social trust the heart of social capital.

Since trust has been defined as a public good that could have influence on individuals (in their desire to take risks), communities, regions, and nations, there has been a real interest to understand how it works and its implications on society. Stolle (2002) presents a brief summary of the three main different types of trust reflected in the interdisciplinary literature.

The first one is the “strategic or rational accounts of trust”, which is to say that the decision to trust others will be based on the probability that those others will reciprocate. Stolle (2002) mentioned Hardin’s encapsulated interest account of trust which is a theory of trust and trust worthiness that seeks to prove that someone will trust another when there is adequate reason to believe that the latter has enough interest to be trustworthy (Hardin, 2002). The problem of this approach is that there is not actually a clear explanation of how someone can generalize his specific experiences of interaction. Trust games have generally been used to study this approach (Berg et al. 1995; Coleman, 1990; Rousseau et al. 1998).

The second one, “identity or group based accounts of trust”, argues that someone generally will trust those to whom they feel close to due to family, status or other similarities. From this approach, it does not really matter if a group partner does not fulfill our expectation because his membership probably will excuse his fail. In other words, in this case the member’s presumptions would be more important than any expectations or calculations, so it would be more difficult to extend trust to an unknown person. That identity or group might be age, gender, ethnicity, social status, political beliefs or something else. In that sense, Alesina and Ferrara (2002) for example, found that belonging to groups that have been historically-discriminated correlated with trusting less in others.

The third one, “moral trust”, is the most anthropological one, in fact this approach is based on the fact that people share fundamental values. What really matters, is the good values, common to all people. Compare with the other two points of view, this one is more susceptible to generalized trust at least in the first step. In fact, personal experiences will influence our propensity to trust others more or less, but never destroy our optimistic view of the world (Uslaner, 2000).

Let’s summarize now what has been written about trust in social capital literature from a social, political, and economic dimension.

2.1. Social

When Putnam (1993) spoke for the first time of social capital, he found that in the twenty Italian regional governments studied, the performance of the institutions there present was different due to their differences in social capital, the economic situation, and the cultural context. He concluded that at least in the sample studied, for the

proper functioning of democracy, it was necessary to have a high level of trust amongst people and a horizontal system of governing.

Lewis and Weigert (1985) declared that from a sociological perspective, trust should be conceived as a property of a collective unit instead of isolated individuals; it is indispensable in social relationships. It has been shown that social trust is very useful when an individual has to make a decision on a topic that carries risk and benefits, but of which he has no idea (Siegrist & Cvetkovich, 2000). Indeed, in absence of sufficient knowledge, people will guide their decisions and judgments based on social trust (Luhmann, 1979). Trust and particularly social trust, reduces the complexity people may have to face with (Earle & Cvetkovich, 1995; Simmel & Wolff, 1964).

“Trust succeeds where rational prediction alone would fail, because to trust is to live as if certain rationally possible future will not occur. Thus, trust reduces complexity far more quickly, economically, and thoroughly than does prediction.” (Lewis & Weigert, 1985)

Knowing how important social trust is for a well-running of societies and to make decisions at the individual level, there are authors who have studied how to improve the level of social trust in societies. Some scholars argue that improving trust between people, and thereby social capital, must be done through a society-centered approach. This approach is to say that the most important mechanism to generate social capital is through regular social interaction. The higher the historical experience of a society to collaborate in social Associations, the greater will be the capacity of citizens to generate social capital (Putnam, 1993; Fukuyama, 1999). As Stolle (2002) explained, informal institutions are associated with the creation of social capital due to their ability to socialize and generate cooperation between their members. From the Tocquevillian tradition, associations would be a type of learning school for democracy.

Some critics of this approach mention that there is no clear evidence of a spillover effect from the participation in voluntary associations on the cooperation outside of group-life. In fact, it seems that people who generally join altruistic associations are those with a higher propensity to cooperate. It has also been found that even if being part of a social association brings more trust, there is no differentiation made between active and passive members (Stolle 1998,2001; Uslaner 2000; Hooghe & Stolle 2003).

Other critics mention the fact that, even accepting that associations are useful in learning cooperation and trust, not all the associations are good; we should control the main objective of each association and also the people who are members of said association. So good or bad associations will generally depend of how homogenous or heterogeneous are its members; it seems that contact with people who are dissimilar tends to create more desirable outcomes (Putnam, 2000).

The huge weight that historical background has on the actual level of social capital has been used as a critique by policy makers because it leaves little influence to stimulate

the development of social capital. Oppressive regimes can destroy social capital, but there is nothing to say that good regimes improve social capital.

So far, there is no empirical evidence that voluntary associations are creators of generalized trust. More research is needed to understand the role played by other types of social interactions. That is why there is no consensus on how to measure trust; generally, two approaches have been taken: one is to use a census of groups and group memberships of societies; the other is to use survey data which asks for the level of trust and civic engagement (Fukuyama, 2001).

2.2. Politics

The generalized trust that people may have is essential to all social orders (Bok, 1999). In that sense, both institutions and society have to put the means for that to happen. Generating or destroying trust is quite simple, but the consequences derived, from one or other action, are not negligible. Indeed, when others act in ways that imply that they trust us, we tend to reciprocate by trusting in them; in the same way, we will distrust those whose actions appear to violate or distrust our trust (Lewis & Weigert, 1985).

“Trust in some degree of veracity functions as a foundation of relation among human beings; when this trust shatters or wears away, institutions collapse” (Bok, 1999)

Being generalized trust so important for the good social and institutional functioning of a country, there are authors who have focused their research into how to improve trust in societies based on the influence of institutions.

The first is the institution-centered approach which is to say that the best way to learn how generalized trust works is by means of state institutions and political context. Contrary to the previous approach, governments and their institutions not only would be able to destroy social capital, but they would also be the ones which, through their policies, will create the channels and enough influence to make social capital flourish. In other words, with the correct management of effective institutions, good values will be created that generate the incentives to foster social capital (Hall, 1999; Inglehart, 1997).

Two branches have to be distinguished: The Attitudinal approach, which focuses on how the proper running of government and institutions leads to a generalized trust, and the institutional structural approach which, on the other hand, focuses on the role played by the state as generator of social capital.

In the Attitudinal approach, there is a general perception that generalized trust is a corollary of political trust (Hall, 1999). Even if this point of view is in accordance with Putnam, to this day there is not a clear flow of causality between these concepts, only personal interpretations of data. In addition, another problem of this approach is that

some attitudes related with institutions have nothing to do with the present institutions.

The institutional structural approach is based on the principle that in order to generate trust in citizens, it is necessary to be a trustworthy state (Levi, 1998). An efficient way to do it is providing the necessary public goods (property rights and public safety) and impartiality from those who have to regulate. Democracy, which is somehow the definition of the previous sentence, scores high on measures of generalized trust but the significant variable is welfare (Uslaner, 2000). In addition to welfare states, just and un-corrupt political institutions seem to be indispensable for the development of generalized trust (Rothstein & Stolle, 2002).

2.3. Economics

The main impact of social capital in economics is the reduction of transaction costs, with all that implies. Countries' openness has generated major changes in trade rules because what in the beginning was regulated by informal chains of trust in closed economies has now changed to a more formal controlled system with formal laws and institutions (Knack and Keefer, 1997).

The main role played by trust in economics is greater than any transaction cost issue. Frankel (1978) argued that some monetary theories did not explain clearly the reality of money as a core social institution which depends on adequate trust for its proper functioning. The point here is to highlight the fact that money functions best when people strongly trust in it and without trust it cannot function (Simmel, 2004). Generalizing this concept to the entire economy, the history has shown us that in commercial and industrial societies, economic collapse occurs when society fails to support trust (Lewis & Weigert, 1985).

In spite of all the control systems nowadays present in any trade relations and all the sophistications from economic activity, the previously mentioned informal chain of trust has a main role when accelerating processes (Ahlerup, Olsson, & Yanagizawa, 2008). Since the industrialization, there have been many production systems which have led to a gain in efficiency (centralized production as Fordism or more globalized systems as the ones currently used by many branches of cars, planes, clothes, etc...). But the problem is still present; that of opportunism due to the knowledge of some workers on the markets or the system giving them the power to decelerate the production or induce strikes in companies.

There are many papers which have linked social capital or trust with growth (Algan & Cahuc, 2010; Aghion et al. 2010, Tabellini, 2010; Carlin et al. 2009; Guiso, Sapienza, & Zingales, 2008b). Zak and Knack (2001) found that low trust environments reduce the rate of investment. Knack and Keefer (1997) shows that there is a greater correlation between trust and growth in poor or developing countries due to lack of development

of their financial institutions, little protection to private property, and early compliance with contracts.

From a theoretical point of view, there are many macroeconomics models which use expectations (corollary of trust) as a key element in order to predict inflation levels, fluctuations in the currency market, and so on. Actually, expectation is one of the winds that move the financial markets. There are many examples in the history about how markets penalize the lack of trust; the trust that individuals and markets have on institutions such as Central Banks, the International Monetary Fund, World Bank, United Nations or governments are directly linked with the trust that those institutions have been able to generate. The perception of trustworthiness in an information source will result of how persuasive the arguments are provided. Frewer et al. (1998) shows that, the perceptions that a source possesses expertise, but not trustworthy, are unlikely to result in attitude change following the provision of information by that source. Eagly et al. (1978) identified two types of communicator bias which can lead to low perceptions of message validity based on characteristics of the communicator and the situation. There will be a knowledge bias if the receiver believes that the communicator's knowledge of the topic being communicated is lacking, whereas there will be a reporting bias when the receiver is not providing, or is not willing to provide, the truth about the topic being communicated. In order to maintain their credibility, those institutions have to control some aspects such as the knowledge and expertise, openness and honesty, the objectivity, being truthful or have a good track record. (Peters, Covello, & McCallum, 1997; Renn & Levine, 1991; Johnson, 1999; Frewer et al. 1996; Frewer & Miles, 2003; McGinnies & Ward, 1980)

Markets are social institutions and as any other social institution, they are sensitive to people's perceptions; and this also happens with globalization.

"The international market is the only market that is not regulated by an overarching political authority. Consequently, transactions undertaken in the international marketplace carry the least inherent legitimacy. This is itself an ongoing source of tension between globalization and society. The problem becomes much worse when segments of society are perceived as having broken their links with their local communities and become footloose. Institutions that lose their legitimacy can no longer function, and markets are no different." Rodrik (1997)

In short, social trust measured as the trust that people have in others and in institutions is very important in economic terms either for the reductions it generates in transaction costs, as well as the impact it has on expectations which nowadays is one of the principal motors of trade and financial markets.

3. THEORETICAL FRAMEWORK: TRUST FUNCTION

Based on some results of this literature, we designed a simple individual trust function in order to see how, theoretically, individuals' trust works in a closed and globalized society. We will base individuals' trust on three aspects, which are their life experience, their education level and social stability present in the region where they live. The literature of sociology of trust, usually insists on the fact that trust is the sum of two factors: personal trust which involves an emotional bond between individuals, and system trust which makes people believe that everything is in order (Luhmann, 1979; Lewis & Weigert, 1985).

As we mentioned before, in social trust literature there are many trust typologies but in all of them, generally life experience (cognitive process which discriminates among persons and institutions trustworthy or not) is somehow the base of trust (Lewis & Weigert, 1985). What one has experienced during their life (friendship, difficulties, work experiences, trips, doubts of faith, social environment), will be going to influence his perception of the world and determine his way of behaving with others. Flanagan and Stout (2010) concluded that middle and late adolescents had significantly lower levels of trust than early adolescents and that these beliefs became more stable and less related to interpersonal trust between early and late adolescence. So, a possible variable which capture all those things is age (Fehr et al. 2003; Bellemare & Kroer, 2007). Sutter and Kocher (2007) found that trust increases almost linearly from early childhood to early adulthood, but stays rather constant within different adult age groups.

The main role played by education on trust has been widely studied (Borgonovi, 2012; Boyadjieva & Ilieva-Trichkova, 2015; Helliwell & Putnam, 2007). It has always been said that education gives freedom, and freedom does not only refer to the ability to reason and judge things with criteria. There exists positive correlation between education, employment, and wealth. Alesina and Ferrara (2002) obtained a positive correlation between income, education, and trust suggesting that a successful professional experience was likely to make individuals more prone to trusting others. Considering that, it is coherent to think that a high level of education brings with it the opportunity to have a high-skilled job which is generally well-remunerated.

Lindström (2000, 2009) found an association between low social capital and unemployment, being more precise he found that unemployed men and woman had lower levels of trust. There is an association between trust, the psychosocial work conditions, and unemployment. Knowing that employment and education foster trust, we may suppose that possessing an updated education will help individuals to still be useful in any job market in order to achieve those high-skilled positions and be well remunerated.

Finally, there is a social component which should be considered, but there is a problem: it is very complicated to define what it is exactly. Both in economics and politics, stability is important. Social stability, very related with trust, is linked to governance and economics. Undertaking reforms and policy innovations may be more beneficial for policy makers in more trusting societies, whereas economic agents in a highly trusting environment enjoy lower transaction costs, which stimulates economic activity (Knack, 2000; Zak & Knack, 2001). Ahlerup et al. (2008) showed that the effect of social capital on growth depends on the quality of institutions. In short, Stability is good for social trust (Berkman & Kawachi, 2000).

Social stability may be analyzed from two different levels, which are the social and the economic levels. When we consider stability at the social level, we are referring to all the literature focusing on the diversity paradox. That paradox reveals that high levels of racial and ethnic diversity are accompanied by lower levels of trust (Putnam, 2007; Uslaner, 2002; Alesina & Ferrara, 2000; Soroka, Banting, & Johnston, 2007; Stolle et al. 2008; Hero, 2003). When we consider stability at the economic level, we refer to that literature which highlights the positive correlation between trust and long-term economic growth. That literature argues that economic growth is greater in countries with greater generalized trust (Horváth, 2013; Whiteley, 2000; Dincer & Uslaner, 2007).

Considering those three aspects just now mentioned, we may define a hypothetical trust function:

$$\textit{Trust Function (TF)}: f(X, Y, Z)$$

Where X denotes life experience measures in age, Y the education updated, and Z the social stability.

Being the objective of this paper to see if globalization has an impact on individuals' trust, we propose two trust functions, one for individuals living in closed societies and the other for those living in globalized societies. The idea is to compare both functions and somehow deduce the main drivers of individuals' trust in both situations.

3.1. Individual trust function for closed societies

To put ourselves in the position of a closed society, suppose we live on an island lost in the middle of the ocean. The habitants of this island do not perceive what is not proper to their reality. Except for the fact that there is no kind of contact with the outside, everything is normal. In spite of the population density, the people know each other well. There is only one ethnic group, they all speak the same language and share the same culture. There are schools, universities, banks, hospitals, companies, different political parties therefore, there are different social classes.

Let's start with the life experience variable. Until the revolution that the printing press generated in the transmission of knowledge, people used to learn through their living experience and the advice and stories that their elders told them. As a consequence of that learning procedure, wisdom is positively associated with age. In a closed society as a village for example, population does not change and although it increases, people know each other. People with a higher life experience in term of events or experiences lived will be those with better criteria. Having good criteria is what allows someone to be trusted (Peters, Covello, & McCallum, 1997). Sutter and Kocher (2007) shows that trust is significantly higher in the adult age group and even if trustworthiness prevails in all age groups, its degree increase with age. The process to trust in others is positive over years, but there is a threshold near to a steady state in which you cannot learn more. Alesina and Ferrara (2002) obtained some results which indicated that trust in others increases with age, though at a declining rate. So, there will be some steady state in which any change or event (political, social, in population in term of birth rate) may not improve the wisdom acquired over the years.

Something quite similar will happen with education. Although the society described is modern, being a closed society, the opportunities in many areas will be limited. Jobs that may require higher academic training already in the private sector as well as in the public sector will be scarce.

Boyadjieva and Ilieva-Trichkova, (2015) found that people with a higher education were more trusting, at aggregate level, than people with a lower level of education. This can be interpreted as that the higher the level of knowledge, the greater the trust. Keefer and Knack (2003) shows that at the individual level, education may make people better-informed and improves skills for handling information which should increase their social trust. So, under these circumstances, education will foster individuals' trust with a higher degree for those with a higher education.

Despite the differences at the political level and social status that may exist in a closed society, social stability is more or less assured. The fact that there is only one ethnic group, that people meet each other and share the same culture are requirements that facilitate understanding, cooperation and therefore social stability. Alesina and Ferrara (2002) highlighted the fact that the more stable and less "transient" a community was, the higher trust should be. Individuals who share racial or other characteristics create a membership bias through cooperation, in which trust is more easily developed (Stolle, Soroka, & Johnston, 2008). Social capital and trust are best promoted in stable social conditions such as stable social structures and low migration rates. In fact, low migration may for instance lead to less disruption in social contacts, and by so, more trust (Martin Lindström, 2009; Berkman & Kawachi, 2000; Lindström, Moghaddassi, & Merlo, 2003). In addition to that stability at social level, Porta et al. (1999) shows that

governments have better quality in less fragmented societies. Levine and Easterly (1997) shows that growth was lower in more ethnically fragmented countries.

The social stability variable will have three different values in order to differentiate periods of growth from those of recession or average. Indeed, during a recession period there will be less jobs, so we understand that with a lower value we would be capturing that malaise affecting the whole society. The better the economy is going; the higher individuals' trust should be.

Summarizing, the individual trust function for a closed society will be: **(About here Figure 1 in appendix)**

$$f(X, Y, Z) = x^{1/2} y^{1/2} z$$

$$\text{with } Z = (\text{high, average, low}) \begin{pmatrix} 2 \\ 1 \\ 0.5 \end{pmatrix}$$

Let's see through the derivatives how this function will behave when there are changes from any variable.

a) Derivatives of X

$$\frac{\partial f}{\partial x} = \frac{y^{1/2} z}{2x^{1/2}}; \quad \frac{\partial^2 f}{\partial^2 x} = -\frac{y^{1/2} z}{4x^{3/2}}$$

$$\frac{\partial f}{\partial x \partial y} = \frac{z}{4x^{1/2} y^{1/2}}; \quad \frac{\partial^2 f}{\partial^2 x \partial y} = -\frac{z}{8x^{3/2} y^{1/2}}$$

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b) Derivatives of Y

$$\frac{\partial f}{\partial y} = \frac{x^{1/2} z}{2y^{1/2}}; \quad \frac{\partial^2 f}{\partial^2 y} = -\frac{x^{1/2} z}{4y^{3/2}}$$

$$\frac{\partial f}{\partial y \partial x} = \frac{\partial f}{\partial x \partial y} = \frac{z}{4x^{1/2} y^{1/2}}; \quad \frac{\partial^2 f}{\partial^2 y \partial x} = -\frac{z}{8x^{1/2} y^{3/2}}$$

$$\frac{\partial f}{\partial y \partial z} = \frac{x^{1/2}}{2y^{1/2}}; \quad \frac{\partial^2 f}{\partial^2 y \partial z} = -\frac{x^{1/2}}{4y^{3/2}}$$

$$\frac{\partial f}{\partial y \partial x \partial z} = \frac{1}{4x^{1/2} y^{1/2}}; \quad \frac{\partial^2 f}{\partial^2 y \partial x \partial z} = -\frac{1}{8x^{1/2} y^{3/2}}$$

c) Derivatives of Z

$$\frac{\partial f}{\partial z} = x^{\frac{1}{2}}y^{\frac{1}{2}}$$
$$\frac{\partial f}{\partial z \partial x} = \frac{y^{\frac{1}{2}}}{2x^{\frac{1}{2}}}$$
$$\frac{\partial f}{\partial z \partial y} = \frac{x^{\frac{1}{2}}}{2y^{\frac{1}{2}}}$$
$$\frac{\partial f}{\partial z \partial x \partial y} = \frac{1}{4x^{\frac{1}{2}}y^{\frac{1}{2}}}$$

Both X and Y first and second derivatives are positive and negative respectively, reinforcing the previous idea that, over time, the improvement that these variables have on trust decreases. By associating them a same coefficient we wanted to show that both variables indeed foster individuals' trust, but depending on some individual characteristics they will have different magnitudes. That is exactly what their partial derivatives show.

The social stability variable is the one with a higher coefficient, and so a higher influence on individuals' trust. The context in which individuals develop themselves as a person does matter. Charron and Rothstein (2016) shows that the positive effects of education on generalized trust were only present when institutional quality was sufficiently high. In a similar way, Dinesen and Hooghe, 2010 found that the most important factor behind the increasing level of social trust among the immigrants they worked with was the fact that they perceived a fair treatment by Danish authorities.

Z is a constant, matching positively with the social feeling about the economy and political issues, among others social issues. Therefore, with this function, we are saying that individuals' trust of people living in a closed society will be mainly driven by a social component, here the social stability variable, to which we have associated three different values. Personal characteristics like life experience or education are parameters that will soften that social effect depending of course on the personal situation of each.

3.2. Individual trust function for globalized societies

Globalization significantly changes the scenario. Simon Reich (1998) explained that globalization is a term that is used a lot although nobody would know very well how to define it. He proposed four different approaches or definitions of what globalization is and thus its relational implications. We have globalization as a historical epoch, globalization as confluence of economic phenomena, globalization as the hegemony of

American values, and globalization as technological and social revolution. All those alternative definitions highlight the interplay among economics, politics, and culture or social relations. Rodrik (1997) already warned that the most serious challenge for the world economy that year would be to make globalization compatible with domestic, social, and political stability. He advanced that globalization fundamentally transforms the employment relationship, engenders conflicts within and between nations over domestic or social norms, and generally makes things harder for governments.

So, it seems that in globalized countries, we will have an individual trust such that:

$$TF: f(g(X), g(Y), g(Z))$$

Globalization is a very broad term that refers to the different processes by which the world becomes increasingly interconnected (Koster, 2007; Guillen, 2001). While in closed societies the fact of sharing a culture, language was an advantage as a consequence to some feeling of brotherhood, now it will not always be the case. Globalization has led to cultural and traditional changes many times associated with less-clear national boundaries which has meant that some people have lost the feeling of being a nation. (Rodrik, 1997; Ina & Rosaldo, 2002; Kellner, 2002; Koster, 2007)

Life experience is still an important variable; the difference now is that the course of life is not the only source of knowledge. The social openness will bring a cross-border interaction allowing people to travel, discover and be in contact with people abroad. Many aspects need to be considered.

Let's start with tourism. It has always been said that traveling allows us to open our mind getting to know new cultures, living the experience of being a foreigner, and therefore discovering different ways of life. Tourism generates exchanges with foreigners and over time contributes to a cultural homogenization (Holton, 2000; Stott, 1978). As Reich (1998) advanced, the globalization as technological and social revolution has generated an inextricable linkage of technology across conventional borders. A possible explanation of that is the exchange theory which suggests that people in order to reduce their costs and maximize their rewards, are most likely to use news products as the telephone or more recently internet (Blank & Dutton, 2012). Internet in addition to be a communication technology provides possibilities for people to contact others creating online ties (Smith & Kollock, 1999). Some platforms such as Facebook or twitter have given greater voice to anonymous citizens and what ten years from now was unthinkable has even a vocabulary on its own. Age still matters, but being the youngest people those who most suffer the technological shocks; it seems that there is a change in the trust pattern. Blank and Dutton (2012) show that trust is influenced by the general attitudes toward technology. Indeed, the reason older people tend to be less trusting was in general due to their less favorable attitude toward technology. It is not only an age issue; people with negative attitudes toward

technology are generally less trusting independently of their age. In short, all these new opportunities to have life experiences and the eruption of new technologies have potentiated the learning procedure in the early age.

Globalization as confluence of economic phenomena is another very interesting topic. Reich (1998) said that under that perspective:

“The term (globalization) refers to the worldwide spread of sales, production facilities, and manufacturing processes, all of which reconstitute the international division of labor.”

Rodrik (1997) went a little further to say that globalization does not only reconstitute the international division of labor, it fundamentally transforms the employment relationship. He argued that the global market:

“... Reduced barriers to trade and investment accentuate the asymmetry between groups that can cross international borders (either directly or indirectly, say through outsourcing) and those that cannot. In the first category are owners of capital, highly skilled workers, and many professionals, who are free to take their resources where they most in demand. Unskilled and semiskilled workers and most middle managers belong in the second category.”

Under this approach, there will be a clear division between people who have skills and those who have not; between people with mobility and those with lack of mobility. Now more than ever, education matters. We previously highlighted the positive correlation between education (see as an instrument that help people to be better informed) and trust. All the structural changes that globalization generates need to be well understood (Lewis & Weigert, 1985; Luhmann 1979). Sullivan et al. (1993) argued that a higher diversified and cosmopolitan contact with people leads to more tolerance and less suspicion of others. Economic openness will generate a huge competition in which the services of a large segment of the working population could be easily substituted by the services of other people across national boundaries (Rodrik, 1997). Now more than ever it is necessary to have a certain level of education not only to understand the national and international framework but eventually to be competitive in the job market. Education not only will increase the social and economic quality of individuals; it will help them to trust more. When people know that a higher level of education makes others generate more incentives to be trusting, they will then in turn be more likely to trust others (Putnam & Helliwell, 2007).

There will be an important discussion about the effects that globalization may have on social stability and therefore in individuals' trust. There are many authors who have highlighted the structural changes that societies and governments have suffered due to economic and social openness. Social openness as a synonym of a spread of ideas, information, images, and people is positively correlated with tourism, immigration and population diversity (Alesina & Ferrara, 2000; Stolle et al. 2008; Franzen, 2000; Hampton et al., 1999; Stott, 1978; Taylor, 1998). Economic openness as a synonym of

the long-distance flows of goods, capital, and services entails gains of international trade but also influenced national policies and particularly welfare spending (Rodrik, 1997, 1998; Samuelson, 1939; Bowles & Wagman, 1997; Laporta et al., 1997; Porta et al., 1999). In spite of having generated much discussion in social capital literature, there is general agreement that the diversity paradox disappears when there is social interaction between the different ethnicities present in any society (Alesina & Ferrara 2002, Putnam, 1995, 2000, 2007; McClelland & Linnander, 2006; Pettigrew & Tropp, 2000, 2008).

Summing up all those new concepts and effects, our individuals' trust function for globalized societies will be: **(About here Figure 2 in appendix)**

$$f(X, Y, Z) = x^{1/4} y^{3/4} z^{1/2}$$

$$\text{with } Z = (\text{high, average, low}) \begin{pmatrix} 2 \\ 1 \\ 0.5 \end{pmatrix}$$

We maintain the three levels for Z because however personal contact positivizes diversity, being able to compare with other countries almost instantly can generate feelings of tension or envy when things go socially wrong in the country or otherwise joy and optimism when they go well.

In comparison with the first trust function, we can see that life experience loses importance as a consequence of the technological improvements which allows new learning procedures and therefore benefits everything that is done at a young age. Something similar happens with Z. In fact, the social openness will mitigate the weight that society may have on individuals' trust through the mobility factor, and it brings them to change their emplacement. The assumption that social stability is more important than the individual characteristics can only be applied with the life experience variable because as we explained, only the high-skill workers will be those with the mobility factor. In short, the education updated variable is now the main driver of individual characteristics.

Let's observe now the derivatives:

a) Derivatives of X

$$\frac{\partial f}{\partial x} = \frac{y^{\frac{3}{4}} z^{\frac{1}{2}}}{4x^{\frac{3}{4}}}; \quad \frac{\partial^2 f}{\partial^2 x} = -\frac{3y^{\frac{3}{4}} z^{\frac{1}{2}}}{4^2 x^{\frac{7}{4}}}$$

$$\frac{\partial f}{\partial x \partial y} = \frac{\frac{1}{4} y^{-\frac{1}{4}} z^{\frac{1}{2}}}{4^2 x^{\frac{3}{4}} y^{\frac{3}{4}}}; \quad \frac{\partial^2 f}{\partial^2 x \partial y} = -\frac{\frac{1}{4} z^{\frac{1}{2}}}{4^3 x^{\frac{3}{4}} y^{\frac{7}{4}}}$$

$$\frac{\partial f}{\partial x \partial z} = \frac{\frac{3}{8} y^{\frac{3}{4}}}{2^3 x^{\frac{3}{4}} z^{\frac{3}{2}}}; \quad \frac{\partial^2 f}{\partial^2 x \partial z} = -\frac{\frac{3}{8} y^{\frac{3}{4}}}{2^5 x^{\frac{3}{4}} z^{\frac{5}{2}}}$$

$$\frac{\partial f}{\partial x \partial y \partial z} = \frac{3}{2^5 x^{\frac{3}{4}} y^{\frac{1}{4}} z^{\frac{1}{2}}}; \quad \frac{\partial^2 f}{\partial^2 x \partial y \partial z} = -\frac{3}{2^7 x^{\frac{7}{4}} y^{\frac{1}{4}} z^{\frac{1}{2}}}$$

b) Derivatives of Y

$$\frac{\partial f}{\partial y} = \frac{3x^{\frac{1}{4}}z^{\frac{1}{2}}}{4y^{\frac{1}{4}}}; \quad \frac{\partial^2 f}{\partial^2 y} = -\frac{3x^{\frac{1}{4}}z^{\frac{1}{2}}}{4^2 y^{\frac{5}{4}}}$$

$$\frac{\partial f}{\partial y \partial x} = \frac{3z^{\frac{1}{2}}}{4^2 x^{\frac{3}{4}} y^{\frac{1}{4}}}; \quad \frac{\partial^2 f}{\partial^2 y \partial x} = -\frac{3z^{\frac{1}{2}}}{4^3 x^{\frac{3}{4}} y^{\frac{5}{4}}}$$

$$\frac{\partial f}{\partial y \partial z} = \frac{3x^{\frac{1}{4}}}{2^3 y^{\frac{1}{4}} z^{\frac{1}{2}}}; \quad \frac{\partial^2 f}{\partial^2 y \partial z} = -\frac{3x^{\frac{1}{4}}}{2^5 y^{\frac{5}{4}} z^{\frac{1}{2}}}$$

$$\frac{\partial f}{\partial y \partial x \partial z} = \frac{3}{2^5 x^{\frac{3}{4}} y^{\frac{1}{4}} z^{\frac{1}{2}}}; \quad \frac{\partial^2 f}{\partial^2 y \partial x \partial z} = -\frac{3}{2^7 x^{\frac{3}{4}} y^{\frac{5}{4}} z^{\frac{1}{2}}}$$

c) Derivatives of Z

$$\frac{\partial f}{\partial z} = \frac{x^{\frac{1}{4}}y^{\frac{3}{4}}}{4z^{\frac{1}{2}}}; \quad \frac{\partial^2 f}{\partial^2 z} = -\frac{x^{\frac{1}{4}}y^{\frac{3}{4}}}{4z^{\frac{3}{2}}}$$

$$\frac{\partial f}{\partial z \partial x} = \frac{y^{\frac{3}{4}}}{2^3 x^{\frac{3}{4}} z^{\frac{1}{2}}}; \quad \frac{\partial^2 f}{\partial^2 z \partial x} = -\frac{y^{\frac{3}{4}}}{4^2 x^{\frac{3}{4}} z^{\frac{3}{2}}}$$

$$\frac{\partial f}{\partial z \partial y} = \frac{3x^{\frac{1}{4}}}{2^3 y^{\frac{1}{4}} z^{\frac{1}{2}}}; \quad \frac{\partial^2 f}{\partial^2 z \partial y} = -\frac{3x^{\frac{1}{4}}}{4^2 y^{\frac{1}{4}} z^{\frac{3}{2}}}$$

$$\frac{\partial f}{\partial y \partial x \partial z} = \frac{3}{2^5 x^{\frac{3}{4}} y^{\frac{1}{4}} z^{\frac{1}{2}}}; \quad \frac{\partial^2 f}{\partial^2 z \partial x \partial y} = -\frac{3}{2^6 x^{\frac{3}{4}} y^{\frac{1}{4}} z^{\frac{3}{2}}}$$

For all the variables, first and second derivatives are respectively positives and negatives; therefore, we can say that the three variables lead to a hypothetical trust steady state.

3.3. Theoretical implications

Based on some statements of social trust and social capital literatures, we have proposed two individuals' trust functions. The first one expresses in what individuals from closed societies based their trust while the second one does exactly the same thing for those living in globalized societies. Both trust functions are explained by three variables which are life experience, education updated, and social stability. In both functions those three variables are positively interconnected.

In a closed society, individuals' trust is the driver of social stability. This comes to say that those individuals based principally their trust in others in accordance with social stability. What will differentiate their level of trust will be their personal

characteristics. Elders and the highly educated will trust more in others than young people and less educated. Therefore, the personal characteristics will lead to a steady state point of trust in which the level of trust will only increase or decrease if there is or not social stability.

In globalized societies, the individuals' trust driver should be the education. Due to structural changes that social openness (being more specific the spread of people and images) generates mostly in young people, the life experience variable will be less determinant. The most informative part of social openness (share of information and ideas) plus people circulation will explain the lower impact that the social stability variable will have on individuals trust. In a such environment in which the world is increasingly interconnected, a higher level of knowledge will be required to understand how things work and be useful in the job market.

The main objective of the theoretical framework is to propose a plausible equation which explains how the individuals' trust works. The assumptions used to create the theoretical model, certainly simplify the framework of study, but they force us to put aside some variables or concepts. As we explained before, the positive correlation which exists between a high level of education, employment, and high wages, therefore wealth, probably has many determinants drivers that we are not considering or capturing here. Something quite similar may occur with life experience variable. One of the main advantages that empirical analysis is that with the appropriated data, they allow you to not only control but consider all those variables in a same regression.

4. DATA

In this paper, we merged four different databases; one captures individual data, and the others, globalization and macroeconomics data. The most important one is the World Value Survey (WVS)² from which we obtained our dependent variable as well as individual controls used in the empirical model. This database is the common one used in the literature, because it consists of nationally representative surveys conducted in almost 100 countries which contain almost 90 percent of the world's population, using a common questionnaire.

The second one, KOF Global Index measures the three main dimensions of globalization which are the economic, social, and political dimensions.

The economic globalization captures the long-distance flows of goods, capital, and services as well as information and the perception that companies market exchange. Economic globalization variable is composed of two dimensions; actual economic flows, and restriction to trade and capital. Actual economic flows dimension, takes into

² We use the same data of Pitlik and Rode (2014)

account trade (sum of a country exports and imports), Foreign Direct Investment (stocks as a percentage of GDP), portfolio Investment, and Income Payments to Foreign Nationals (all normalized by GDP). Restrictions dimension, considers hidden import barriers, mean tariff rate, taxes on international trade as percent of current revenue, and capital account restrictions. The idea here is that given a level of trade, countries with higher revenues from tariffs are less globalized.

The social globalization variable expresses the spread of ideas, information, images and people. This variable is composed of three categories which are personal contact, information flows, and cultural proximity. The personal contact captures direct interaction among people living in different countries. For this category are considered telephone traffic, transfers (percent of GDP), international tourism, foreign population as percent of total population, and number of international letters sent and received per capita. The information flow measures the potential flow of ideas and images based on internet users (per 100 people), television (per 100 people), and trade in newspapers (percentage of GDP). The cultural proximity captures the melting pot based on number of McDonald's restaurants (per capita), number of Ikea (per capita), and trade in books (percent of GDP).

The political globalization variable is characterized by a diffusion of government policies. To proxy the degree of political globalization, this variable consider the number of embassies and high commission in a country, the number of international organizations to which the country is member, the number of UN peace missions a country participated, and the number of treaties signed between two or more states since 1945.

Finally, from the World Bank database and Penn World, we obtained respectively the annual Gini social indicator and the GDP per capita for each country which we will be using as controls in our regressions.

We will be working with a database composed of individual survey answers and macroeconomic variables of citizens from 175 countries for a period of time ranging from 1980 to 2013.

(Table A0 (variables information and statistics) in appendix)

5. EMPIRICAL ANALYSIS

5.1. Econometric set up

The equation we will use for our analysis is the following:

$$Y_{ict} = \alpha + \alpha_c + \alpha_t + \beta' X_{ict} + \gamma' Z_{ct} + \varepsilon_{ict}$$

In which i denotes persons, c the country, and t the year; α_c and α_t are fixed effects. X_{ict} , represents all the individual control generally used in the literature. We will control for gender “female”, age, number of children “children12”, acquisitive level “income decile”, years of education “education age”, if is unemployed, if is a religious person, and life satisfaction³.

Z_{ct} , summarizes those variables measured at a country level. Here we consider the three KOF variables (economic globalization, social globalization, and political globalization), the Gini social indicator, and GDP per capita.

The dependent variable Y_{ict} , will be the answers given to the question originally formulated by Elizabeth Noelle-Neumann: “Generally speaking, would you say that most people can be trusted, or that you can’t be too careful in dealing with people?”. Those answers are treated as dummies; where 0 is for distrustful and 1 for those who trust.

As explained previously, one of the most interesting aspects of this paper is that in order to study the globalization’s impact on individuals; we are combining microeconomic and macroeconomic data. This sort of approaches generally has two main problems which are the causality effect, and the endogeneity or multicollinearity that may exist between some variables.

Even if this paper does not try to solve any econometrics issue, we are conscious that one of the main challenges of regressions in this literature is to control the endogeneity and multicollinearity problems which may exist between macroeconomic and microeconomic variables. Not being able to completely solve that aspect, we put some restrictions to the correlation between variables. Indeed, all individuals’ controls have less than 0.3 degree of correlation among them including the dependent variable. This is the reason why, for example, we use age of education instead of level of education or children12. This restriction is softer with macroeconomics variables, because our results were similar but clearer when we used original data instead of their residuals with what we decreased the degree of correlation. It is true that some individuals’ controls have some correlation with macroeconomic variables as the acquisitive level with GDP per capita, but those correlations were not significant.

(Tables A1 and A2 in appendix)

Accepting to work with some degree of correlation between some variables, causality is solved by using as dependent variable, individuals’ perceptions of trust in a society and as independent variable macroeconomics data. The idea behind this methodology is that, through our equation, we are highlighting the causality effect that globalization could have on individuals’ perception of trust, while questioning the effect the other way around. It is more probable that the macroeconomic behavior of a society

³ See (Helliwell & Barrington-Leigh, 2010; Helliwell & Huang, 2011; Helliwell, Huang, & Wang, 2014)

influenced individuals' perception instead that individuals' perceptions can have a substantial impact on a variable which represents an entire country. Under this assumption it is more comprehensible that we do not care so much for the high correlation of the macroeconomic variables.

As a consequence of the high degree of heterogeneity present in our dataset, in terms of countries and above all, since it is not the same people which answer the survey each wave, we do not have a panel data but a quasi-panel data. In order to find a similar group of analysis by country, we have used the cluster analysis. Kaufman and Rousseeuw (1990) defined cluster analysis as the art of finding groups in data based on a specific parameter. Being our dependent variable a dummy variable, our regression will be a logistic cluster with the country as a reference parameter.

5.2. Policy implication

Social capital literature has been deeply studied, particularly the main role played by trust for the well running of societies, economically and socially speaking. In the same way, despite some discrepancies in term of approaches, there are no doubts until now about the two main mechanisms (individuals and institutions) through which social trust is developed in a society. Each of those mechanisms has direct policy implications in order to improve the level of trust in a given society.

This paper changes drastically the methodology generally used in this literature. What we are doing here, is study if a political decision to “globalize a country”, affects trust at an individual level. The hypothesis we will test is: ***Globalization has an impact on individual trust.***

Definitely, what we are doing it is taking a leap; is believed that a general term such as globalization, which normally makes reference to either aggregates' or macroeconomic concepts, may influence people at the individual level.

As we concluded earlier in the theoretical framework, any positive variation of the life experience or social stability variable considered in the trust function should have a higher impact on individuals' trust in closed societies. We also concluded that social stability will be the driver of individuals' trust in closed societies, whereas education will be the driver in globalized societies. Comparing the derivatives, we supposed that individuals' trust should be higher in closed societies, nevertheless in globalized societies the hypothetical steady state will be reached earlier.

Based on our trust equations, it is really interesting to ascertain whether the empirical analysis holds with our theoretical conclusions.

6. RESULTS

Table 1 (*appendix*) shows how KOF variable behaves when we consider them separately or jointly, and proves why we stopped using residuals variables. This table is very important because it allows to better position the frameworks in which we are going to work. For the regressions represented in this table, we used all the information present in our data set, in other words, all countries and years of study are considered. Something very common in this literature, but which may surprise those who are not accustomed to work with survey data are the large number of significant variables, and the small value of the R-squared.

Let's start with the individual variables used as controls in regressions. Independently of the number of KOF variables used, they are always significant. Being a religious person does not affect trust in others, whereas a higher level of education and wealth foster trust⁴.

In what concerns the two macroeconomics controls, we obtained that GDP per capita is negatively insignificant but the Gini indicator is positively significant.

If we focus now on the KOF variables and their residual, we can see that both behave similarly when they are used separately or jointly. Based on that, we decided to only use original data in future regressions. Once clarifying that point, what is striking is that in contrast to the survey variables, we no longer have a great level of significance. In fact, only one (the political globalization) of the three globalization dimension considered is significant. Based on the benchmark regression, globalization has a positive impact on individuals' trust. Being more specific, we shall say that a higher political globalization generates positive effects on individuals' trust; greater diffusion of government policies increases individuals' trust.

This conclusion is coherent with Frewer et al. (2001), which concluded that the failure to communicate may be perceived as an attempt to hide relevant information further fueling public distrust in the motives of the source. In other words, people are interested in being well informed, because in the end, each trusts on the assumption that others trust (Lewis & Weigert, 1985). Our results do not allow us to say anything about the quality of the information; they only highlight the fact that communication and information are important for trust.

We did the same exercise, but now differentiating by continent as is shown in Table 2 (*appendix*). From those results we can observe that globalization (in any of its dimensions) generates different outcomes on individuals' trust depending on the continent.

⁴ See Alesina and Ferrara (2000,2002); Lindström (2009); Helliwell & Barrington-Leigh (2010); Boyadjieva & Ilieva-Trichkova, 2015

Let's start with the individual controls. For Africa, none of them are significant. If we compare now each continent with the benchmark regression, there are no big surprises. Almost all the variables remain significant with the same sign, but for some of them, the coefficients have changed. For example, women from Asia are less likely to trust people while, old people from Oceania and America are the most trustful. There are not big variations with the variables "children12" and "education age", we may just remark that for both, higher coefficients are found in Europe. Oceania is the continent in which high levels of wealth and life satisfaction have the highest effect on individuals' trusts whereas being a religious person decreases trust. Surprisingly, Asia is the continent in which the unemployed trust the least in others.

If we focus now on KOF variables, clearly there exist substantial differences between continents. Previously, we argued that only the political globalization variable was significant, but now, depending of the continent at least one of the three KOF variables is significant.

In America, political globalization is significant and its impact on trust is higher than the one observed in the benchmark regression. So, people from that continent are positively sensitive to the diffusion of government policies. In Asia, the economic aspect of globalization is the one which fosters individual trust. In Europe, Africa, and Oceania all variables are significant. In Europe, while political and economic dimensions of globalization have the same positive impact on individuals trust, we observed that the social one decreased trust. In other words, the higher the spread of ideas, information, or people, the lower will be individuals' trust. A similar lecture can be done for Oceania where both economic globalization and political globalization are positively significant, having the first a higher coefficient whereas social globalization again generates a negative impact on individual trust.

Africa as happened with individual' controls, differs from others. It is the continent with the highest KOF coefficients. While economic and social globalization fosters trust in others, political globalization destroys it. In the other continents, economic globalization was higher or at least equal to the other two globalization variables. The economic aspect somehow was the reference, but what is surprising for this continent is the huge negative perception that people have of politicians. It is like people do not trust politicians and when they inform about policies, individuals trust less. Political aspect of globalization damages eight times more the trust at individual level than what the economic globalization creates. Nunn and Wantchekon (2011) give an explanation that could justify these results when they argue that Africans trust less in others due to slavery. The slave trade shocks have had a very persistent effect on trust, literally lasting for centuries.

Dividing the sample has revealed to us such a regional issue which generates different responses to globalization. Perhaps a continental fixed effect could have absorbed that

regional effect, but what is clear is that independently of the sample, globalization impact remains. Lindström (2004) mentioned this regional issue, when it explained that generalized trust is associated with age, country of birth, education, and economic stress suffered. Considering these two tables our hypothesis is consistent in the sense that, globalization has an impact on individuals' trust; nevertheless, that impact depends on which part of the world you are living.

Taking into account that we use countries' fixed effects and in order to see if that regional issue remains, we did the analysis at a country level. We ran the same regression, but now only for European countries.

Europe is an interesting continent for two reasons. Firstly, many European countries have been considered in the different waves of World Value Survey. Secondly, it is a continent with a lot of cultural diversity, but more importantly, somehow those countries share a recent history (the two world wars, beginning and end of the cold war, European Union creation). We divided it into six portions: Oriental, Occidental, Central, Meridional, Nordic countries, and Ex-Soviet countries. We decided to create the Ex-Soviet group in order to see if globalization may have a real impact when it is applied in countries previously under a dictatorship regime which filtered the contact that citizens had with the foreigner. **(Table A3 appendix)**

In Table 3 (*appendix*), you can see that as for the European continent, the three KOF variables are always significant. So, globalization is still important for these groups of countries especially for the central Europe group. We have divided countries by group; the country fixed effect absorbs all that is common to people of a same country, therefore we may suppose that these results are highlighted in addition to the regional issue, another cultural or historical. A clear example of that is the Ex-Soviet group. For those countries, social and political aspects of globalization are what matters. Historically speaking it is comprehensible, because under the communist regime, there was no freedom to say or read whatever people wanted. The lack of freedom made people lose confidence in their friends or family for fear of being betrayed. What people really desired was freedom. In that sense, it could be said that the recent history of societies also matters⁵.

The group of Nordic countries is the only one in which political globalization is negatively significant. This is even more interesting because, of all the groups, it is the only one in which all countries are most similar in terms of way of life, history, social structure or political cooperation. Nordic countries are generally recognized by their economic Nordic model where the market economy is combined with strong labor union forces and a Universalist welfare sector financed by heavy taxes with a high degree of distribution and little social unrest. While the positive impact of economic

⁵ This historical issue also has been mentioned by Alesina and Ferrara (2002) and Putnam (1993) when he concluded that the historical background of the regions he analyzed explained their social capital.

globalization was expected, the political not so much. Another interesting fact is the negative sign that age variable has for this group. Young people trust more in others than the older people.

In short, based on Table 3, we can conclude that globalization has a different impact on individuals trust depending on where they live and the historical background of that region. These remarks match with the “identity or group based accounts of trust” explained in the literature. This approach came to say that people usually tend to trust those to whom they feel close due to family, status or other similarities as for example a common history, common culture or way of life (Rothstein & Stolle, 2001).

Inda and Rosaldo (2002) have shown that globalization leads to an erosion of local cultures and traditions. In order to be more competitive, many countries have had to change their legal structure which has favored an increase of foreign direct investment and therefore an evolution of societies. Nowadays, clear examples of that are cities like London, Hong Kong, New York, Abu Dabi or St. Petersburg, where there is a melting pot mainly due to the arrival of multinational firms, but also for other type of immigration as it has been recently the case in Nordic countries⁶.

In order to see if globalization has generated changes on individuals' trust over years, for Table 4 (*appendix*), we differentiated the sample between 80's-90's (1980-1999) and 2000's (2000-2013).

If we take a look of individuals' controls we see that, in the benchmark regression, “Female” is only significant in the second period and except with “age”, the others controls have higher coefficients in the first period. Unemployed and people with children trust more now than ten years before, life satisfaction is less important for trust, and both education and wealth generate less trust in other. In Europe, people with children and unemployed are more distrustful now than before, life satisfaction makes people trust more now, and education and wealth are less important for individuals' trust now than before.

The analysis becomes more interesting for American continent, firstly because “age” has the highest coefficient in both periods; secondly because “children12” remains constant in both periods; thirdly because unlike in the other two regressions both “income decile” and “education age” have higher coefficient in 2000's; while “unemployed” was significant, it is not anymore; only for this sample “religious person” was significant and life satisfaction only has been significant in the second period.

Taking into account all the regressions present in this table, we can observe that the variables “children12”, “income decile”, “education age”, “unemployed”, and “life

⁶ Koster (2007) shows increasing social openness affects the social structure of countries

satisfactions” are those that are often significant. In the theoretical function, we agreed that a variable education was necessary because it allowed somehow to control for unemployment and good wages. Based on these results, both unemployment and wealth variables have higher coefficients than education; therefore we should redefine what that variable captures or replace it with one of these two. The values obtained for unemployment are too big to be ignored in a theoretical approach. On the other hand, life satisfaction and “children12” are also variables which should be represented.

Finally, the variable age as proxy of the life experience concept, has turned out to be very interesting. Both in this table and in all the others, it was one of the variables constantly significant and with the same sign. The fact that in for America, it has a higher coefficient may reflect the idea that there are some individual aspects intrinsic to the man that do not change. In other words, it could be that globalization over the years has not changed the weight of life experience because the coefficient does not change, but it has changed weight that different experiences have had on life experience..

In benchmark regression, both the economic and political globalization variables are significant in the first period while social and political are significant in the second. Both KOF variables that are significant in the first period have a positive effect on trust, while in the second period, social globalization generates a negative effect on individuals’ trust. In regressions for Europe, in both periods, all globalization variables are significant and only social globalization has a negative sign. The American continent is a bit more convoluted. There is not a variable significant in both periods. In the 80’s-90’s the economic dimension of globalization by far was the driver of individuals trust. Socially and economically, globalization increased individuals’ trust. In the 2000’s is the political aspect which fosters individuals’ trust. Catching some perspective, it is clear that globalization has become increasingly important; proof of this is that all variables have higher coefficients in the second period. It is also clear that no conclusion can be generalized for any of the variables; each has to be study in its context, but based on these results and the previous one, nowadays, the political dimension of globalization is the only one which is relevant for everyone.

If we assume that countries during the period of 80’s-90’s were less globalized than in the 2000’s, we can then make a comparison between the theoretical function and these results. In the theoretical function we argued that the social stability variable should drive individual trust while the individual characteristics would be the ones that would establish the level of confidence. Hence, social stability had a higher coefficient than life experience and education, which have the same coefficient.

What we observe with this data is that in term of coefficient, age and education do not coincide. Education is much more important than life experience. We have to redefine

what we want to capture with education because both the income decile and unemployed variables also have higher coefficients than education in both periods. Globalization variables which somehow measure the economic, social, and political stability present in a country are indeed significant but not so much. Except for America in 80's-90's, there is always an individual control with a higher coefficient.

Focusing now on second period regressions, which represent globalized societies, we can see that education which should drive individual trust has a lower coefficient than in the first period. Except for unemployed, both income decile and education have lower coefficients in the second period. This also happen with globalization variables, therefore, we should recalibrate theoretical variables. The fact that globalization variables have negative signs suggests that they should be considered as an average of social stability, and that our proposal of three levels (High, average, low) was not bad, but in order to simplify things it can be better to only use an average value.

To conclude, in both theoretical functions, more individual controls should be considered. Life satisfaction, having children, and being unemployed should be somehow captured in the theoretical model because these factors are relevant in the empirical model. The role played by individual' controls in both closed and globalized societies changed depending of the region in which one lives and the historical background of each society. There is no general theory that may explain how society influences people at the individual level, but from our data, we observed that those individual characteristics were more relevant for those living in globalized environments; therefore they should have a higher coefficient in the theoretical function. We could say that a higher degree of globalization generates higher differentiation at an individual level.

In what concerns globalization variables or social stability, we have observed that are not constant according to the periods and even less according to the regions. In order to simplify this, it could be interesting to consider an average value of the three KOF variables because each of them behaves differently, and a parameter that captures the geographical and historical issues.

7. CONCLUSIONS

Based on our results three ideas have to be emphasized: firstly, globalization has a direct impact on individuals' perception of trust. Secondly, the mechanism through which that causality effect is applied could not be generalized. Nevertheless, there are geographical and historical aspects which influence the way in which society may affect individuals. And thirdly, globalization changes the individual characteristics of individuals' trust over time.

Individual trust depends on three components: the individual characteristics, a geographical aspect, and the historical or cultural background from society in which it lives. When studying the impact that globalization has on individual trust, we found that at all levels of study, at least one of the globalization variables was significant. When significant, the economic dimension of globalization always generates a positive effect on individual trust. Any improvement on the diffusion of government policies makes individuals trust more in others. Cannot say the same for the others dimensions, but what is true is that political globalization is what individuals are most sensitive.

From our results, we have observed that: women, people with children, and the unemployed used to trusts less in others than old people, and those satisfied with their lives. A high level of education and wealth fosters trust in others while being a religious person has no implication on trust. Any improvement on the diffusion of government policies makes individuals trust more in others.

When we differentiated the dataset by continents we observed that: there were no significant changes at individual levels whereas for globalization variables, we observed a geographical issue. In fact, depending of which continent was analyzed, globalization variables had different effects on individuals' trust. The political globalization variable has only a negative sign in Africa while social globalization diminishes individual trust both in Europe and Oceania. As well as the geographical issue appearing in the continental analysis, a cultural or historical issue appeared when the study was replicated only for European countries.

Based on some results obtained in social trust literature and well known facts in economics, we proposed a function to model the different channels through which individual trust is based. The model explains how individual trust behaves, differentiating between closed and globalized societies. The model is based on three variables where X captures the life experience measured in ages, Y education updated, and Z the macroeconomic stability which at the end is a social component.

Comparing the theoretical and empirical model, we observed that the theoretical model was not able to capture correctly those geographical and cultural aspects. Our equation does not take into account the fact that when a country starts its globalization process, some changes in the populations are not immediate. We have to reconsider the Y variable because at the end, it is measuring the education, wealth (here measured as wages), and employment which is a proxy of life satisfaction. This employment component has turned out to be very important on trust as we explained previously. The weight given to both variables X and Y, had to be revised. The results show that the age (X) is not so important in term of coefficient, while both the education and wealth should have a higher weight in closed societies.

The social component Z, is the one that needs to be defined correctly. From the regression it is clear that there is a social component influencing the individual trust either with the cultural aspect as with the geographical. As a consequence of structural changes that globalization generates both in individuals and so forth in societies, Z should have a high weight in the equation as we did.

The main contribution this paper adds to social literature is that with the empirical model, it is highlighting the fact that there is relation existing between globalization and individual trust; between macroeconomic decisions and individual trust. Going back to the social capital literature which focuses on how to improve the generalized trust in a society, the causality relation earlier mentioned showed that both the society-centered approach and institutional-centered approach complement each other. In fact, globalization, as the political decision that it is, has an impact on individual trust; both approaches agree on the fact that generalized trust (sum of individual trust) is needed for a well-running of a society. This comes to say that good political decisions taken by institutions or governments have a direct impact on individuals, who are those which with their trust (on those institutions or government) facilitate the well-running of society.

Our results did not allow us to say what is more important; individuals trust, or political decisions. The changes highlighted from globalization on an individual perception of trust over time, are in accordance with the idea that institutions, with their policies, can produce structural changes in societies. This is a very interesting question for future researches.

The failures from the theoretical model emphasize the difficulties there are to firstly define how trust behaves and by so, modeling it. They also, proved that, depending on those geographical and cultural issues, the different types of trust reflected in the interdisciplinary literature have to be considered.

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Appendix

Table 1: results of the benchmark regression

VARIABLES	economic	social	political	2	2'	benchmark	3'
economicglobalization	0.02 (1.20)			0.02 (1.25)	0.01 (0.43)	0.02 (1.22)	0.01 (0.65)
socialglobalization		-0.01 (-0.91)		-0.01 (-1.01)		-0.01 (-1.09)	
politicalglobalization			0.01** (2.08)			0.01** (2.02)	
socialresidual					-0.01 (-1.01)		-0.01 (-0.61)
politicalresidual							0.01** (2.02)
female	-0.05*** (-2.71)	-0.05*** (-2.76)	-0.05*** (-2.77)	-0.05*** (-2.73)	-0.05*** (-2.73)	-0.05*** (-2.74)	-0.05*** (-2.74)
age	0.00** (2.38)	0.00** (2.30)	0.00** (2.25)	0.00** (2.37)	0.00** (2.37)	0.00** (2.31)	0.00** (2.31)
children12	-0.06*** (-4.73)	-0.06*** (-4.98)	-0.06*** (-4.97)	-0.06*** (-4.76)	-0.06*** (-4.76)	-0.06*** (-4.80)	-0.06*** (-4.80)
incomedecile	0.06*** (7.33)	0.06*** (6.84)	0.06*** (6.94)	0.06*** (7.00)	0.06*** (7.00)	0.06*** (6.82)	0.06*** (6.82)
educationage	0.02*** (6.77)	0.02*** (6.27)	0.02*** (6.41)	0.02*** (6.73)	0.02*** (6.73)	0.02*** (6.83)	0.02*** (6.83)
unemployed	-0.13*** (-3.36)	-0.14*** (-3.65)	-0.14*** (-3.57)	-0.13*** (-3.50)	-0.13*** (-3.50)	-0.14*** (-3.55)	-0.14*** (-3.55)
religiousperson	-0.03 (-1.21)	-0.03 (-1.14)	-0.03 (-1.23)	-0.03 (-1.16)	-0.03 (-1.16)	-0.03 (-1.20)	-0.03 (-1.20)
lifesatisfaction	0.07*** (5.56)	0.07*** (5.91)	0.07*** (5.84)	0.07*** (5.65)	0.07*** (5.65)	0.07*** (5.69)	0.07*** (5.69)
gni_prcap_ppp	0.00* (1.94)	0.00* (1.69)	0.00*** (2.74)	0.00* (1.73)	0.00* (1.73)	0.00** (2.10)	0.00** (2.10)
GDPPC	-0.00 (-1.37)	-0.00 (-0.54)	-0.00 (-1.48)	-0.00 (-1.11)	-0.00 (-1.11)	-0.00 (-1.45)	-0.00 (-1.45)
Constant	-2.02*** (-5.79)	-1.40*** (-3.36)	-2.46*** (-5.25)	-1.75*** (-3.74)	-1.75*** (-3.72)	-2.53*** (-4.08)	-1.82*** (-4.18)
year	yes	yes	yes	yes	yes	yes	yes
country	yes	yes	yes	yes	yes	yes	yes
Observations	203,739	207,692	207,692	203,739	203,739	203,739	203,739
Pseudo R-squared	0.122	0.121	0.121	0.122	0.122	0.122	0.122

Robust z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

2 represent the number of KOF variables considered

2' and 3' represent the regressions with residuals variables

Table 2: The results of the regressions differentiated by continents

VARIABLES	benchmark	america	europa	africa	asia	oceania
economicglobalization	0.02 (1.22)	0.02 (0.63)	0.02* (1.75)	1.11*** (25.22)	0.03* (1.67)	0.07*** (25.10)
socialglobalization	-0.01 (-1.09)	-0.01 (-0.11)	-0.05*** (-4.08)	12.90*** (25.87)	0.01 (0.32)	-0.02*** (-20.22)
politicalglobalization	0.01** (2.02)	0.05*** (3.53)	0.02*** (4.12)	-8.07*** (-26.06)	0.04 (1.60)	0.05*** (20.41)
female	-0.05*** (-2.74)	-0.01 (-0.13)	-0.02 (-0.86)	-0.01 (-0.56)	-0.11*** (-3.36)	-0.04 (-0.26)
age	0.00** (2.31)	0.01*** (3.30)	0.00 (1.21)	0.00 (0.33)	0.00*** (2.95)	0.01*** (11.75)
children12	-0.06*** (-4.80)	-0.08*** (-2.79)	-0.09*** (-5.59)	-0.01 (-0.13)	-0.02 (-0.99)	-0.07*** (-3.64)
incomedecile	0.06*** (6.82)	0.09*** (4.93)	0.07*** (7.51)	-0.01 (-0.47)	0.02* (1.76)	0.10*** (20.94)
educationage	0.02*** (6.83)	0.01*** (3.70)	0.03*** (7.14)	0.00 (0.55)	0.01* (1.70)	0.02*** (14.17)
unemployed	-0.14*** (-3.55)	-0.17*** (-2.85)	-0.16*** (-3.08)	-0.02 (-0.54)	-0.21*** (-2.90)	0.07 (0.65)
religiousperson	-0.03 (-1.20)	-0.07*** (-3.21)	-0.01 (-0.16)	-0.04 (-0.44)	-0.03 (-0.63)	-0.13** (-2.24)
lifesatisfaction	0.07*** (5.69)	0.04* (1.78)	0.11*** (7.87)	-0.01 (-0.33)	0.08*** (6.91)	0.12*** (10.58)
gni_prcap_ppp	0.00** (2.10)	0.00*** (2.81)	0.00*** (3.17)	0.20*** (26.10)	0.00 (1.47)	
GDPPC	-0.00 (-1.45)	-0.00*** (-5.07)	-0.00*** (-2.84)	-0.30*** (-26.06)	-0.00 (-0.41)	
Constant	-2.53*** (-4.08)	-6.46*** (-2.58)	-2.22*** (-6.96)	11.09*** (17.68)	-5.87*** (-3.41)	-11.43*** (-75.37)
year	yes	yes	yes	yes	yes	yes
country	yes	yes	yes	yes	yes	yes
Observations	203,739	37,996	77,510	24,072	64,019	4,511
Pseudo R-squared	0.122	0.124	0.116	0.0474	0.113	0.0508

Robust z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3: The results of the regressions for different regions of Europe

VARIABLES	benchmark	europa	occidental	central	oriental	meridional	nordic	exsoviet
economicglobalization	0.02 (1.22)	0.02* (1.75)	0.11*** (4.82)	-0.30*** (-23.54)	-0.04*** (-14.09)	0.02*** (4.63)	0.05*** (8.06)	-0.11*** (-14.45)
socialglobalization	-0.01 (-1.09)	-0.05*** (-4.08)	0.07*** (2.63)	-0.22*** (-28.30)	0.02*** (5.01)	0.01*** (6.18)	-0.02*** (-3.37)	0.11*** (17.21)
politicalglobalization	0.01** (2.02)	0.02*** (4.12)	0.01*** (10.62)	0.44*** (23.24)	0.00*** (2.76)	0.01*** (28.67)	-0.02*** (-5.01)	0.01*** (11.58)
female	-0.05*** (-2.74)	-0.02 (-0.86)	-0.11*** (-2.78)	-0.02 (-0.39)	0.02 (0.36)	-0.01 (-0.20)	0.10** (2.38)	-0.01 (-0.29)
age	0.00** (2.31)	0.00 (1.21)	0.00 (0.27)	0.01*** (4.93)	0.01*** (3.55)	0.00*** (3.02)	-0.01* (-1.90)	0.01*** (2.72)
children12	-0.06*** (-4.80)	-0.09*** (-5.59)	-0.12*** (-4.09)	-0.02 (-0.32)	-0.13*** (-2.69)	-0.09** (-2.37)	-0.09*** (-2.87)	-0.02 (-1.07)
incomedecile	0.06*** (6.82)	0.07*** (7.51)	0.08*** (4.72)	0.04** (1.97)	0.01 (0.34)	0.07*** (6.86)	0.09*** (4.95)	0.04*** (2.61)
educationage	0.02*** (6.83)	0.03*** (7.14)	0.05*** (5.56)	0.03 (1.45)	0.02*** (3.38)	0.03** (2.03)	0.03*** (5.49)	0.01* (1.91)
unemployed	-0.14*** (-3.55)	-0.16*** (-3.08)	-0.20*** (-3.02)	-0.20 (-1.42)	-0.11 (-1.03)	0.05 (1.04)	-0.29** (-2.08)	-0.32** (-2.48)
religiousperson	-0.03 (-1.20)	-0.01 (-0.16)	0.10* (1.80)	-0.09 (-0.79)	-0.12* (-1.85)	-0.11 (-1.35)	-0.03 (-0.43)	-0.05 (-0.76)
lifesatisfaction	0.07*** (5.69)	0.11*** (7.87)	0.15*** (5.05)	0.11*** (5.26)	0.11*** (11.21)	0.07*** (3.69)	0.12*** (4.81)	0.11*** (10.88)
gni_prcap_ppp	0.00** (2.10)	0.00*** (3.17)	0.00*** (3.89)	-0.00*** (-37.11)	-0.00** (-2.56)	-0.00*** (-9.45)	-0.00*** (-3.31)	0.00*** (23.94)
GDPPC	-0.00 (-1.45)	-0.00*** (-2.84)	-0.00*** (-4.82)	0.00*** (53.81)	0.00*** (6.61)	0.00*** (10.05)	0.00*** (7.71)	-0.00*** (-19.80)
Constant	-2.53*** (-4.08)	-2.22*** (-6.96)	-18.53*** (-4.45)	3.26*** (5.33)	-1.07*** (-7.59)	-4.93*** (-7.51)	-6.73*** (-12.15)	-1.85*** (-9.16)
year	yes	yes	yes	yes	yes	yes	yes	yes
country	yes	yes	yes	yes	yes	yes	yes	yes
Observations	203,739	77,510	23,635	14,104	11,452	14,866	13,453	22,329
Pseudo R-squared	0.122	0.116	0.0830	0.0395	0.0348	0.0452	0.0570	0.0513

Robust z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4: Comparison between 80's-90's and 2000's

VARIABLES	benchmark8090	benchmark2000	europe8090	europe2000	america8090	america2000
economicglobalization	0.03* (1.68)	0.01 (0.72)	0.03* (1.89)	0.04*** (13.59)	0.30** (2.03)	0.00 (0.14)
socialglobalization	-0.01 (-0.19)	-0.04*** (-4.54)	-0.06*** (-3.38)	-0.10*** (-51.83)	0.08* (1.68)	0.03 (1.48)
politicalglobalization	0.01** (2.49)	0.03** (2.00)	0.01** (2.35)	0.07*** (42.04)	-0.03 (-0.60)	0.19*** (15.65)
female	-0.01 (-0.39)	-0.07*** (-3.49)	-0.02 (-0.83)	-0.01 (-0.42)	0.07 (0.76)	-0.07 (-1.40)
age	0.00* (1.93)	0.00** (2.51)	0.00 (1.03)	0.00 (1.10)	0.01*** (4.47)	0.01** (2.50)
children12	-0.07*** (-3.65)	-0.05*** (-3.11)	-0.06*** (-3.08)	-0.12*** (-3.57)	-0.08* (-1.67)	-0.08** (-2.36)
incomedecile	0.07*** (7.60)	0.05*** (4.78)	0.07*** (7.96)	0.06*** (3.91)	0.08*** (3.17)	0.10*** (4.94)
educationage	0.03*** (5.77)	0.01*** (4.79)	0.04*** (6.55)	0.02*** (5.54)	0.01*** (2.69)	0.02*** (3.40)
unemployed	-0.15*** (-3.44)	-0.14*** (-2.82)	-0.11** (-2.03)	-0.21** (-2.38)	-0.27*** (-4.03)	-0.10 (-1.37)
religiousperson	-0.06 (-1.25)	-0.01 (-0.43)	0.00 (0.02)	-0.03 (-0.53)	-0.12** (-1.96)	-0.03 (-0.73)
lifesatisfaction	0.08*** (6.19)	0.07*** (4.86)	0.11*** (8.12)	0.12*** (6.47)	0.04 (1.27)	0.05** (2.27)
gni_prcap_ppp	0.00 (0.14)	0.00*** (2.61)	0.00** (2.11)	0.00*** (19.54)	-0.00*** (-2.97)	0.00*** (33.25)
GDPPC	0.00 (0.20)	-0.00*** (-2.86)	-0.00** (-2.36)	-0.00*** (-57.02)	-0.00 (-1.10)	-0.00*** (-16.39)
Constant	-5.14*** (-4.36)	-2.30 (-1.44)	-2.06 (-0.92)	-4.47*** (-21.45)	-18.72*** (-2.94)	-21.55*** (-10.75)
year	yes	yes	yes	yes	yes	yes
country	yes	yes	yes	yes	yes	yes
Observations	73,026	130,713	45,676	31,834	15,235	22,761
Pseudo R-squared	0.107	0.135	0.102	0.142	0.124	0.116

Robust z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

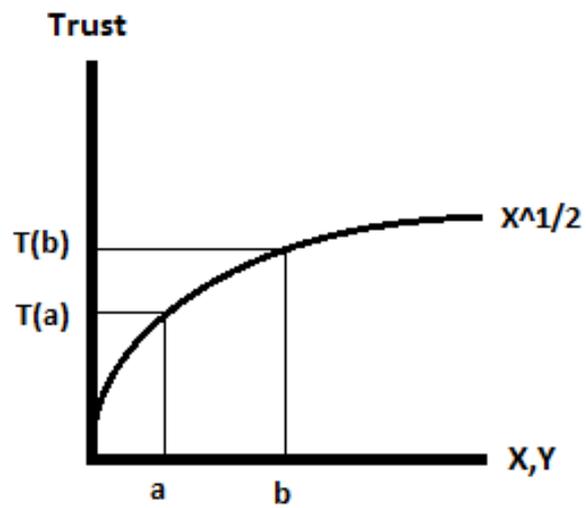


Figure 1: Graph of X and Y variables of the trust function for closed societies

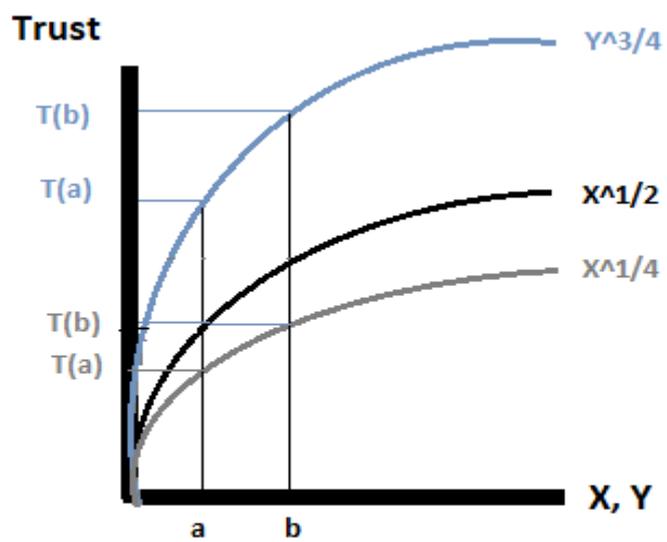


Figure 2: Graph of the variables X and Y for the trust function in globalized societies

Table A0: Variables definition and statistics

Source	Variable	Information	Obs	Mean	Std.Dev.	Min	Max
WVS 2014	socialtrust	Most people should be trusted?(yes=1; no=0)	466195	0.2886088	0.4531161	0	1
KOF global index 2016	economic globalization	Explained in section 4 (data)	463934	60.70848	16.93713	7.76	99.15
KOF global index 2016	social globalization	Explained in section 4 (data)	473133	56.96955	20.77403	2.63	93.61
KOF global index 2016	political globalization	Explained in section 4 (data)	473133	75.8005	18.32146	4.27	98.42
WVS 2014	female	Female (yes=1; no=0)	484564	0.5249874	0.4993758	0	1
WVS 2014	age	age (years)	484687	42.11226	16.72618	13	108
WVS 2014	children 12	one/two children (yes=1; no=0)	476165	0.3650898	0.4814558	0	1
WVS 2014	incomedecile	income decile scale to 0-10	376304	4.724805	2.385560	1	10
WVS 2014	education age	age of completed education	381381	19.07931	7.000781	0	99
WVS 2014	unemployed	unemployed (yes=1; no=0)	476034	0.0860758	0.2804762	0	1
WVS 2014	religious person	religious person (yes=1; no=0)	461345	0.6816287	0.4658449	0	1
WVS 2014	life satisfaction	life satisfaction scale to 0-10	482663	6.733153	2.407533	1	10
World Bank	gni-prcap-ppp	GNI per capita, PPP (current international \$)	436990	16192.74	13843.43	230	132900
Penn World Tables 8.1	GDPPC	used real GDP per capita growth rates for that year from the World Development Indicators to calculate the GDP per capita level in 2012	479344	15420.81	12717.67	153.152	124720.4

Table A1: table of correlation of individuals' controls

(obs=249581)	socialtrust	female	age	children12	incomedecile	educationage	unemployed	religiousp~n	lifesatisf~n
socialtrust	1.0000								
female	-0.0187	1.0000							
age	0.0482	0.0031	1.0000						
children12	0.0121	0.0594	0.1320	1.0000					
incomedecile	0.1109	-0.0498	-0.1235	0.0173	1.0000				
educationage	0.0352	-0.0338	-0.0761	0.0031	0.1392	1.0000			
unemployed	-0.0611	-0.0296	-0.1335	-0.0506	-0.1193	-0.0186	1.0000		
religiousp~n	-0.0857	0.0983	0.0444	-0.0519	-0.0408	-0.0185	0.0167	1.0000	
lifesatisf~n	0.1143	0.0095	-0.0066	-0.0121	0.2235	0.0508	-0.1155	0.0072	1.0000

Table A2: Table of correlation of macroeconomic' variables

(obs=392659)	socialtrust	economiczation	socialzation	politicalzation	socialresil	politicalresil	gni_prcap~p	GDPPC
socialtrust	1.0000							
economiczation	0.0973	1.0000						
socialzation	0.1314	0.7939	1.0000					
politicalzation	0.0672	0.3242	0.4461	1.0000				
socialresil	0.0921	0.0303	0.6318	0.3201	1.0000			
politicalresil	0.0070	-0.0279	-0.0169	0.8869	0.0078	1.0000		
gni_prcap~p	0.1572	0.6280	0.7667	0.4178	0.4598	0.0728	1.0000	
GDPCC	0.1613	0.6273	0.7721	0.3854	0.4694	0.0335	0.9526	1.0000

Table A3: Classification of european countries

occidental	Central	Oriental	Meridional	Nordic	Ex Soviets
France	Croatia	Hungary	Albania	Denmark	Russia
Belgium	Slovakia	Bulgaria	Andorra	Finland	Lithuania
Netherlands	Slovenia	Moldavia	Bosnia herz.	Iceland	Kazakhstan
Switzerland	Luxembourg	Belarus	Greece	Norway	Kyrgyzstan
Austria	Poland		Italy	Sweden	Georgia
Germany	Czech Republic		Macedonia		Armenia
	Romania		Malta		Azerbaijan
			Montenegro		Uzbekistan
			Portugal		Tajikistan
			Spain		Bielorus
					Ukraine
					Moldavia
					Turkenistan