Exchange rates fluctuations and bilateral trust

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ABSTRACT

Pegged exchanged rate agreements have often been recalled as an instrument to increase the reliability of governments and their reputation, as also the introduction of the single currency was presented as a crucial step for the economic and political integration between European countries. But do stable exchange rate also increase trust between countries, or the contrary ? In this paper, we find a significant and positive effect of exchange rate fluctuations on bilateral trust between countries, suggesting a negative relationship between "stable" exchange rate and trust. As a measure for bilateral trust, we use Eurobarometer survey carried between 1970 and 1996. In addition, we carry a small survey in which we find that bilateral trust between citizens of different countries, is highly correlated with the trust in the respective foreign institutions (measured in terms of perceived corruption and property rights protection). We suggest two possible explanation for our results: (1) since exchange rate fluctuations increase uncertainty, there is more demand for trust (2) because pegged exchange rate increases free riding behaviors of government, this lead to an erosion of the trust between the two countries.

INTRODUCTION AND LITERATURE OVERVIEW

The importance of trust for economics could be summarized in the words of Kenneth Arrow (Arrow, 1972):

"virtually every commercial transaction has within itself an element of trust…it can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence"

In the end of the past century, much evidence has supported the idea that trust plays a crucial role in Economics. Firstly, Knack and al. (Knack & Keffer, 1996) find that the level of trust of a country is highly correlated with its GDP growth rate, they also found that this link persist after controlling for the quality of law enforcement (Knack & Zak, 2001) (Sapienza, et al., 2007), while La porta et al. (La Porta, et al., 1997) find that trust can improve governance performance in large organizations. With respect to the effect of trust between individuals from different countries, trust matter when deciding the country of destination for investment by venture capital (Bottazzi, et al., 2016) as it also positively impact foreign trade, foreign direct investment and portfolio investment (Guiso, et al., 2009). For an overview of the consequences of cross-country trust see Springer et al. (Spring & Grossman, 2016). With respect to trust in institution, the Organization for Economic Co-operation and Development (OECD) underlined that, since the crisis started, trust in governments deteriorated in many OECD countries. This erosion of trust in governments compromises the willingness of citizens and businesses to respond to public policies and undermine a sustainable economic recovery (OECD, 2017). A recent paper from the Dutch Central Bank showed that trust in the European Central Bank (ECB) lowers inflation expectations, and significantly reduces uncertainty about future inflation (Christelis, et al., 2016).

In this paper, we will investigate the link between exchange rate fluctuations and bilateral trust. The argument is important and interesting for two main reasons: it is important because, as just mentioned, bilateral trust is likely to have an economic impact on country relations (trade and investment for example); it is interesting, because exchange rate arrangements inevitably involve a "trust component". For example, Obstfeld and Rogoff (Obstfeld & Rogoff, 1995)

underline the importance of the dynamic interplay between credibility and commitment for the stability of a fixed exchange rate system; while, both the literature and the discussion in the public domain have often argued that fixed exchange rate regime can be used to repeal hyper-inflationary forces (Ghosh & Ostry, 2009) and increase the "reliability" of the country institution.

We did not have found any systematic empirical analysis on what is the direction neither the magnitude of the link between exchange rate arrangements and trust. The absence of such analysis can be explained by mainly two reasons: on the one hand, there is the difficulty to have a reliable measure of trust; on the other hand, more importantly, both theory and intuitions suggests that the direction of the link between exchange rate fluctuations and trust is not trivial.

We use a dataset of bilateral trust for a group of European countries in the period between 1970 and 1996, together with the data on exchange rate fluctuations between those countries. We find a positive link between the two variables (i.e. higher fluctuations of the exchange rate are associated with higher level of trust).

To try to link this results with previous literature, we recall two main findings: firstly, trust is likely to be higher in context where uncertainty is high (Kollock, 1994), secondly, exchange rate peg can lead to free riding behaviors (Bruni, 2004) (Duttagupta & Tolosa, 2007), that can potentially erodes reputation and trust.

This paper is organized as follows: section 1 looks at the potential link between the exchange rate and trust, in section 2 we discuss the measures used for trust and fluctuations in the exchange rate. Section 3 present the model and discuss the results. Section 4 explicit the limitations, implications and conclusions of the paper.

Section 1. The potential links between trust and exchange rate fluctuations

Premises

There is no existing literature that investigates specifically the effects of exchange rate fluctuations on trust, however we can try to look at the theory and empirics of exchange rate functioning, in order to extract a logical framework to describe the potential link between trust and exchange rate. The important underlining reasoning, is that exchange rates can have an impact on the "reputation" of the countries observed (reputation in terms of expected outcome, consequences on domestic and foreign economy, trustworthiness). The erosion (or improvement) of the "reputation" of a country can translate on a change of the trust between

the citizens of the two countries. Moreover, the logical framework presented here does not want to be fully exhaustive on the discussion regarding exchange rate arrangements and trust, but it can be useful to interpret the results and to find plausible reasons to explain those.

Another important assumption for our analysis, is that we will look only at the "*de facto"* movements of the exchange rate and not the "*de jure"* arrangements. This is motivated firstly by the fact that *"de jure"* pegged exchange rate can be in fact significantly floating if the fluctuation-band is large enough (as was sometimes the case in the European Exchange Rate Mechanism). While oppositely, a central bank (or the government) could declare an official *"de jure"* floating exchange rate, while in fact *unofficially* influencing the exchange rate (using a wide array of instruments). To clarify, when we will refer to pegged, stable, fixed, or semi-fixed exchange rate, we will not consider whether this is a declared official policy or not, however it is important to consider that the "*de jure"* definition of the exchange rate can have important consequences on economic outturn (Ghosh & Ostry, 2009) , as it can intuitively be understood, the "*de jure"* definition itself could also have an impact on trust[1].

Exchange rate and trust

When looking at exchange rate policy decisions, the principle of "one size does not fit all" seems to describe perfectly the dilemma between pegged and floating exchange rate.

However, the experience and the literature are inclined to *slightly* be in favor of stable and pegged exchange rate regime. There are various reason for this, all of them are somewhat linked to the principle of the "impossible trinity" (or trilemma) (Obstfeld & Taylor, 1997). In fact, when a country engages in stable exchange rate policy (by pegging their currency), this impedes them from conducting an independent monetary policy for domestic interests (Obstfeld & Taylor, 1997) and can refrain inflationary forces: evidence shows that in emerging and developing economies, pegged exchange rate regimes are highly correlated with lower inflations (Ghosh & Ostry, 2009). Another straightforward intuition, is that stable exchange rate can decrease the exchange rate risk, as it can also enhance fiscal discipline and discourage monetary devaluation for competitive purposes. Put together, the described dynamics suggests that a stable exchange rate can lead to an increase of the reputation, commitment and "reliability" of a country, thus

[1] For instance, in the presence of a non-credible "de jure" arrangement, there can be negative effects on trust because of lack of trustworthy of declared policies.

leading to an increase of trust in this country.

However, there are several downsides to stable (fixed or semi-fixed) exchange rate regime: among those, the difficulties to adopt counter-cyclical fiscal policy, the higher exposure to currency and financial crises (debt crises, sudden stop of capital flows and currency crises), and the impediment to timely external adjustment (due to a slower adjustment of the real exchange rate) (Ghosh & Ostry, 2009). More importantly, a pegged exchange rate can lead to free riding and moral hazard issues caused by the absence of fiscal discipline (Duttagupta & Tolosa, 2007) (Bruni, 2004). Those downsides of stable exchange rate systems suggest an opposite conclusion, that fluctuations of exchange rate can also have a positive effect on trust.

Eventually, theory and intuition do not give a clear expectation on what the final effect of exchange rate fluctuations on trust is expected. Figure 1 summarizes the aspects we just described. In section 3 we will try to look empirically to what is the direction and magnitude of the link between exchange rate and trust.

Figure 1

Pegged or non-fluctuating exchange rate	
Can increase trust because…	Can decrease trust because…
• Repeal inflationary forces • Decrease exchange rate risk[3] • Enhance fiscal discipline (riskier to increase public debt) • Decrease stance for monetary devaluation for competition purpose (incentive for internal adjustment)	• Difficulty to adopt counter-cyclical fiscal policies • Greater susceptibility to debt crisis, sudden capital flows stop and currency crises • Fiscal free-riding and moral-hazard (spread inflationary cost) • Decrease exchange rate risk can require less trust.

Section 2a. Measures for trust and fluctuations

Definition of trust

The act of trusting is a subjective behavior, that is why it can be difficult to find a universal and recognized definition. People can have different interpretation of it, the Italian enciclopedia Treccani defines trust as a behavior, towards others or themselves, caused by a positive judgements of facts, circumstances, relations, for which one confide in others or own chances to generally produce a sentiment of self-confidence and tranquility (Treccani, 2017). Learners defines trust as a belief that someone or something is reliable, good, honest, effective, etc. (Learners

[3] Following the argument that trust can be used to deal with uncertainity (as discussed in section 2), it could be the case that reducing exchange rate risk could actually lead to a decrease on trust (as opposed on what is represented in the table).

Dictionary, 2017). Gambetta (Gambetta, 1988) defines trust as the level of the subjective probability with which an individual evaluates that another individual (or group of people) will perform a particular action, in a context in which it affects his own decision. According to Gambetta, when an individual says that he/she trust someone (or that someone is trustworthy), he/she implicitly mean that the probability that "someone" will perform an action that is beneficial or at least not detrimental to him/her is high enough for him/her to consider engaging in some form of cooperation with "someone" (Gambetta, 1988). On the contrary, when we an individual states that "someone" is untrustworthy, he/she implicitly mean that that probability that someone will commit an action that is beneficial to him/her is low enough for him/her to engage in some form of cooperation with "someone" (Gambetta, 1988).

Because of the broad definitions that trust can have, different meaning of trust can be used to fit into different contexts. To deal with this issue, in the next paragraphs we introduce our measure of trust and we link this measure with economic behaviors observed in lab experiment.

A measure for trust

When it comes to ask people whether they trust someone, the type of questions can be divided in two main groups. The fundamental difference is whether the people to which the judgement is referred are identified or not. People can be asked about their trust in "the others" (unidentified) as in the World Value Survey (WVS) question[4], or towards a defined group of people (or a single identified individual) like "the politicians", "the Germans" or "the hippies". This latter type of question (personalized trust) is the one used in this paper, where individuals are asked their trust towards different group of people defined according to their nationalities.

The data we use here are from the Eurobarometer survey conducted between 1970 and 1996. Our measure of trust is the answer to the following survey question:

"I would like to ask you a question about how much trust you have in people from various countries. For each, please tell me whether you have a lot of trust, some trust, not very much trust or no trust at all"-"The Italian, The French..etc."

[4] The WVS trust question is "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" where the answers are : "most people can be trusted" & "need to be very careful".

For every country, four possible answers are given: 1) no trust at all 2) not very much trust 3) some trust 4) a lot of trust. For each country and years of our sample, we will collapse the answer where "a lot of trust" will be equal to 4 and "no trust at all" will be equal to 1. The surveys were carried on a representative sample of of 1000 individuals for each country (total population older than 16 years old) (Guiso, et al., 2009). The countries observed varied over time with the enlargement of the European Union: there were 5 in 1970 (France, Belgium, The Netherlands, Germany and Italy), when the first survey was conducted, and has grown to 17 in 1996, which is the last survey to which we have access[5]. (Guiso, et al., 2009) .

Table 1: data coming from EUROBAROMETER (GESIS, 1970-1976-1980-1986-1990-1993-1994-1996), collapsed over years as in Table 3 from Guiso et al. (Guiso, et al., 2009)

Trust from country A to country B	countryB															
countryA	Austria	Belgium	Denmark	Finland	France	Germany west	Greece	Ireland	Italy	Luxembourg	Netherlands	Portugal	Spain	Sweden	United Kingdom	Mean
Austria		2,95	2,95	2,94	2,62	3,09	2,52	2,55	2,43	3,07	2,95	2,5	2,58	3,05	2,59	2,77
Belgium	2,83		3,01	2,92	2,91	2,79	2,45	2,75	2,42	3,3	2,9	2,56	2,63	2,99	2,83	2,79
Denmark	3,22	3,18		3,2	2,86	3,12	2,61	3,02	2,53	3,23	3,33	2,69	2,68	3,41	3,22	2,98
Finland	3,29	3,07	3,3		2,92	2,89	2,68	2,92	2,51	3,06	3,14	2,67	2,61	3,35	3,18	2,97
France	2,7	3,07	2,96	2,91		2,74	2,53	2,72	2,43	3,09	2,94	2,61	2,7	2,99	2,54	2,77
Germany west	2,98	2,84	2,97	2,85	2,85		2,51	2,59	2,36	2,99	2,9	2,52	2,7	2,99	2,66	2,73
Greece	2,32	2,6	2,56	2,42	2,78	2,31		2,55	2,33	2,56	2,55	2,6	2,72	2,51	2,34	2,53
Ireland	2,93	2,93	2,99	2,92	2,81	2,78	2,5		2,65	2,96	3	2,66	2,64	2,92	2,8	2,81
Italy	2,66	2,64	2,7	2,78	2,66	2,63	2,4	2,37		2,62	2,77	2,35	2,68	2,89	2,51	2,59
Luxembourg	2,95	2,82	2,86	2,94	2,83	2,76	2,53	2,55	2,54		2,97	2,62	2,71	2,98	2,57	2,72
Netherlands	2,9	3,18	3,29	3,25	2,75	2,87	2,59	2,8	2,37	3,29		2,8	2,7	3,34	2,99	2,9
Portugal	2,13	2,66	2,66	2,18	2,91	2,54	2,41	2,51	2,55	2,71	2,7		2,59	2,24	2,67	2,6
Spain	2,65	2,73	2,73	2,71	2,37	2,66	2,47	2,57	2,61	2,71	2,85	2,51		2,84	2,3	2,6
Sweden	3,53	3,23	3,57	3,49	3,04	3,13	2,88	3,26	2,81	3,31	3,33	2,97	2,86		3,43	3,2
United Kingdom	2,88	2,9	3,11	2,95	2,36	2,61	2,53	2,65	2,51	2,95	3,13	2,75	2,5	3		2,74
Mean	2,86	2,89	2,93	2,89	2,74	2,73	2,51	2,66	2,48	2,97	2,93	2,61	2,66	2,96	2,7	2,75

On the survey-based measure of trust

As in every survey, there may be some doubts about the way people interpret the trust question (Guiso, et al., 2009): in fact, the trust answer given by the survey, could reflect different beliefs other than trustworthiness. As a way of identifying

[5] besides the 5 countries above, Luxembourg, Denmark, Ireland, Great Britain, Northern Ireland, Greece, Spain, Portugal, Norway, Sweden, Finland, and Austria are also included)

the meaning of the "trust" question, it is possible to compare the survey answer with the outcome of the standard trust game from Berg et al (Berg, et al., 1995)[6]. The first attempt to conduct this comparison can be found in Glaeser et al. (Glaeser, et al., 2000) : using the WVS trust measure they showed that it is not correlated with senders' behavior in the standard trust game, but only with his/her trustworthiness (how the sender behave when he/she plays as a receiver) (Sapienza, et al., 2007). Fehr et al. (Fehr & Fischbacher, 2003) find an opposite result: WWS measures of trust are correlated with the sender's behavior in the standard trust game, but not with his/her trustworthiness (Sapienza, et al., 2007). Other experimental papers have provided evidence that the sender's behavior in the standard trust game can be influenced by other motivations besides the confidence in the receiver's trustworthiness: other factors that plays a role in the sender's decision are individual risk aversion, reciprocity (Karlan, 2005) and altruism (Cox, 2004) (Sapienza, et al., 2007). "The act of trusting" can thus be considered as the combination of the beliefs in other people's trustworthiness and the specific preferences of the sender (Sapienza, et al., 2007). In response to this literature, Sapienza et al. (Sapienza, et al., 2007) run a modified trust game, in which senders are asked to give their expectation about the receiver behavior[8]. In this way, the authors can separate the belief component of the amount sent by the "preference" component (that is influenced by the specific preferences of the sender). Eventually, the authors found that the expectation about the receiver behavior, it is a good predictor of the quantity sent and is highly correlated with the WVS trust question (Sapienza, et al., 2007). This lead Sapienza et al. to conclude that the WVS question is a good measure of the expectation-component of trust in economically-relevant situations (Sapienza, et al., 2007). Furthermore, Guiso et al. (Guiso, et al., 2008) conducted a survey in which they asked to respondent:

1) "Suppose that a random person you do not know personally receives by mistake a sum of 1000 euros that belong to you. He or she is aware that the money belongs to you and knows your name and address. He or she can keep the money without incurring in any punishment. According to you what is the probability (a number between zero and 100) that he or she returns the money?"

[6] In the standard trust game, an individual (the sender) is endowed with an amount of money *y*. It can then decide how much to send of this money to another individual (the receiver). Any amount sent is multiplied by 3, the receiver then decide how much to return to the sender (the amount the receiver can send back to the sender range between 0 and 3 times the amount sent by the sender).

[8] They separately ask to the sender how much he expect to receive if he send different amount of money (5$, 10,$...50$). See Sapienza et al. For a full description of their modified trust game (Sapienza, et al., 2007).

2) "How good are you (very good, good, not very good, not good at all) in detecting people who are trustworthy?"

They find that the answer to the first question (the wallet question) is highly statistically correlated with the measure of trust used in this paper, providing evidence that the reported level of trust reflects the subjective probability that a random person is trustworthy (Guiso, et al., 2009).

What influences bilateral trust?

Table 1 shows the matrix of the mean for the bilateral trust of the countries of our sample. As we can see, some countries are more trusted than other, the so-called "PIIGS" countries (Portugal, Ireland, Italy, Greece and Spain) are the less trusted on average; while Sweden, Luxembourg, Denmark, Finland and Belgium are the more trusted on average. Indeed, citizens of different countries can trust citizens of a same country in different ways. These different ways of judging the trustworthiness of the same population can depend on the information sets (Guiso, et al., 2009). As an example, Germans could be better informed about Dutch people than Italian are, this could for example be caused by proximity[9] that would eventually influence the perception of trustworthiness[10]. Moreover, the trustworthiness perception, could be the result of past experiences (such wars) or cultural and religion differences (Guiso, et al., 2009). To disentangle the effect of information, an option would be to add control variables for geographical distance and common border as in Guiso et al. (Guiso, et al., 2009). As an alternative option to tackle this issue, in our model we will use country-couple fixed effect: this will allow us to control for all the dyadic and time-invariant variables that could affect pairwise trust, including information, cultural distance, institutional differences, and bilateral social preferences that do not change over time and that are specific to the country-couple[11].

Fluctuations of the exchange rate

Two commonly used measures of exchange rate fluctuations are the standard deviation of the percentage change of the exchange rate and the standard deviation of the first differences of the logarithmic exchange rate. While, as a measure of the exchange rate risk, the literature often uses the average absolute

[9] Proximity can increase the information that the two countries have of each other, the probability of having close relations, etc..

[10] For example, proximity could lead to an higher probability of family relations, cross-country tourism, etc..

[11] Indeed, using country-couple fixed variables will not capture some time-variant variables such as migration and tourists flow, this issue will be recalled when discussing the limitations.

difference between the previous period forward rate and the current spot rate (Dell'Ariccia, 1999). Overall, finding a unique measure depends also on the choice of the time frame (daily, weekly, yearly fluctuations?), ending in a vast option of measures that can be used (Dell'Ariccia, 1999).

For our purpose, we will choose the standard deviation of the yearly percentage change over the past 5 years. Additionally, we will also use the sum of the absolute yearly percentage change over the past 5 years. In our robustness tests, we will also change the time-frame (4 and 3 years) and use the quadratic absolute yearly percentage change (plus 1, as they are all smaller than 1) to give more weight to high fluctuations. As previously mentioned, there will be the option to choose other fluctuations time frame, such as the daily, weekly or monthly changes, however we believe that for our purpose the average yearly change is a more adapt measure, since more short-time measures would reflect "volatility" in the market instead of what we mean as fluctuations[12]. Therefore, running robustness check using other alternative measures of fluctuations can be useful, but goes beyond the scope of this paper.

Section 2b Trust, uncertainty and trust in institutions

Uncertainty and trust

Because exchange rate arrangements can lead (in different ways) to uncertainty, we are also interested in the relationship between trust, risk and uncertainty. The relevant point, is that trust could be used to deal with uncertainty, however there is no "universal" agreement on this. On one hand, phenomenological research proposes that trust is an alternative way of relating to uncertainty rather than a way to reduce uncertainty. Frederiksen (Frederiksen, 2014) find that trust and risk can be characterized as different ways of perceiving the social and managing uncertainty, rather than different elements of the same decision process (Frederiksen, 2014). Another part of literature suggests that trust is a way of dealing with uncertainty, with the implication that trust is likely to be higher among actors that establish successful exchange relations in situations where uncertainty is high (where information asymmetries introduce significant risks), as opposed to actors in situations where uncertainty and risk are lower (Kollock, 1994). In other words, when contracts are incomplete (for example because of information asymmetries), trust is needed, while if contracts are complete, there is no need of trust. If we assume that uncertainty effectively enters in the trust

[12] also those "volatility" measures should be controlled for other important factors such as liquidity, market for derivative, etc.. for which we find difficult to retrieve data

decision (assuming trust is used to deal with uncertainty), it remains to establish how exchange rate fluctuations are associated with uncertainty. An intuitive (perhaps simple) intuition, is that because exchange rate fluctuations lead to exchange rate risk, this can boost uncertainty. However, one could claim that uncertainty about exchange rate, do not depend from its nominal value, but from its real value (the real exchange rate). Moreover, if a pegged exchange rate is not "reliable", there could still be exchange rate risk. To conclude, while it can be reasonably assumed that trust is positively correlated with uncertainty, we are not sure on what is the relationship between exchange rate fluctuations and uncertainty. This reasoning will be recalled in our discussion of the results in section 3.

Trust in foreign citizens as a good measure of trust in foreign institutions?

In the context of this analysis, we are interested to understand if our measure of trust (trust between citizens of different countries) incorporates the "credibility" and "trust" of citizens towards the institution of foreign countries (the government, the central bank, the parliament, etc..). In fact, it seems realistic that the trust towards citizens of other countries, can be a good proxy for the trustworthiness of the set of institutions of that country. This could be justified on the ground that trust between citizens of different countries is indeed affected by institutional differences: Guiso et al. (Guiso, et al., 2009) show that bilateral trust is well explained by institutional differences such as culture, religion, legal system and languages. While those mentioned differences in institutions will be captured by the mean of country-couple fixed effect (as they are likely to not change over our time period), we are interested whether the residual part of trust is in fact a judgement of the trustworthiness of other foreign institutions. We are aware that social preference can still have an influence on this residual part. For example, a person could not trust Donald Trump (because of political attitude) while having a lot of trust in US institutions. Another bias could arise from the influence of alienation (Levi & Stoker, 2000), perception and recognition of institution. Those social preferences will rather be an issue for our identification, since they will be controlled by country*time fixed effects[13]. It remains to investigate the extent to which our trust measure incorporates the trust in foreign institution. For this purpose, we conducted a small survey on a sample of 91 individuals. In our questionnaire[14] we asked individuals (a) how much they trust people from other countries (the same Eurobarometer question previously quoted), (b) the

[13] Using country*time fixed effect we can capture social preferences at country level, this will not indeed capture the social preferences that cannot be assumed to be country specific.

[14] The on-line questionare can be found here: https://docs.google.com/forms/u/0/d/e/1FAIpQLSfr8pWWrsdQ8X1eMWvx5RKxiA10YzueKLTm7zdIhFSXJAjMrw/viewform?usp=sf_link

perception of friendliness they have of citizens of other countries and (c) the trust they have on the incumbent leaders of other countries[15] . In addition, to capture the trust in foreign institution we asked two different questions: (d) the perception of corruption in foreign country and (e) the likelihood of expropriation in other countries.

The question regarding corruption stated:

"I want to ask you your opinion on how much those countries are corrupted. You can give an answer that ranges from 1 to 5. Where 1 is "TOTALLY corrupted" and 5 is "NO corruption"
"How much Belgium is corrupted? …. How much Italy is corrupted? …etc.."

We choose this question as we think that the perception of corruption can actually reflect the trust in institution. To support this idea, we looked at two recent Eurobarometer datasets (GESIS, 2013) (GESIS, 2013), in two different samples, citizens of different countries were asked how much they trust their national institution and how widespread is the problem of corruption in their country. As table 2 and figure 3 (in the appendix) shows, by taking the mean at country level, we find a strong and significant correlation between the perception of corruption and the trust in public institution, with an higher correlation in parliamentary institution (0.78). This suggests that perception of corruption can be used as a good proxy of the question regarding the trust people have in institutions (where institutions are political parties, government and parliament). As a clarifications, we do not claim that perception of corruption is a good measure of the *quality* of institution, neither that those institution can have an effect on bilateral relations.

Table 2: Correlation Matrix. Calculated at country-mean, Data from the EUROBAROMETER n.79.1 and 79.3 (GESIS, 2013) (GESIS, 2013)

	corruption	Trust in political parties	Trust in national government	Trust in parliament	Trust in european union
corruption	1.0000				
Trust in political parties	-0.6609	1.0000			
Trust in national government	-0.6447	0.9442	1.0000		
Trust in parliament	-0.7807	0.9642	0.9403	1.0000	

[15] The idea is that "friendliness" will capture individual social preferences towards citizen of different countries. Trust in the incumbent leaders is used to proxy the "incumbent effect" as described in Levi et al (Levi & Stoker, 2000). Incumbent leaders are the prime minister or the president (For example Trump for US, Macron for France, Merkel for Germany, etc..).

Trust in European union	-0.1015	0.4308	0.3893	0.2865	1.0000

As a second and alternative measure of trust in institution, we asked our respondents about their perception of property rights protection in different countries, the question states as follows:

Suppose that you own land in a certain country. What are the chances of losing ownership of the land (through not fault of your own)? More specifically, what are the chances of the government (or some other entity) unilaterally taking that land away from you? You can give 5 possible answers: Very Unlikely (1) Unlikely (2) Neutral (3) Likely (4) Highly Likely (5)

Likelihood of expropriation in Italy… Likelihood of expropriation in China…etc..

Eventually, we asked respondents to reveal their demographic characteristics (nationality, age, education) and the information they had of other countries (if they lived more than 2 months in that country and if they ever lived abroad). When collapsing the observations of our survey at country-mean, we obtain the correlation matrix showed in Table 3. Corruption and the likelihood of expropriation are found to be correlated with the trust question with a coefficient of 0.93 and -0.81, respectively. High level of perceived corruption and low property rights are associated with low level of trust in citizen from those countries. This suggest the presence of a strong link between the trust perception of foreign institution (measured in terms of corruption and property rights protection) and the trust in foreign citizens.

Table 3:Calculated at country-mean, Data coming from the survey conducted from the author

	Trust	**Corruption**	**Expropriation**	**Friendliness**	**Leader trust**
trust	1.0000				
Corruption (high index=low corruption)	0.9359	1.0000			
expropriation	-0.8148	-0.8520	1.0000		
friendliness	0.0686	-0.0517	-0.3832	1.0000	
Leader trust	0.8322	0.8005	-0.6838	-0.0036	1.0000

In addition to the correlation matrix (that use the values at country-mean), we use the data from the same survey but at the individual level, to investigate the relationship between our measures of trust in institution when controlling for other factors. We thus estimate the following equation:

$$1)\ Trust_{i,->b} = +Corruption_{i,\rightarrow b} + Expropriation_{i,\rightarrow b} + Friendliness_{i,\rightarrow b} + Leader\ trust_{i,\rightarrow b} + Individual_i + Nationality_i + Country_b + \varepsilon_i$$

Where $Trust_{i,->b}$ is the answer of the respondent *i* to the trust question with respect to the citizens of country *b*, while *Corruption*, *Expropriation, Friendliness* and *Leader trust* are the perception of corruption, the likelihood of expropriation, the friendliness and the trust in the leader of the same individual towards country b. *Individual* is a control for individual unobserved characteristics, *Nationality* is a control for the nationality of the individual and *Country* is a control for the country of destination. Results are showed in Table 4: trust in foreign citizens (the dependent variable) has a positive strong link with our measures of trust in foreign institution. This is true also when we control for social preferences such political attitude, friendliness, trust in incumbent leader, and sensitivity to corruption (captured by individual fixed effect). Indeed our estimation suffers from several endogeneity problems, (for example trust and corruption can cause each other, i.e. reverse casualty), but we can still assume that trust in foreign citizens also *incorporates* trust in foreign institution.

Table 4: Results from estimation of equation 1 (*significance at 5 % level, standard errors in brackets)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Trust	Trust	Trust	Trust	Trust	Trust	Trust	Trust
Corruption (the sign is positive because the measure is higher when perceived corruption is low)	0.336***	0.292***	0.277***	0.242***	0.196***	0.196***	0.152***	0.197***
	(0.0206)	(0.0218)	(0.0210)	(0.0217)	(0.0211)	(0.0211)	(0.0219)	(0.0224)
expropriation		-0.123***	-0.0960***	-0.0794***	-0.0346	-0.0346	-0.0229	-0.103***
		(0.0218)	(0.0212)	(0.0211)	(0.0224)	(0.0224)	(0.0242)	(0.0221)
friendliness			0.135***	0.123***	0.0894***	0.0894***	0.118***	0.141***
			(0.0150)	(0.0150)	(0.0138)	(0.0138)	(0.0158)	(0.0164)
leader				0.114***	0.190***	0.190***	0.163***	0.120***
				(0.0213)	(0.0205)	(0.0205)	(0.0223)	(0.0221)
political								-0.0212
								(0.0144)
Constant	1.656***	2.101***	1.468***	1.287***	1.588***	1.588***	1.483***	1.430***
	(0.0661)	(0.102)	(0.121)	(0.124)	(0.228)	(0.228)	(0.231)	(0.190)
Observations	1,001	1,001	1,001	1,001	1,001	1,001	1,001	1,001

R-squared	0.210	0.234	0.291	0.311	0.577	0.577	0.602	0.415
controlindividual	NO	NO	NO	NO	YES	YES	YES	NO
nationality	NO	NO	NO	NO	NO	YES	YES	YES
countrydestination	NO	NO	NO	NO	NO	NO	YES	YES

Section 3, Model and Results

2) $PairTrust_{ab,t}$

$$= const \quad + Fluctuations_{ab,t} + \delta_a * year_t + \phi_b * year_t + \gamma_{ab} + X_{ab,t} + \varepsilon_{ab,t}$$

For our model, we will start from equation 2), where the dependent variable $PairTrust_{ab,t}$ is the sum (pairwise) of the two-bilateral trust between country A and country B. We choose the pairwise sum as we want to investigate the impact of exchange rate fluctuations on the "total" trust between the two countries. The independent variable of interest is the fluctuations of the exchange rate $Fluctuations_{ab,t}$, measured as discussed in section 2.

The equation above clearly raises identification problems. There are a vast number of variables that could affect both pairwise trust as also fluctuations of exchange rates. To get rid of some of those, we will make use of three different fixed effects. Firstly, we will include a country and time specific variables effects $\delta_a * year_t$ and $\phi_b * year_t$. , these fixed effects will capture characteristics that are specific to the country allowing for those to change over time. Thus, we will be able to capture the fact that some countries are systematically more (or less) trusted (or trust) more than others in each time observation, we will also capture events specific to some countries in a certain time period (such as event of hyperinflation, economic growth, political scandal, shock to exchange rate, etc..). Furthermore, the interaction of country and time fixed effects will also capture the global fluctuations of exchange rate and trust, and controlling for events that affected all the countries (such as the fall of the Bretton woods arrangements) like a time fixed effect $year_t$. As previously discussed, we will also use a country-pair effect γ_{ab} that will capture all the dyadic variables between two countries that do not change over time, including cultural distance and geographical distance.

The error term

The error term $\varepsilon_{ab,t}$ contains all the unobserved characteristic of country couple *ab* that changes over time, among those that could cause endogeneity problems (as they can potentially be correlated with the independent variables), we have

uncertainty (for the reason explained in section 2), migration flows and touristic flows. The potential consequences of this endogeneity problem will be discussed later.

Reverse casualty

On the other hand, reverse casualty between pairwise trust and fluctuation of the exchange rate seems to be a minor problem. In fact, it is difficult to argue that trust between the countries pair can affect the bilateral exchange rate. Truly, the exchange rate between two countries could depend partially on the bilateral relations of those two countries (that can affect trust). However, in a globalized economy, it is difficult to argue that the trust of one country to another can solely affect the fluctuations of the exchange rate in a considerable magnitude.

Other omitted variable problem

Eventually, we will control for other country-couple and time variant variables. Indeed, exchange rate fluctuations are correlated with trade (Dell'Ariccia, 1999) that could also affect trust. Thus, we control for total trade flows over the sum of the two GDP (*Trade/GDP*[17]). As exchange rate could affect investments flow, and could be correlated with trust (Guiso, et al., 2009), we also control for FDI flows (*TotalFDI/GDP*[18] available only from 1985). Moreover, income differences, size of the economies, and size of the countries, could also be correlated both with exchange rate and trust: we thus also control for GDP and GDP per capita differences (*GDPdifference and GDPcapita_difference*) and population (*POPdifference*).

Results

Table 5 shows the result from estimating equation 2. Column 1 excludes all the fixed effects, giving a negative and significant coefficient of fluctuations (*Fluctuations 5 years S.D.)* equals to -2.8. When country-couple γ_{ab} and time $year_t$ fixed effects are included (column 2) the coefficient turns sign and becomes positive; the R squared increase to 0.91. In column 3 we include also country A and country B fixed effects interacted with time fixed effects ($\delta_a * year_t$ & $\sigma_b * year_t$), the coefficient decreases to 1.29. In column 4, we control for trade: as expected we obtain a positive but insignificant effect of trade on trust, while the coefficient of fluctuations remains positive and significant (1.45). In column 5 we run the same regression of column 3 applied to the same sample of column 4

[17] Measured as the sum of import and export of one of the country of the couple, divided by the total of the GDP of the two countries

[18] Measured as the sum of the FDI inflows and outflows, divided the sum of the two GDP,

(since we have missing observations for trade), indeed the coefficient does not change. In column 6 and 7 we use alternative measures for fluctuations, results show that the coefficients remain positive and significant.

Table 5: Results from the estimation of equation 2 (*significance at 5 % level, standard errors in brackets)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust
Fluctuations 5 years S.D.	-2.805***	2.332***	1.298**	1.458**	1.445**		
	(0.870)	(0.566)	(0.564)	(0.609)	(0.604)		
Trade/GDP				1.616			
				(7.119)			
Fluctuations 5 years % absolut change						0.181*	
						(0.0960)	
Fluctuations 5 years quadratic % absolut change							0.0889**
							(0.0442)
Constant	5.621***	5.319***	5.265***	5.296***	5.332***	5.280***	4.836***
	(0.0450)	(0.124)	(0.0996)	(0.186)	(0.100)	(0.0997)	(0.243)
Observations	453	453	453	345	345	453	453
R-squared	0.023	0.912	0.965	0.970	0.970	0.965	0.965
Couple	NO	YES	YES	YES	YES	YES	YES
Year	NO	YES	YES	YES	YES	YES	YES
countryoforigin*year	NO	NO	YES	YES	YES	YES	YES
countryofdestination*year	NO	NO	YES	YES	YES	YES	YES
Descriptive statistics							
Pairtrust (Mean, Standard deviation, Minimum, Mazimum)	5.50	0.50	4.30	6.98			
Fluctuations 5 years S.D. (Mean, Standard deviation, Minimum, Maximum)	0.044	0.027	0	0.13			

Magnitude of the effects

Overall, Table 7 suggests the presence of a positive and statistically significant positive effect of fluctuations of the exchange rate on trust. When measured in terms of standard deviation, a coefficient of 1.3 for the fluctuations (*Fluctuations 5 years S.D.*) implies that an increase of 1 standard deviation of the fluctuations increases pairwise trust (*pairtrust)* of 7 per cent of its standard deviation. When looking at the alternative measures for exchange rate fluctuations, the conclusions do not change; a coefficient of 0.18 for the *Fluctuations 5 years % absolut change* implies that an increase of 1 standard deviation of the *Fluctuations 5 years % absolut change* increases pairwise trust of 6.5 per cent of its standard deviation. While for *Fluctuations 5 years quadratic % absolut change*, an increase of 1 standard deviation increases pairwise trust of 7 per cent of its standard deviation.

Robustness tests

In table 6, we carry robustness tests by using other alternative measures and adding new control variables. In column 1 we control for the sum of total fluctuations[20] ($\sum Fluctuation_{ab}$), this does not change our coefficient of interest, while suggests a negative effect of "global" fluctuations on pairwise trust. In column 2 and 3 we adopt different measures, that take into account only 4 and 3 years previous to the observation; the coefficients remain positive and in terms of standard deviation, the magnitude of the effects is similar (1 standard deviation of fluctuations increases of 6 per cent standard deviation of trust). In column 4-8 we control for: difference in GDP (as a measure of the size of the economy), difference in GDP per capita, difference in population (as a measure of the size of the country) and we control for Foreign Direct Investment flows. Above all, differences in the size of the economy and per capita income have a negative effect on the pairwise trust, while our coefficient of interest still remains significant and stable around 1.3. However, when we control for FDI flows our coefficient turns insignificant while FDI flow has an insignificant and negative effect on trust. In column 9, we put all our control variables together, the coefficient turns again significant at the 10 per cent level with a value of 1.423. Importantly, when controlling for FDI, observations halve since observations starts from 1985 only and we have missing observations for certain countries.

(TABLE IN THE NEXT PAGE)

[20] This impede us to use year fixed effects

Table 6: Results from the estimation of equation 2 (*significance at 5 % level, standard errors in brackets)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust
Fluctuations 5 years S.D.	1.549**			1.335**	1.273**	1.311**	1.374**	1.251	1.423*
	(0.611)			(0.562)	(0.559)	(0.557)	(0.563)	(0.831)	(0.850)
Total fluctuations in year t	-0.0101**								
	(0.00433)								
Fluctuations 4 years S.D.		0.939*							
		(0.505)							
Fluctuations 3 years S.D.			0.985*						
			(0.515)						
GDPdifference				-8.02e-14*		-8.28e-14*			1.24e-14
				(4.61e-14)		(4.57e-14)			(1.25e-13)
GDPcapita_difference					-1.20e-05**	-1.22e-05**			-1.92e-05**
					(5.11e-06)	(5.09e-06)			(9.31e-06)
POPdifference							-0.0224*		0.0207
							(0.0121)		(0.0413)
TotalFDI/GDP								-12.81	-7.562
								(23.07)	(23.60)
Constant	6.001***	5.261***	5.273***	5.322***	5.249***	5.308***	6.396***	5.746***	4.754**
	(0.0867)	(0.100)	(0.0997)	(0.105)	(0.0990)	(0.104)	(0.616)	(0.244)	(1.937)
Observations	453	453	453	453	453	453	453	232	232
R-squared	0.857	0.965	0.965	0.965	0.965	0.966	0.965	0.970	0.971
Couple	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year	NO	YES	YES	YES	YES	YES	YES	YES	YES
countryoforigin*year	NO	YES	YES	YES	YES	YES	YES	YES	YES
countryofdestination*year	NO	YES	YES	YES	YES	YES	YES	YES	YES

Section 4: Limitation and Conclusions

What causes these results?

After having established a positive link between exchange rate fluctuations and trust, we can discuss what the potential causes behind this relationship are. A first attractive explanation is the relationship between trust and uncertainty. In fact, if trust is higher in uncertainty context, and uncertainty is higher in fluctuating exchange rate contexts (simply because agents do not have *certain* expectations about future exchange rate), it comes natural to have a positive link between trust and higher fluctuations. We can explain this by looking at equation 2, as previously mentioned, if the error term contains uncertainty (as trust is used to deal with it[22]) , and uncertainty is positively correlated with *fluctuations,* the coefficient of fluctuations will be positively biased. While suggestive, this interpretation can have serious limitations: the main issue is that if one thinks carefully, the relationship between exchange rate risk (that cause uncertainty) and the fluctuations of exchange rate is not unique. In fact, the exchange rate risk is indeed present when exchange rates fluctuate (as there is uncertainty about which price will take), but it is also present when the "pegged" exchange rate is not reliable, in fact if there are suspicion that the pegged exchange rate will fall, such as if agents expect a depreciation (or appreciation) because they believe the Central Banks is not committed to defend the arrangements, this can ultimately lead to the emergence of an exchange rate risk also when the exchange rate does not actually fluctuate (that could in fact lead even to an higher level of uncertainty). Moreover, there could exists instruments (such as futures) that can be used to decrease uncertainty caused by exchange rate risk, and eventually, it could be argued, that nominal exchange rate do not matters for uncertainty: in a "purely" economic framework, what matters is the uncertainty about the real exchange rate. This latter intuition could overturn the relationship between exchange rate fluctuations and uncertainty, as in pegged exchange rate, the real exchange rate will fluctuate more (because of slower adjustments). Put all together, we are prudent in assuming a positive correlation between uncertainty and fluctuations, and prudent as well in using this motivation to explain the positive and significant sign of the coefficient of fluctuations on trust.

Another possible explanation: free riding and moral hazard

Given our finding that trust incorporates the trust in foreign institutions (see Section 2), an alternative explanation for our results is that engaging in stable

[22] see section 2 about the relationship between uncertainty and trust

exchange rate policy, could have a negative effect on trust because it fuels the suspicion (or actual) free riding and moral hazard behaviors of the governments (that decrease the trust in foreign institution). To try to translate this in the contemporary world, we could question whether Greece would had such a bad institutional reputation abroad[23] if Greece was not in the Eurozone. Could it be that this is partially due to the fact that Greece suffers from a *free riders* and *moral hazarder* reputation? To try to give another example of the today world, we could think at what is the meaning of the US president Donald Trump to call Chinese 'grand champions' of currency manipulation[24] ? Is it in fact accusing China to be a *free rider*? Does this impact trust of the US citizens towards Chinese citizens? Would this *free rider* reputation of China remain if the central bank of China would let the Renmimbi fluctuate more (or freely) ?

Since the likelihood of *free riding and moral hazard* increases in a fixed exchange rate system (and even more relevantly in a monetary union) (Bruni, 2004), this could explain the existence of a positive link between fluctuating exchange rate and trust. So far, those explanations are not more than suggestions, further research would be required to explain and verify the potential channels of transmission.

Limitations: does it exist an effect of trust on international economic exchange?

The first limitation comes from the fact that if trust does not have an effect on economic exchange, then there will not be any "economic" consequences. On the one hand, there are several paper that shows the existence of a *relevant* "cultural bias" in economic exchange (Guiso, et al., 2009); on the other hand, there are papers that doubt on the existence of an effect of trust on bilateral economic relations (Spring & Grossman, 2016).

Despite the existing research on the link between trust and economic exchange, it is difficult to claim that the trust between countries does not affect their bilateral relations, indeed *trust matter when coming to international relations*[25], this view could also be supported by the importance that policy makers give to this argument nowadays[26][27].

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[23] See Table 4

[24] http://www.reuters.com/article/us-usa-trump-china-currency-exclusive-idUSKBN1622PJ

[25] See for example (Demertzis & Wolf, 2016)

[26] See for example (Draghi, 2017) & (Draghi, 2016)

[27] In our survey, when asked "Do you think trust between people of different countries can actually affect economic relations between their respective countries ?" , 68 % of the respondents replied Yes, 26 % maybe, 5% no.

external validity

A more important concern for our results is external validity. In fact, our sample consist of only European countries, we are thus excluding other big players of the world economic (such as China and US) and not including any developing countries. This latter exclusion is particularly important, as high exchange rate fluctuations are likely to be more relevant in developing countries. Also, the time-frame of our sample is highly unbalanced (1970, 1976, 1980, 1986, 1990,1993,1994,1996) and relatively old. Eventually external validity, combined with the previous limitations, require more research on the topic before the results being useful for any reasonable policy implications.

Other limitations

As a fairly new topic analysis, this research could indeed suffer weaknesses, both in terms of methodology and measures. We believe that the use of triple fixed effects well capture endogeneity problems that could come to mind when looking at equation 2, however further thinking could show up other endogeneity problems. For instance, what come to us as a problem could be migration and touristic flows [28]. Moreover, the difficulties of finding a clear and intuitive theoretical explanation for our results, leave many questions open with respect to the results of our estimation.

CONCLUSIONS

Lack of trust between countries has been often recalled also in recent time as a major obstacle for the European integration [29][30][31]. Indeed, one straightforward question raised by our results would be to investigate its implications and adaptability for the case of the Euro area and the European Union. Furthermore, recent research has found that major steps towards the European integration (for instance the 1992 Maastricht treaty and the 2004 enlargement) seem to have reduced pro-European sentiment (Guiso, et al., 2014). Thus, it is also likely they had a negative impact on bilateral trust between EU countries. Unfortunately carrying such an investigation would require finding other proxies for bilateral

[28] Unfortunately we do not have find data on migration and touristic flows for our sample. Still, it should keep in mind that our couple-fixed effect will already capture the time-invariant pattern of migration and tourism.

[29] *"…What is preventing us from moving ahead today is, in part, the legacy of those past failures, which creates a lack of trust among countries to enter into such a new stage of integration…*" (Draghi, 2017)

[30] *"... a union of separate nations, with different histories, traditions and cultures, but bound together by common interests and common needs, could only be built on mutual trust...Trust was the key ingredient for countries take further steps towards integration without fear of moral hazard. But trust had to be earned..."* (Draghi, 2016)

[31] "*Fiscal integration is a matter of trust"* (Demertzis & Wolf, 2016)

trust, others than the one we used here (since the Eurobarometer stopped to ask the question for bilateral trust after 1996). Eventually our results could be considered for "development policies", when advising on exchange rate policies (peg, currency board, etc..) aimed at helping to stabilize economies in developing countries (Ghosh & Ostry, 2009), policy-maker should take into account a potential additional effect through the "trust" channel.

Overall, our study adds to a recent and vast amount of literature investigating the role of trust in economics. We find the presence of a relatively new potential link between exchange rate fluctuations and trust between countries that we believe should further be investigated and expanded.

Figure 2: The word trust in the Google Ngram Viewer. Google Books Ngram Viewer is an online search engine that charts frequencies of any set of comma-delimited search strings using a yearly count of n-grams found in sources printed between 1500 and 2008 (In simple words, the graph gives the relative importance of a certain words in the literature stored in the Google Books database)

APPENDIX
DATA DESCRIPTION of TABLE 7 and TABLE 8

TRUST

Pairwise trust=$Trust_{a\rightarrow b,t}$ *+*$Trust_{b\rightarrow a,t}$
Sum of the trust of citizen of country A towards citizen of country B plus the trust of citizen of country B towards citizen of country A, both at time t, from of the survey question described in section 1. The dataset has been taken from the Eurobarometer GESIS archive. Answer for 1980 (GESIS, 1970-1976-1980-1986-1990-1993-1994-1996)[32]

EXCHANGE RATE

The bilateral exchange rate is calculated using the IFS database.
Fluctuations 5 years S.D.
standard deviation of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation *t.*

Fluctuations 4 years S.D.
standard deviation of the yearly percentage changes of the bilateral exchange rate in the 4 years before the observation *t*

Fluctuations 3 years S.D.
standard deviation of the yearly percentage changes of the bilateral exchange rate in the 3 years before the observation *t*

Exrateabsolut12345
sum of the absolute value of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation *t*
quadexrateabsolut12345
sum of the quadratic absolute value (plus 1) of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation *t*

TotalFluctuations 5 years S.D.

Total sum of Fluctuations 5 years S.D. of every country at time *t*

[32] In the Eurobarometer survey 14 (year 1980) the answers were coded in a reverse order

TRADE

Trade data are taken from the COMTRADE database aggregated at the 4 digit SITC level, expressed in current US$ prices (year fixed effects takes into account US$ inflation).

Trade/GDP
sum of import+export over the sum of the two GDP

GDP AND POPULATION
GDP and population data are taken from the CEPII Gravity dataset (Head, et al., 2010) (Head & T. Mayer, 2013)

gdpdiff
absolute difference of the two gdp
GDPcapita_difference
absolute difference of the two gdp per capita
POPdifference
absolute difference of the two population

FOREIGN DIRECT INVESTMENT
Bilateral FDI are taken from the OECD dataset (starting from 1985)
totalflowsGDP
sum of the inflows and outflows of FDI divided over the sum of the two GDP

ERM MEMBERSHIP
ERM member is a dummy constructed using Table 2 from Higgins (Higgins, 1993) equals to 1 if both countries were part of the ERM in the past two years, 0 otherwise.

FIGURES AND TABLES (including additional tables)

Figure 1

Pegged or non-fluctuating exchange rate	
Can increase trust because…	Can decrease trust because…
• Repeal inflationary forces • Decrease exchange rate risk[33] • Enhance fiscal discipline (riskier to increase public debt) • Decrease stance for monetary devaluation for competition purpose (incentive for internal adjustment)	• Difficulty to adopt counter-cyclical fiscal policies • Greater susceptibility to debt crisis, sudden capital flows stop and currency crises • Fiscal free-riding and moral-hazard (spread inflationary cost) • Decrease exchange rate risk can require less trust.

[33] Following the argument that trust can be used to deal with uncertainity (as discussed in section 2), it could be the case that reducing exchange rate risk could actually lead to a decrease on trust (as opposed on what is represented in the table).

Figure 2: (Trust in the google n-gram)

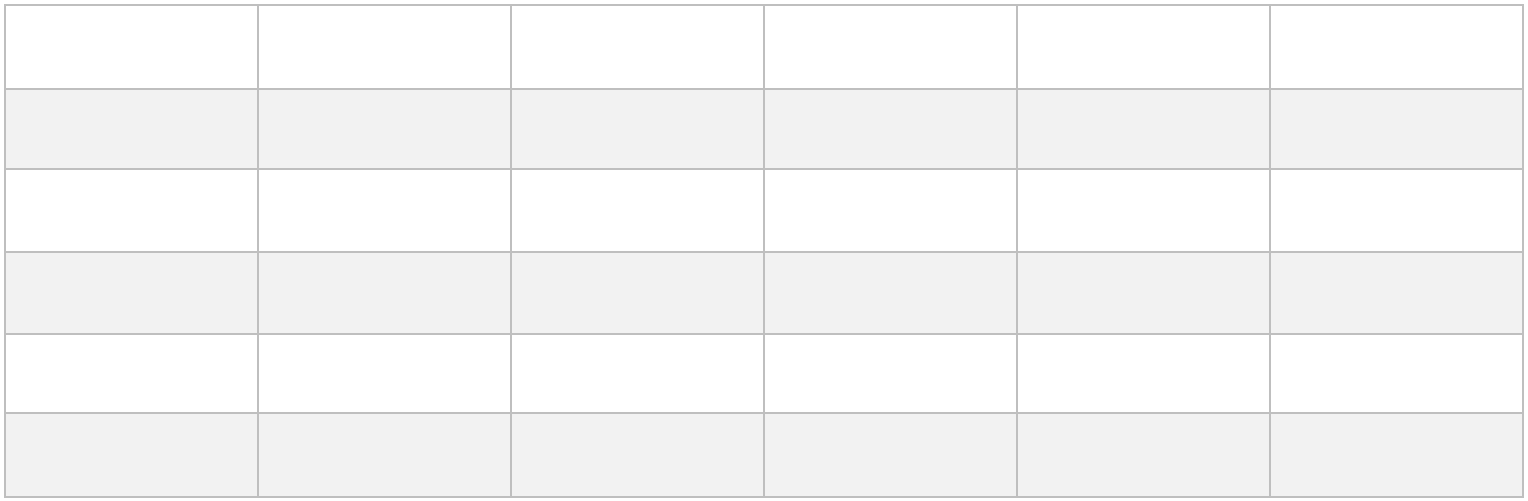
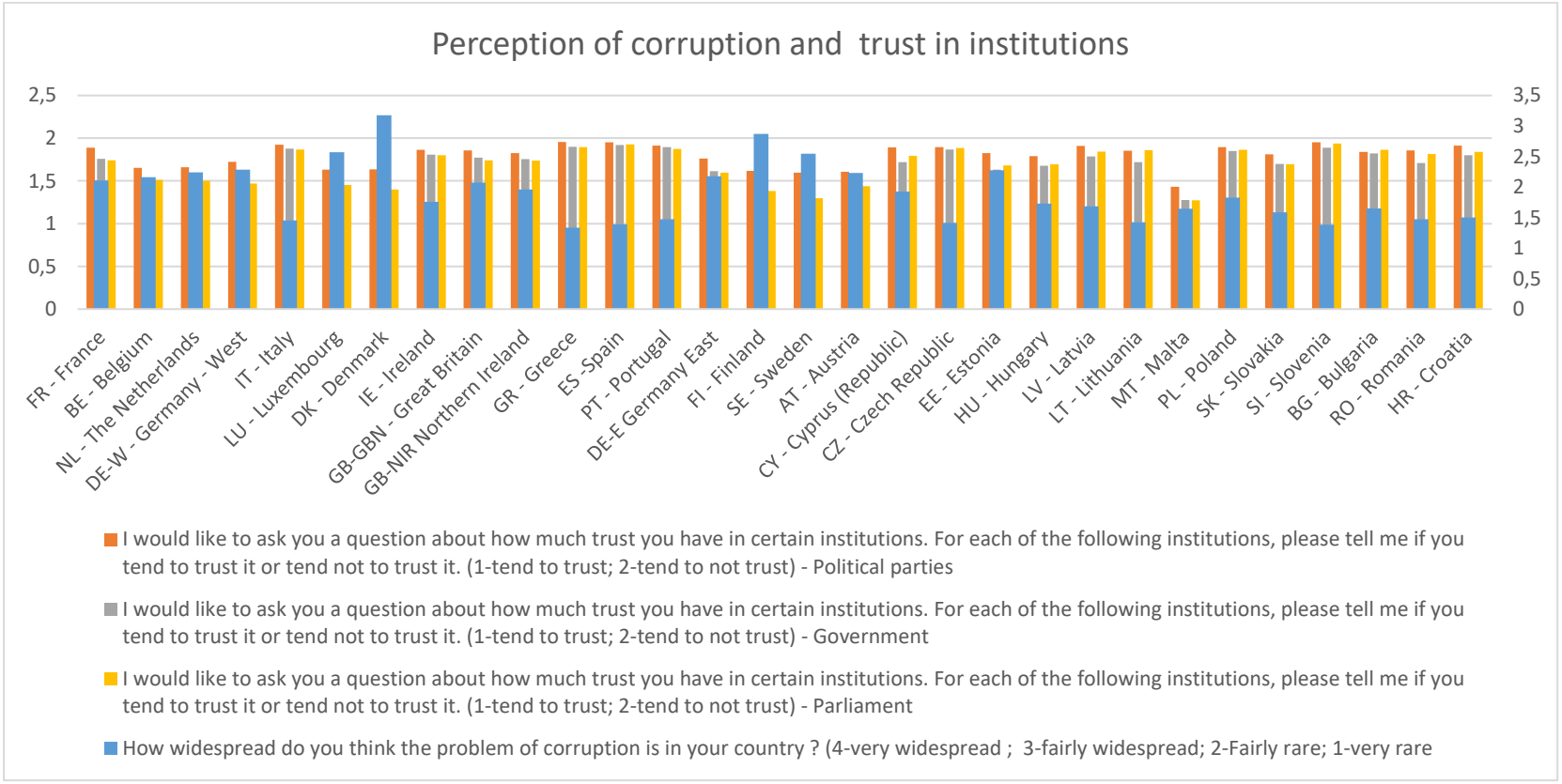


FIGURE 3: Calculated at country-mean, Data from the EUROBAROMETER n.79.1 and 79.3 (GESIS, 2013) (GESIS, 2013)


Perception of corruption and trust in institutions
2,5
2
1,5
1
0,5
0
3,5
3
2,5
2
1,5
1
0,5
0
FR - France
BE - Belgium
NL - The Netherlands
DE-W - Germany - West
IT - Italy
LU - Luxembourg
DK - Denmark
IE - Ireland
GB-GBN - Great Britain
GB-NIR Northern Ireland
GR - Greece
ES - Spain
PT - Portugal
DE-E Germany East
FI - Finland
SE - Sweden
AT - Austria
CY - Cyprus (Republic)
CZ - Czech Republic
EE - Estonia
HU - Hungary
LV - Latvia
LT - Lithuania
MT - Malta
PL - Poland
SK - Slovakia
SI - Slovenia
BG - Bulgaria
RO - Romania
HR - Croatia
I would like to ask you a question about how much trust you have in certain institutions. For each of the following institutions, please tell me if you tend to trust it or tend not to trust it. (1-tend to trust; 2-tend to not trust) - Political parties
I would like to ask you a question about how much trust you have in certain institutions. For each of the following institutions, please tell me if you tend to trust it or tend not to trust it. (1-tend to trust; 2-tend to not trust) - Government
I would like to ask you a question about how much trust you have in certain institutions. For each of the following institutions, please tell me if you tend to trust it or tend not to trust it. (1-tend to trust; 2-tend to not trust) - Parliament
How widespread do you think the problem of corruption is in your country ? (4-very widespread ; 3-fairly widespread; 2-Fairly rare; 1-very rare

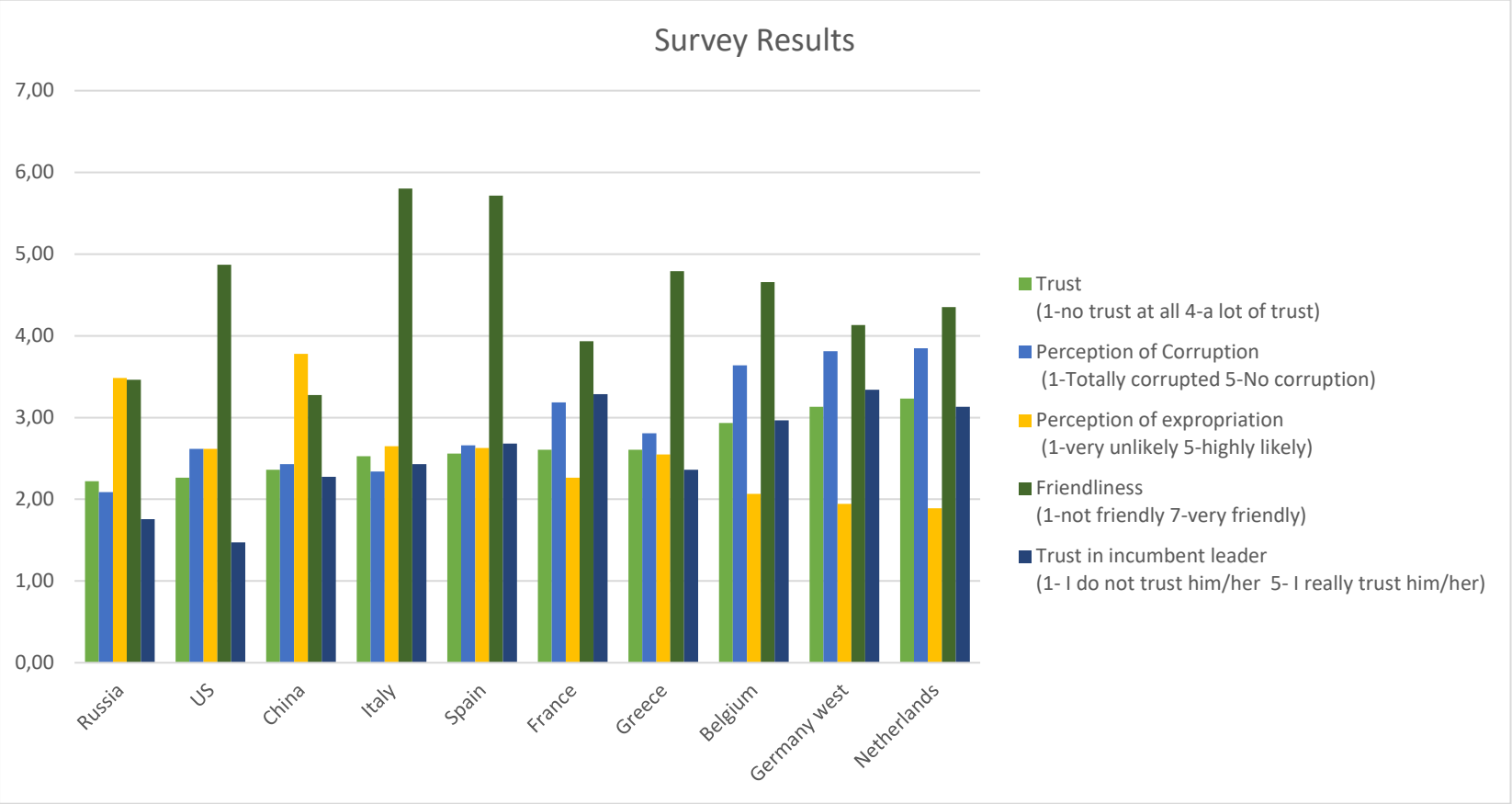


Figure 4: Calculated at country-mean, Data coming from the survey conducted from the author

Table 1: data coming from EUROBAROMETER (GESIS, 1970-1976-1980-1986-1990-1993-1994-1996), collapsed over years as in Table 3 from Guiso et al. (Guiso, et al., 2009)

Trust from country A to country B	countryB															
countryA	Austria	Belgium	Denmark	Finland	France	Germany west	Greece	Ireland	Italy	Luxembourg	Netherlands	Portugal	Spain	Sweden	United Kingdom	Mean
Austria		2,95	2,95	2,94	2,62	3,09	2,52	2,55	2,43	3,07	2,95	2,5	2,58	3,05	2,59	2,77
Belgium	2,83		3,01	2,92	2,91	2,79	2,45	2,75	2,42	3,3	2,9	2,56	2,63	2,99	2,83	2,79
Denmark	3,22	3,18		3,2	2,86	3,12	2,61	3,02	2,53	3,23	3,33	2,69	2,68	3,41	3,22	2,98
Finland	3,29	3,07	3,3		2,92	2,89	2,68	2,92	2,51	3,06	3,14	2,67	2,61	3,35	3,18	2,97
France	2,7	3,07	2,96	2,91		2,74	2,53	2,72	2,43	3,09	2,94	2,61	2,7	2,99	2,54	2,77
Germany west	2,98	2,84	2,97	2,85	2,85		2,51	2,59	2,36	2,99	2,9	2,52	2,7	2,99	2,66	2,73
Greece	2,32	2,6	2,56	2,42	2,78	2,31		2,55	2,33	2,56	2,55	2,6	2,72	2,51	2,34	2,53
Ireland	2,93	2,93	2,99	2,92	2,81	2,78	2,5		2,65	2,96	3	2,66	2,64	2,92	2,8	2,81
Italy	2,66	2,64	2,7	2,78	2,66	2,63	2,4	2,37		2,62	2,77	2,35	2,68	2,89	2,51	2,59
Luxembourg	2,95	2,82	2,86	2,94	2,83	2,76	2,53	2,55	2,54		2,97	2,62	2,71	2,98	2,57	2,72
Netherlands	2,9	3,18	3,29	3,25	2,75	2,87	2,59	2,8	2,37	3,29		2,8	2,7	3,34	2,99	2,9
Portugal	2,13	2,66	2,66	2,18	2,91	2,54	2,41	2,51	2,55	2,71	2,7		2,59	2,24	2,67	2,6
Spain	2,65	2,73	2,73	2,71	2,37	2,66	2,47	2,57	2,61	2,71	2,85	2,51		2,84	2,3	2,6
Sweden	3,53	3,23	3,57	3,49	3,04	3,13	2,88	3,26	2,81	3,31	3,33	2,97	2,86		3,43	3,2
United Kingdom	2,88	2,9	3,11	2,95	2,36	2,61	2,53	2,65	2,51	2,95	3,13	2,75	2,5	3		2,74
Mean	2,86	2,89	2,93	2,89	2,74	2,73	2,51	2,66	2,48	2,97	2,93	2,61	2,66	2,96	2,7	2,75

	corruption	Trust in political parties	Trust in national government	Trust in parliament	Trust in european union
corruption	1.0000				
Trust in political parties	-0.6609	1.0000			
Trust in national government	-0.6447	0.9442	1.0000		
Trust in parliament	-0.7807	0.9642	0.9403	1.0000	
Trust in European union	-0.1015	0.4308	0.3893	0.2865	1.0000

TABLE 2: Calculated at country-mean, Data from the EUROBAROMETER n.79.1 and 79.3 (GESIS, 2013) (GESIS, 2013)

	Trust	Corruption	Expropriation	Friendliness	Leader trust
trust	1.0000				
corruption	0.9359	1.0000			
expropriation	-0.8148	-0.8520	1.0000		
friendliness	0.0686	-0.0517	-0.3832	1.0000	
Leader trust	0.8322	0.8005	-0.6838	-0.0036	1.0000

TABLE 3: Calculated at country-mean, Data coming from the survey conducted from the author

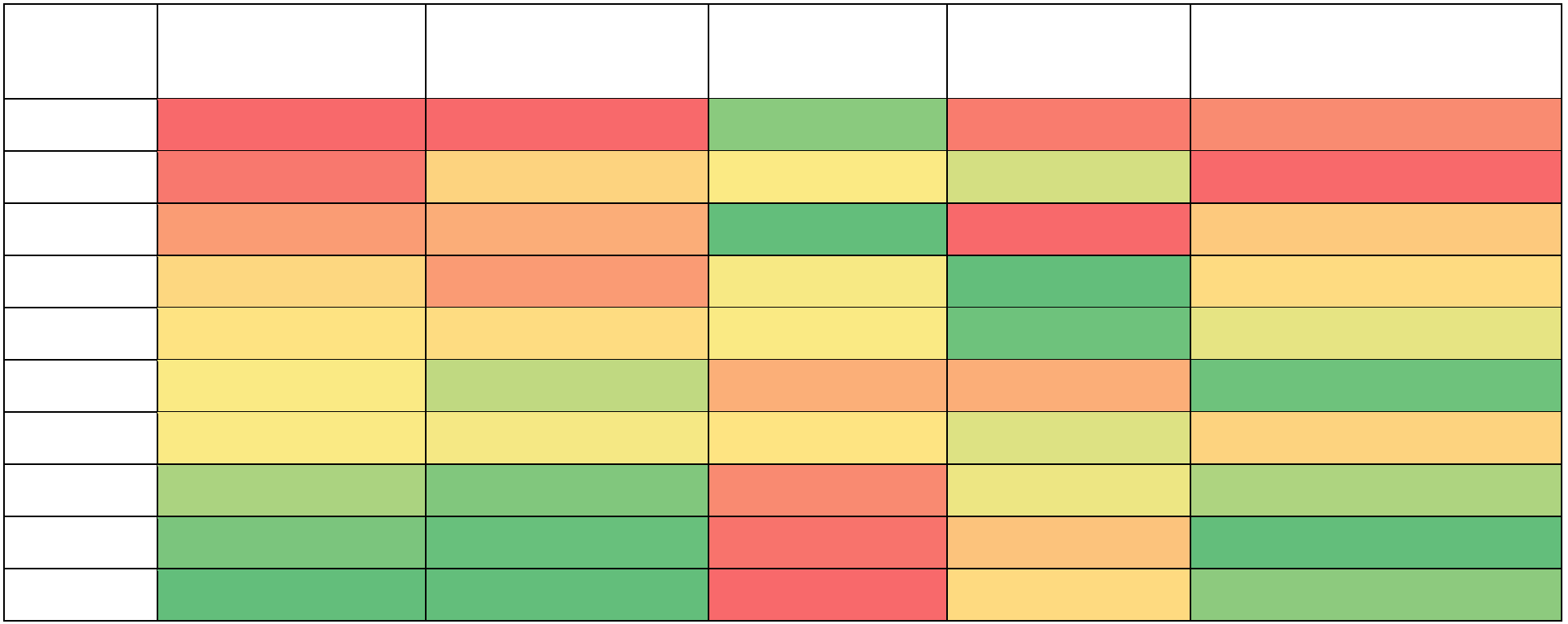


Table 4: Data coming from the survey conducted by the author. Results from the estimation of:

$$Trust_{i,->b} = +Corruption_{i,\rightarrow b} + Expropriation_{i,\rightarrow b} + Friendliness_{i,\rightarrow b} + Leader\ trust_{i,\rightarrow b} + Individual_i + Nationality_i + Country_b$$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Trust	pairtrust	pairtrust	Tru	pairtrust	Trust	pairtrust	Trust	Trust
Fluctuations 5 years S.D.	.22205***	2.332***	1.298**	0.242	1.458**	.19445**		*	0.152***	0.197***
	(0.870)	(0.566)	(0.564)		(0.609)	(0.604)			219)	(0.0224)
Trade/GDP	0.123***		*	-0.079	1.616	-0.0346			-0.0229	-0.103***
					(7.119)				242)	(0.0221)
Fluctuations 5 years % absolut change				0.123		0894***	0.181*	*	0.118***	0.141***
							(0.0960)		158)	(0.0164)
quadFluctuations 5 years % absolut change				0.114		.190***		*	0.0889**	0.163***	0.120***
									(0.0442)	223)	(0.0221)
Constant	5.621***	5.319***	5.265***	5.296***	5.332***	5.280***	4.836***			-0.0212
	(0.0450)	(0.124)	(0.0996)	(0.186)	(0.100)	(0.0997)	(0.243)			(0.0144)
	.101***			1.287		.588***		*	1.483***	1.430***
Observations	453	453	453	345	345	453	453		31)	(0.190)
R-squared	0.023	0.912	0.965	0.970	0.970	0.965	0.965			
Couple	NO	YES	YES	YES	YES	YES	YES		001	1,001
Year	0.234	NO	YES	YES	0.3	YES	0.577	YES	YES	0.602	0.415
countryoforigin*year	NO	NO	YES	YES	YES	YES	YES		ES	NO
countryofdestination*year	NO	NO	NO	YES	NO	YES	NO	YES	YES	YES	YES
countrydestination	NO	NO	NO	NO	NO	NO	YES	YES

TABLE 5: ($PairTrust_{ab,t} = const \quad + Fluctuations_{ab,t} + \delta_a * year_t + \sigma_b * year_t + \gamma_{ab} + X_{ab,t}$

Pairtrust:Sum of the mean of the trust of citizen of country A towards country B and the mean of the trust of citizen of country B towards country A ;*Fluctuations 5 years S.D.*:standard deviation of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation t;*Fluctuations 4 years S.D.*:standard deviation of the yearly percentage changes of the bilateral exchange rate in the 4 years before the observation t;*Fluctuations 3 years S.D.*:standard deviation of the yearly percentage changes of the bilateral exchange rate in the 3 years before the observation t;*Exrateabsolut12345*:sum of the absolute value of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation t;*quadexrateabsolut12345:*sum of the quadratic absolute value (plus 1) of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation t;*TotalFluctuations 5 years S.D.:*Total sum of Fluctuations 5 years S.D. of every country at time t;*Trade/GDP2*:sum of import+export over the sum of the two GDP;*gdpdiff*:absolute difference of the two gdp;*GDPcapita_difference*:absolute difference of the two gdp per capita;*POPdifference*:absolute difference of the two population;*totalflowsGDP*:sum of the inflows and outflows of FDI divided over the sum of the two GDP;

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust	pairtrust
Fluctuations 5 years S.D.	1.549**			1.335**	1.273**	1.311**	1.374**	1.251	1.423*
	(0.611)			(0.562)	(0.559)	(0.557)	(0.563)	(0.831)	(0.850)
Total fluctuations in year t	-0.0101**								
	(0.00433)								
Fluctuations 4 years S.D.		0.939*							
		(0.505)							
Fluctuations 3 years S.D.			0.985*						
			(0.515)						
GDPdifference				-8.02e-14*		-8.28e-14*			1.24e-14
				(4.61e-14)		(4.57e-14)			(1.25e-13)
GDPcapita_difference					-1.20e-05**	-1.22e-05**			-1.92e-05**
					(5.11e-06)	(5.09e-06)			(9.31e-06)
POPdifference							-0.0224*		0.0207
							(0.0121)		(0.0413)
TotalFDI/GDP								-12.81	-7.562
								(23.07)	(23.60)
Constant	6.001***	5.261***	5.273***	5.322***	5.249***	5.308***	6.396***	5.746***	4.754**
	(0.0867)	(0.100)	(0.0997)	(0.105)	(0.0990)	(0.104)	(0.616)	(0.244)	(1.937)
Observations	453	453	453	453	453	453	453	232	232
R-squared	0.857	0.965	0.965	0.965	0.965	0.966	0.965	0.970	0.971
Couple	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year	NO	YES	YES	YES	YES	YES	YES	YES	YES
countryoforigin*year	NO	YES	YES	YES	YES	YES	YES	YES	YES
countryofdestination*year	NO	YES	YES	YES	YES	YES	YES	YES	YES

TABLE 6: $PairTrust_{ab,t} = const \quad + Fluctuations_{ab,t} + \delta_a * year_t + \sigma_b * year_t + \gamma_{ab} + X_{ab,t}$

Pairtrust:Sum of the mean of the trust of citizen of country A towards country B and the mean of the trust of citizen of country B towards country A ;*Fluctuations 5 years S.D.*:standard deviation of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation t;*Fluctuations 4 years S.D.*:standard deviation of the yearly percentage changes of the bilateral exchange rate in the 4 years before the observation t;*Fluctuations 3 years S.D.*:standard deviation of the yearly percentage changes of the bilateral exchange rate in the 3 years before the observation t;*Exrateabsolut12345*:sum of the absolute value of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation t;*quadexrateabsolut12345*:sum of the quadratic absolute value (plus 1) of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation t;*TotalFluctuations 5 years S.D.*:Total sum of Fluctuations 5 years S.D. of every country at time t;*Trade/GDP2*:sum of import+export over the sum of the two GDP;*gdpdiff*:absolute difference of the two gdp;*GDPcapita_difference*:absolute difference of the two gdp per capita;*POPdifference*:absolute difference of the two population;*totalflowsGDP*:sum of the inflows and outflows of FDI divided over the sum of the two GDP;

Variable	Obs	Mean	Std. Dev.	Min	Max
pairtrust	453	5.496501	0.499173	4.301243	6.977505
Fluctuations 5 years S.D.	453	0.044388	0.026726	0	0.127293
Fluctuations 4 years S.D.	453	0.043211	0.02848	0	0.145865
Fluctuations 3 years S.D.	453	0.039141	0.028537	0	0.153525
exrate~12345	453	0.270269	0.18022	0	0.868429
quadex~12345	453	5.568675	0.388795	5	6.904621
GDPcapita_difference	453	8182.535	7357.932	2.866211	40034.24
GDPdifference	453	5.94E+11	5.66E+11	4.90E+09	2.48E+12
Fluctuations 4 years S.D.	453	0.043211	0.02848	0	0.145865
Fluctuations 3 years S.D.	453	0.039141	0.028537	0	0.153525
TotalFDI/GDP2	232	0.000494	0.000816	-0.00089	0.005346
totaltrade~2	345	0.00879	0.011181	0.000396	0.071709

TABLE 7: summary statistics of the sample used in Table 5 and 6

Pairtrust:Sum of the mean of the trust of citizen of country A towards country B and the mean of the trust of citizen of country B towards country B ;*Fluctuations 5 years S.D.*:standard deviation of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation t;*Fluctuations 4 years S.D.*:standard deviation of the yearly percentage changes of the bilateral exchange rate in the 4 years before the observation t;*Fluctuations 3 years S.D.*:standard deviation of the yearly percentage changes of the bilateral exchange rate in the 3 years before the observation t;*Exrateabsolut12345*:sum of the absolute value of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation t;*quadexrateabsolut12345*:sum of the quadratic absolute value (plus 1) of the yearly percentage changes of the bilateral exchange rate in the 5 years before the observation t;*TotalFluctuations 5 years S.D.*:Total sum of Fluctuations 5 years S.D. of every country at time t;*Trade/GDP2*:sum of import+export over the sum of the two GDP;*gdpdiff*:absolute difference of the two gdp;*GDPcapita_difference*:absolute difference of the two gdp per capita;*POPdifference*:absolute difference of the two population;*totalflowsGDP*:sum of the inflows and outflows of FDI divided over the sum of the two GDP;

What is your nationality ?	frequency
Italian	37
Dutch	14
German	7
Slovak	5
Greek	4
French	3
British	2
Polish	2
Russian	2
Belgian	1
Egyptian	1
Georgian	1
Indian	1
Japanese	1
Kyrgyzstan	1
Lithuanian	1
Mexico	1
Portoguese	2
Spanish	1
Thailand	1
Ukrainian	1
United States	1
Venezuelan	1

Table 8: Country of origin of respondents, Data coming from the survey conducted from the author

	Trust (1-no trust at all 4-a lot of trust)	Perception of Corruption (1-Totally corrupted 5-No corruption)	Perception of expropriation (1-very unlikely 5-highly likely)	Friendliness (1-not friendly 7-very friendly)	Trust in incumbent leader (1- I do not trust him/her 5- I really trust him/her)
Russia	2,22	2,09	3,48	3,46	1,76
US	2,26	2,62	2,62	4,87	1,47
China	2,36	2,43	3,78	3,27	2,27
Italy	2,53	2,34	2,65	5,80	2,43
Spain	2,56	2,66	2,63	5,71	2,68
France	2,60	3,19	2,26	3,93	3,29
Greece	2,60	2,81	2,55	4,79	2,36
Belgium	2,93	3,64	2,07	4,66	2,97
Germany west	3,13	3,81	1,95	4,13	3,34
Netherlands	3,23	3,85	1,89	4,35	3,13

Table 9: Calculated at country-mean, Data coming from the survey conducted from the author

Bibliografia

Arrow, K., 1972. Gift and Exchanges. *Philosophy and Public Affairs.*

Bottazzi, L., Da Rin, M. & Hellmann, T., 2016. The Importance of Trust for Investment: Evidence from Venture Capital. *Review of financial studies.*

Bruni, F., 2004. Fiscal Discipline in a Monetary Union: Issues for the Euro Area. *European monetary and financial integration: evolution and prospects, SUERF.*

Cox, J. C., 2004. How to Identify Trust and Reciprocity. *Games and economic behaviour.*

Dell'Ariccia, G., 1999. Exchange Rate Fluctuations and Trade Flows: Evidence from the European Union. *IMF staff papers.*

Demertzis, M. & Wolf, G. B., 2016. What are the prerequisites for a euro-are fiscal capacity?. *Bruegel - Policy contribution*.

Duttagupta, R. & Tolosa, G., 2007. Fiscal Discipline and Exchange Rate Regimes:. *Emerging Markets Finance & Trade.*

Fehr, E. & Fischbacher, U., 2003. The nature of Human Altruism. *Nature.*

Frederiksen, M., 2014. Trust in the face of uncertainty: a qualitative study of intersubjective trust and risk. *International review of Sociology.*

Gambetta, D., 1988. Can we trust trus? . In: *In Trust: Making and Breaking Cooperative Relations..* s.l.:Blackwell, pp. 213-237.

GESIS, 1970-1976-1980-1986-1990-1993-1994-1996. *European community studies (Eurobarometer).* s.l.:s.n.

GESIS, 2013. *Eurobarometer 79.1.* s.l.:s.n.

GESIS, 2013. *Standard Eurobarometer 79.1.* s.l.:s.n.

Ghosh, A. R. & Ostry, J. D., 2009. Choosing an Exchange Rate Regime. *IMF, FINANCE & DEVELOPMENT.*

Glaeser, E., Laibson, D., Scheinkman, J. A. & Soutter, C. L., 2000. Measuring trust. *Quarterly Journal of Economics.*

Guiso, L., Sapienza, P. & Zingales, L., 2008. Trusting the Stock Market. *Journal of Finance.*

Guiso, L., Sapienza, P. & Zingales, L., 2009. Cultural bias in economic exchange ?. *Quarterly Journal of Economics.*

Guiso, L., Sapienza, P. & Zingales, L., 2014. Monnet's error ?. *LEQS paper 83.*

Head, K., Mayer, T. & Ries, J., 2010. The erosion of colonial trade linkages after independence. *Journal of International Economics.*

Head, K. & T. Mayer, 2013. Gravity Equations: Toolkit, Cookbook, Workhorse". In: *Handbook of International Economics.* s.l.:Elsevier.

Higgins, B., 1993. Was the ERM crisis inevitable ?. *Economic review, Federal reserve of Kansas city.*

Karlan, D., 2005. Using experimental economics to measure social capital and predict financial decisions. *American Economic Review.*

Karlan, D. S., 2006. Using Experimental Economics to Measure Social Capital and predict final decisions. *American economic review.*

Knack, S. & Keffer, P., 1996. Does social capital have an economic payoff? A cross-country investigation. *Quarterly Journal of Economics.*

Knack, S. & Zak, P., 2001. Trust and Growth. *Economic Journal.*

Kollock, P., 1994. The emergence of exchange structures: an experimental study of uncertainty, commitment, and trust. *American Journal of Sociology,* pp. 313-345.

La Porta, R., Lopez-de-Silane, F., Shleifer, A. & Vishny, R. W., 1997. Trust in Large organizations. *American economic review.*

Levi, M. & Stoker, L., 2000. Political trust and trustworthiness. *Annual review of Political sciences.*

Obstfeld, M. & Rogoff, K., 1995. The Mirage of Fixed Exchange Rates. *Journal of economic perspectives.*

Obstfeld, M. & Taylor, A. M., 1997. The Great Depression as a Watershed: International Capital Mobility over the Long Run. *NBER Working Paper No. 5960 (Also Reprint No. r2212).*

OECD, 2017. *OECD-Trust in government.* [Online]
Available at: http://www.oecd.org/gov/trust-in-government.htm
[Accessed 1 July 2017].

Sapienza, P., Toldra, A. & Zingales, L., 2007. Understanding trust. *NBER Working Paper 13387.*

Spring, E. & Grossman, V., 2016. Does bilateral trust across countries really affect international trade and factor mobility ?. *Empirical economics.*

HELLO!

Thanks for doing this survey, there are 5 questions in total, completing all the survey will not take more than 5 minutes !

*Campo obbligatorio

I would like to ask you a question about how much trust you have in people from various countries. For each, please tell me whether you have a lot of trust, some trust, not very much trust or no trust at all.

1. **How much do you trust the Belgians ?** *
   Contrassegna solo un ovale.
   - no trust at all
   - not very much trust
   - some trust
   - a lot of trust

2. **How much do you trust the Germans ?** *
   Contrassegna solo un ovale.
   - no trust at all
   - not very much trust
   - some trust
   - a lot of trust

3. **How much do you trust the Dutch (Netherlands)?** *
   Contrassegna solo un ovale.
   - no trust at all
   - not very much trust
   - some trust
   - a lot of trust

4. **How much do you trust the French?** *
   Contrassegna solo un ovale.
   - no trust at all
   - not very much trust
   - some trust
   - a lot of trust

5. **How much do you trust the Italians ?** *
Contrassegna solo un ovale.

- no trust at all
- not very much trust
- some trust
- a lot of trust

6. **How much do you trust the Spanish ?** *
Contrassegna solo un ovale.

- no trust at all
- not very much trust
- some trust
- a lot of trust

7. **How much do you trust the Greeks ?** *
Contrassegna solo un ovale.

- no trust at all
- not very much trust
- some trust
- a lot of trust

8. **How much do you trust the Americans?** *
Contrassegna solo un ovale.

- no trust at all
- not very much trust
- some trust
- a lot of trust

9. **How much do you trust the British?** *
Contrassegna solo un ovale.

- no trust at all
- not very much trust
- some trust
- a lot of trust

10. **How much do you trust the Russians?** *
Contrassegna solo un ovale.

- no trust at all
- not very much trust
- some trust
- a lot of trust

11. **How much do you trust the Chinese?** *
Contrassegna solo un ovale.

- no trust at all
- not very much trust
- some trust
- a lot of trust

Section 2 -corruption

Now, I want to ask you your opinion on how much those countries are corrupted. You can give an answer that ranges from 1 to 5. Where 1 is “TOTALLY corrupted” and 5 is “NO corruption”

12. **How much Belgium is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED						NO CORRUPTION

13. **How much Germany is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED						NO CORRUPTION

14. **How much Netherlands is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED						NO CORRUPTION

15. **How much France is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED						NO CORRUPTION

16. **How much Italy is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED						NO CORRUPTION

17. **How much Spain is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED	◯	◯	◯	◯	◯	NO CORRUPTION

18. **How much Greece is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED	◯	◯	◯	◯	◯	NO CORRUPTION

19. **How much United States is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED	◯	◯	◯	◯	◯	NO CORRUPTION

20. **How much UK is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED	◯	◯	◯	◯	◯	NO CORRUPTION

21. **How much Russia is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED	◯	◯	◯	◯	◯	NO CORRUPTION

22. **How much China is corrupted** *
Contrassegna solo un ovale.

	1	2	3	4	5	
TOTALLY CORRUPTED	◯	◯	◯	◯	◯	NO CORRUPTION

Section 3- expropriation

Suppose that you own land in a certain country. What are the chances of losing ownership of the land (through not fault of your own)? More specifically, what are the chances of the government (or some other entity) unilaterally taking that land away from you? You can give 5 possible answers: Very Unlikely (1) Unlikely (2) Neutral (3) Likely (4) Highly Likely (5)

23. **Likelihood of land expropriation in Belgium** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

24. **Likelihood of land expropriation in Germany** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

25. **Likelihood of land expropriation in the Netherlands** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

26. **Likelihood of land expropriation in France** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

27. **Likelihood of land expropriation in Italy** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

28. **Likelihood of land expropriation in Spanish** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

29. **Likelihood of land expropriation in Greeks** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

30. **Likelihood of land expropriation in United States** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

31. **Likelihood of land expropriation in UK** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

32. **Likelihood of land expropriation in Russia** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

33. **Likelihood of land expropriation in China** *
Contrassegna solo un ovale.

	1	2	3	4	5	
Very Unlikely	◯	◯	◯	◯	◯	Highly Likely

Section 4 -friendliness

Now, please tell me how much "friendly" people from different countries are. You can give an answer between 1 and 7, where 1 is “no friendly at all” and 7 is “very friendly” .

34. **Belgians** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

35. **Germans** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

36. **Dutch** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

37. **French** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

38. **Italians** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

39. **Spanish** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

40. **Greeks** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

41. **Americans** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

42. **British** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

43. **Russians** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

44. **Chinese** *
Contrassegna solo un ovale.

	1	2	3	4	5	6	7	
not friendly	◯	◯	◯	◯	◯	◯	◯	very friendly

Section 5 - leaders

Now I would like you to tell me what is your level of trust for the following people:

45. **Emmanuel Macron (French prime minister)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust him	◯	◯	◯	◯	◯	I REALLY trust him

46. **Matteo Renzi (Italian politician)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust him	◯	◯	◯	◯	◯	I REALLY trust him

47. **Theresa May (Britih prime minister)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust her	◯	◯	◯	◯	◯	I REALLY trust her

48. **Angela Merkel (German prime minister)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust her	◯	◯	◯	◯	◯	I REALLY trust her

49. **Alexis Tsipras (Greek prime minister)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust him	◯	◯	◯	◯	◯	I REALLY trust him

50. **Donald Trump (US president)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust him	◯	◯	◯	◯	◯	I REALLY trust him

51. **Mariano Rajoy (Spanish prime minister)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust him	◯	◯	◯	◯	◯	I REALLY trust him

52. **Charles Michel (Belgian prime minister)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust him	◯	◯	◯	◯	◯	I REALLY trust him

53. **Vladimir Putin (Russian prime minister)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust him	◯	◯	◯	◯	◯	I REALLY trust him

54. **Mark Rutte (dutch prime minister)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust him	◯	◯	◯	◯	◯	I REALLY trust him

55. **Xi Jinping (China president)** *
Contrassegna solo un ovale.

	1	2	3	4	5	
I do NOT trust him	◯	◯	◯	◯	◯	I REALLY trust him

Final section

We have almost finish, can you tell me some details about you

56. **What is your nationality ?** *

Contrassegna solo un ovale.

- Italian
- French
- German
- Dutch
- Spanish
- Greek
- American
- Irish
- British
- Portoguese
- Belgian
- Polish
- Hungarian
- Russian
- Chinese
- United States
- Philippines
- Chinese
- Indian
- Japanese
- Altro: _____

57. **Have you ever lived abroad for more than 2 months ? if yes, in which of the following countries (multiple choice possible)** *

Seleziona tutte le voci applicabili.

- [ ] Never lived abroad
- [ ] United States
- [ ] Italy
- [ ] United Kingdom
- [ ] France
- [ ] Netherlands
- [ ] Belgium
- [ ] Russia
- [ ] Spain
- [ ] France
- [ ] Greece
- [ ] China
- [ ] Germany
- [ ] Altro: _____

58. **In politica matters, people talk of "the left" and "the right". How would you place your views on this scale?** *

Contrassegna solo un ovale.

	1	2	3	4	5	6	7	8	9	
LEFT-WING	◯	◯	◯	◯	◯	◯	◯	◯	◯	RIGHT-WING

59. **Your age** *

Contrassegna solo un ovale.

- ◯ 18-30 years
- ◯ Older than 30 years

60. **Your education**

Contrassegna solo un ovale.

- ◯ High school
- ◯ University student/graduate
- ◯ Altro: _____

61. **Do you think trust between people of different countries can actually affect economic relations between their respective countries ?** *

Contrassegna solo un ovale.

- ◯ No
- ◯ Maybe
- ◯ Yes
- ◯ Altro: _____