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between 2002 and 2018**

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Globalisation Increased Trust in Northern and Western Europe between 2002 and 2018

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Abstract

Institutional trust and interpersonal trust are supposedly threatened by globalisation. In a case study of twelve countries in Northern- and Western Europe, however, we show that the substantial globalisation of the first two decades of the 21st century has *contributed* to institutional trust and – less significant – to interpersonal trust. This relation is non-linear. The “usual suspects” of income inequality and diversity have decreased institutional and interpersonal trust. Only specific Government expenditures (education and culture) have contributed to trust, more so in combination with high quality of institutions. High trusting countries (compared to Austria) turn out to be: France, Germany, Sweden, Switzerland and the UK. The positive effect of globalization on trust is “carried” by the higher educated and those with higher incomes.

1. Introduction

We aim at deepening the understanding of the relationship between globalisation and trust of the population in institutions and in each other for high income countries. Globalisation has often been viewed as threatening trust in institutions and reducing interpersonal trust. “*Social theories tend to equate globalisation with the general erosion of societal bonds at the national level. Social cohesion is undermined, they claim, by a variety of social trends, including the erosion of national/state identities, the rise of individualism and increasing structural inequalities in societies.*” (Green, Janmaat and Chen, 2011, p. R6). The loss of interpersonal trust and trust in institutions (we use often the term social cohesion to catch both phenomena) is often recognised in higher income countries in a surge of populism and political polarisation (Putnam, 2020, Swank & Betz, 2018, Grechyna, 2016).

Globalisation increases the interconnectedness of countries, through the increasing flow of goods, services, capital, and labour (Ritzer & Dean, 2015). The mechanisms for the decrease in trust due to globalisation is increasing diversity – as a result of migration – as well as increasing economic inequality. Inequality and diversity may well decrease trust as the extent of connectedness, solidarity, and sense of belonging of society and its citizens (Manca, 2014), as they contribute to social and economic divisions within society (Easterley, Ritzer & Woolcock, 2006, p. 105). Putnam (2020) also describes how globalisation can have a negative effect on social cohesion when he investigates different trends in the US from 1880 onwards. He finds a positive correlation between trends in social cohesion, economic growth, political harmonisation, and communitarianism, and sees all these four trends decline since 1970 – the start of a new stage of globalisation as a result of the abolition of the gold standard and the increase in trade agreements. This concurrence of increasing globalisation with the decline in trust is often suggested to be present in Western-European countries, where globalisation is claimed to be the determinant for polarisation (Swank & Betz, 2018).

This paper provides an assessment of the relation between trust and globalisation for twelve North and Western European countries for the period 2002-2018. We also seek evidence to establish whether Government intervention can increase trust as suggested by, for example Rodrik and Stantcheva (2021). They have developed a framework consisting out of nine different ways in which a government can intervene, shaped by choices of when to intervene and who to target with the intervention. Their main argument is that intervening in the so-called production stage will ensure most inclusivity and equality within society, and thus can foster

social cohesion. These are the two sides of our model of analysis (in section 2). In section 3 we present the data used with a cursory examination. In section 4 the results are presented, within section 5 a summary and conclusions.

2. Model of Analysis

2.1. Trust, globalisation, inequality, and diversity

Our model of analysis looks at institutional and interpersonal trust as the result of the process of globalisation and accompanied by a rise in inequality and an increase in the diversity in the population, using a regression model (along the lines of Zulfqar, Nadeem & Pervaiz, 2018). We expect the relationship between globalisation and trust to be non-linear, based on findings of, for example, Carter (2007) and Bergh and Nilsson (2010). Therefore, we will include a quadratic term for globalisation into our model. Besides the non-linear function of globalisation on trust, we incorporate the impact of Government expenditures and of institutional quality together with an interaction term for both levels of analysis, as we expect that the effect of government intervention is dependent on the quality of institution, as found by, for example, Rodriguez-Pose & Garcilazo (2015), so that:

$$Y_{ijt} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{1it}^2 + \beta_3 X_{2it} + \beta_4 X_{3ijt} + \beta_5 X_{4it} + \beta_6 X_{5it} + \beta_7 (X_{4it} * X_{5it}) + \varepsilon_{ijt} [1]$$

Where

i denotes the country, j the individual, t the year;

Y_{ijt} denotes the level of trust;

X_{1it} denotes globalisation;

X_{2it} denotes a vector of GDP (ln), economic decline and conflict regressors;

X_{3ijt} denotes a vector of characteristics of individual j in country i at time t ;

X_{4it} denotes a vector of government expenditure;

X_{5it} denotes institutional quality;

β_0 denotes the intercept term which encompasses country-specific variables; and β_1 through β_7 denote (vectors of) coefficients, while ε_{it} denotes the error term.

This regression model will allow us for testing firstly the relationship between globalisation and trust, followed by the analysis of Government intervention in this relationship.

2.1.1. Trust

Easterley, Ritzen and Woolcock (2006) highlight the importance of interpersonal trust as a dimension of social cohesion, as well as participation and acceptance of diversity. A certain level of trust in institutions is needed for governments to rule effectively. When this level of institutional trusts is not reached, governments would need to use force to actually be effective (Easton, 1975; Marien & Hooghe, 2011, Green, Janmaat & Chen, 2011).

The effect of globalization on trust may be direct or indirect. Direct, because of the emergence of a “global citizen” (para 2.1.2) and indirect by potentially increasing diversity and increasing income inequality (para 2.1.3). All in all, the impact of globalization on trust is expected to be negative. At the same time, overall welfare is likely to rise with increased globalisation, potentially leading to more trust. We will see that our results seem to indicate that –in contrast to pretty much all of the literature- the separate effect of globalization on trust is *mostly positive*.

2.1.2. Globalisation and Trust

Globalisation may cause people to feel less connected to the specific geographical territory that represents “their” nation, and more connected to a cosmopolitan identity (see, for example, Stiglitz, 2003). This harms the social bond between state and citizens and undercuts the social bond that ensures citizens to comply to the unwritten rules of society (Anderson, 1996). Simultaneously, globalisation changes the role governments have in their administration and the political sphere (Magalhães, 2014). Governments are becoming more subservient to transnational powers in economics, trade, and governance. This refers to transnational agreements on trade and monetary issues, but also to humanitarian and development affairs. These agreements can reduce the national autonomy of states. They are becoming a part of an international governance scheme in the globalised era (Ritzer & Dean, 2015). This might negatively impact the level of institutional trust of citizens, depending on other factors like the level of education of an individual as was empirically established by Fischer for the period 1981 to 2007, for repeated cross-sections of from 80 countries (Fischer, 2012).

It has been argued that globalisation has challenged the welfare state. The reason behind this is that welfare states are built on trust and the feeling of belonging specifically (Soroka, Johnston & Banting, 2002). But the story also has another side to it. In the globalised world, interpersonal attitudes transcend state territories and historical traditions (Zajda, 2015). Some people will

become more cosmopolitan, others will try to hold on to traditions and to – what they see as – their national identity and culture. This can result in nationalism, populism, and polarisation (Antonisch, 2009; Bonikowski, Halikiopoulou, Kaufmann & Rooduijn, 2019), undercutting the ability of Governments to govern sufficiently and act for the common good (Catterall, 2011; Ariely, 2012). All in all, we would expect that –in line with the literature- globalization has a *negative* impact on trust.

2.1.3. Diversity, Inequality and Trust

Globalisation has been accompanied by increased international competition with a substantial potential income inequality as a result (as was predicted by the Stolper-Samuelson theorem of international trade (Davis, 1996)). Globalisation implies growing competition on the world market, creating the so-called “winners” and “losers” of globalisation, where the poorer cannot reap the rewards of globalisation due to a shortage of resources, and the wealthy can make use of transnational benefits to accumulate more wealth (Ritzer & Dean 2015). This results in a decrease of social mobility for some, and overall, an increase in inequality (Kriesi et al., 2008). Globalisation implies that societies become more diverse, potentially causing a decrease in trust, both interpersonal and institutional. Globalisation also may imply an increasing income inequality with the same potential effect as diversity.

2.1.3.1 Diversity

Migration has become easier in the recent past as a result of increasing globalised (social) networks, more and easier global communication, and the spread of modernity and development in general. In particular, people have become abler at migrating over longer distances. People do not merely move to neighbouring countries, but also intercontinentally. Where people from the same regions may be relatively alike, this is not true for people who originate from different continents. Diversity, rather than migration itself, is increasing due to globalisation (de Haas, Castles & Miller, 2020).

Increasing diversity has implications for social cohesion (Pervaiz, Chaudhary & van Staveren, 2013). Putnam (2007), for example, describes how ethnically heterogenous communities are less connected and have lower levels of trust: in diverse neighbourhoods, people would retreat from social life. Increasing diversity hampers social cohesion (van der Meer & Tolsma, 2014), as the world is inherently too complex for individuals to grasp. Basic cognitive mechanisms help individuals to comprehend their (social) surroundings (Gray & Bjorklund, 2014), by using social categorisation and identification. These processes refer to one’s need of an ‘other’ to be able to understand one’s own identity. By comparing ourselves

to others, we can attribute characteristics that do not belong to ourselves (Simmel, 1908/1971). This is often followed by attaching negative attitudes to the different characteristics of the ‘other’ (Eriksen, 2007; Taylor & Moghaddam, 1987). This is in line with the social identity theory (SIT), which shows how divisions in society based on self-categorisation produces positive in-group attitudes and negative out-group attitudes. Such attitudes cause stereotyping and discrimination (Tajfel, 1970). It can also result in scapegoating migrants, which is often observed in the polarised political landscape (de Haas, Castles & Miller, 2020). Hence, globalisation can affect social cohesion through increased diversity and cognitive processes of social categorisation and identification, in other words, resulting in negative attitudes towards ‘others’. The coefficient for the relation between diversity and trust is then expected to be negative.

2.1.3.2. Inequality

Social cohesion and inequality have been widely discussed in literature (e.g., van Staveren & Pervaiz, 2015; Wilkinson & Pickett, 2017, Pervaiz, Chaudhary & van Staveren, 2013). Welfare states aim at keeping the growth of income inequality in check but may not always be successful in this respect (also not within the group of countries considered in this paper). Income inequality harms social cohesion through social stratification (Wilkinson, 1997), by the impact on trust (Vergolini, 2011) in other people and in institutions such as the government (Boarini, Causa, Fleurbaey, Grimalda, & Woolard, 2018). A concrete example is the economic crisis in 2007, which negatively impacted many people. The increased inequality was associated with a negative effect on both institutional and interpersonal trust. Especially tensions between social groups – rich and poor; young and old; different ethnic groups – were observed to be rising (Andrews, Downe, Guarneros-Meza, Jilke & Van de Walle, 2013). This can be explained by the idea that besides inequality being a harmful characteristic in itself, the perception of inequality of individuals when comparing their socio-economic position to others influences their feeling of trust towards others even more (Knell & Stix, 2021). This explains very well why inequality is expected to have a negative impact on trust.

2.1.3.3. Economic decline and conflict

We have also included economic decline and conflict in the model as potential contributors to less trust. The relationship between institutional trust and economic decline is dependent on an individual’s position (Dotti Sani & Magistro, 2016). The so-called “losers” of globalisation, who run a higher risk of unemployed in times of crises, might have lower levels of trust. This causes an asymmetrical decline in trust, where citizens with higher risks have decreasing levels

of trust compared to those exposed to less risk (in the labour market) in case of an economic decline (Foster & Frieden, 2017).

Conflict is, likewise, not beneficial to the level of social cohesion in society (Abu-Nimer & Smith, 2016). Conflict can raise tensions between individuals with different values, beliefs, and opinions, and between people who experience (relative) inequality (Knell & Stix, 2021). Moreover, involvement of states in international conflict can (negatively) influence the level of trust of citizens in their government (Zulfiqar, Nadeem & Pervaiz, 2018). An example could be the polarised opinions on refugee issues originating from conflict zones abroad (Boarini, Causa, Fleurbaey, Grimalda & Woolard, 2018).

2.2. What governments can do

The welfare state is a mechanism in which people pay taxes for the government to be able to provide the services they do, e.g., social protection, education, healthcare, housing, and community building. As it is based on a redistributive system, people with higher incomes contribute relatively more compared to people with lower incomes. This mechanism heavily relies on trust; trust from people in others and trust in the government that the mechanism works in a proper, equal, and efficient way. Without this trust and support in the government, their efficiency declines, hampering the welfare system (Bjornskov & Tinggaard Svendsen, 2013).

Governments can possibly have a mediating impact on threats of decreasing social cohesion (Cilingir, 2016). We hypothesise that an increase in government expenditure can lead to increases in the quality and inclusivity of the public service system. This might bring people to become more trusting (Alan, Baysan, Gumren & Kubilay, 2021; Saint-Supéry Ceano-Vivas, Rivera Lirio & Muñoz-Torres, 2014).

It is very much debated whether public spending has a direct positive outcome on economic growth. The neo-liberal school argues that government intervention forms an obstacle for market forces, that, according to them, will lead to market efficiency (Mitchell, 2005, Alonso Alonso, 2015). The more socialistic school of thought argues that public spending directly increases economic growth, as it contributes to public goods that will not meet its equilibrium without the involvement of the government (Wu, Tang & Lin, 2010; Lamartina & Zaghini, 2010). Whether or not public spending as such has a direct positive impact on economic growth, government expenditures could have an impact on social cohesion. In particular, government expenditure on education and social services are areas where social cohesion could be improved. These are the area's where governments intervene to prevent market failures and increase efficiency due to the positive externalities related to these area's

(Gruber, 2016).

Education has positive externalities, i.e., it has more positive effects for society than merely the return of education for the students themselves (Gruber, 2016). Government intervention in education can enhance the returns of education in two ways: by improving the quality of education and by making education accessible for students of all different backgrounds. It enables the development of talents and skills, which causes innovation and creates individuals who are a “more responsible and participating citizen who is better able to contribute to the economic production process.” (Ritzen, 2017, p. 1). Overall, it reduces poverty and inequality and is the basis for (economic) growth (Patrinos, 2016). This shows the importance to ensure the quality and accessibility of education for all citizens, not merely the better-off in society that can pay for high-quality education.

The social contract, which forms the foundation of the welfare state, is under pressure when social cohesion declines. The redistributive character of the state, which counters income inequality, is therefore essential to social cohesion. The other way around, income inequality hinders social cohesion (Dethlefsen, Emmanouilidis, Mitsos, Primatarova & Špok, 2014). Social services are meant to support the redistributive function of the state and are therefore assumed to contribute to social cohesion. Fiscal policy can play an important role to enhance these aims (Saint-Supéry Ceano-Vivas, Rivera Lirio & Muñoz-Torres, 2014).

It might, however, not be government expenditure as such that will make a significant difference for social cohesion, but rather government expenditure in interaction with the quality of governments. Of course, public investment affects society, but the quality of government is a condition for this to work efficiently (Rodríguez-Pose & Garcilazo, 2015; Heimberger, 2020). The quality of institutions is based on the rule of law, levels of corruption, the quality of bureaucracy, and the strength of democracy (Rodríguez-Pose & Garcilazo, 2015).

3. Methodology and data

3.1. Research strategy

Our method of analysis is a fixed effect regression model, as our data presents a pseudo-panel dataset. The fixed effect model is preferred over ordinary least square (OLS), as fixed effects could mitigate a possible omitted variable bias (OVB). OVB is problematic, as this means some of the unobserved variances of the dependent variable will be explained by the error term (Stock & Watson, 2015).

3.2. Case study

Data from the European Social Survey (ESS), the KOF Globalisation Index, government expenditure data from Eurostat and the QoG data on institutional quality will be used to analyse these relations. The data covers twelve Northern and Western European countries: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Netherlands, Norway, Sweden, Switzerland, and the United Kingdom. Our focus is on social cohesion. Here the ESS is the main source. ESS data are available from 2002 until 2018. The rest of the data is amended to fit the panel framework of the ESS.

3.3. Data

3.3.1. Social Cohesion: ESS data

The data source that will be used for the dependent variable on trust are the different rounds of the ESS, which has conducted a cross-sectional survey in European countries every other year from 2002 onwards. Merging the different rounds into one dataset generates a quasi-panel dataset that can be used in this research. The ESS data has different questions related to trust (see Table 1), which are all coded in the same way: they are scaled from 0 to 10, where 0 represents the lowest score on trust – i.e., no trust at all, and 10 the highest score on trust. We use the answers to the questions:

| Variable name | Variable label |
|---------------|--|
| ppltrst | Most people can be trusted or you can't be too careful |
| trstprl | Trust in country's parliament |
| trstlgl | Trust in the legal system |
| trstplc | Trust in the police |
| trstplt | Trust in politicians |
| trstep | Trust in the European Parliament |
| trstun | Trust in the United Nations |

Table 1: Measures for trust as derived from the ESS data

To reduce the number of variables on institutional trust, we use a principal component factor analysis. A principal component factor (PCF) analysis is chosen rather than a normal factor analysis because the values of the different variables do not vary as much (Di Franco, 2013; Acock, 2016). Moreover, the rotated factor analysis, inherent in PCF, corrects a possible bias that can be present in a general factor analysis (Bryman, 2012). The PCF leads to one variable for institutional trust. It shows one factor with an eigenvalue of 3.82. Moreover, the loadings of

the variables are higher than 0.3, which – as a rule of thumb – is the threshold for the loading on a factor (Bryman, 2012). The alpha of these variables combined is 0.8661, which passes the threshold of 0.7 (Hair, Black, Babin, Anderson & Tatham, 2006). This means the six different measures of institutional trust can well be merged into one variable.

3.3.2. Globalisation: KOF index

We use data from the KOF Swiss Economic Institute (Gygli, Haelg, Potrafke & Sturm, 2019) as the index of globalisation (in line with for example, Potrafke, 2015; Villaverde & Maza, 2011; Anderson & Obeng, 2021 and Sangha & Riegler, 2020). The different components of the KOF-index are economic, social, and political globalisation. Economic globalisation is measured by trade and financial globalisation and measures, for example, foreign direct investment, while informational and cultural globalisation are used to index the social dimension of globalisation. Political globalisation is indexed by the number of embassies and international non-governmental organisations (NGO), international treaties and United Nations peace keeping missions. These three main dimensions all have the same weights of 33.3% in the composite KOF index.

3.3.3. Inequality

Inequality can be captured with different statistical measures. In this paper, inequality will be measured with the so-called Gini-coefficient (as is done in e.g., Faustino & Vali, 2013; Almas & Sanghoon, 2010; Neutel & Heshmati, 2006). The Gini-coefficient used in this research is from the World Bank and derived from the QoG dataset.

3.3.4. Diversity

Diversity is measured by the percentage of foreign-born individuals in a country. As described in the literature, because of an increase in social globalisation, diversity increases as migrants are moving further away. Using foreign-born population as a proxy for diversity has been done before in socio-economic (e.g., Ottaviano & Peri, (2006) and political research (e.g., Wright, 2011). A limitation to our study is that presumably the country of origin of the foreign-born population may matter. Most studies show a difference in the appreciation of diversity between persons born inside Europe and outside of Europe.

3.3.5. Government expenditures

The data on government expenditure is derived from Eurostat (2021). The data represents government expenditure in different areas, expressed as a percentage of the GDP of the respective country. Eurostat data is a recognised dataset that is widely used, also within research

of the relation between expenditure and social cohesion (e.g., Wishlade, Gross, Yuill, Gorzelak, Kozak & Mendez, 2010; Alonso Alonso, 2015), which is why Eurostat data will be used in this research to investigate whether government expenditure mitigates the relation between globalisation and trust.

3.3.6. Quality of Institutions

It is expected that the effect of government expenditure in the relation between globalisation and social cohesion is dependent on the quality of institutions in a country. To be able and measure this interaction effect, data on institutions is gathered from the QoG dataset (Teorell, Sundström, Holmberg, Rothstein, Alvarado & Cem Mert Dalli, 2021). The data set contains a specific variable on the quality of government which is derived from the International Country Risk Guide (PRS group, 2021). It represents the mean value of the International Country Risk Guide variables on corruption, law and order and quality of bureaucracy, and is scaled from 0 to 1, where higher values indicate a higher quality of institutions. Again, this measure has been chosen to work with in this research, as it is used as a variable to measure institutional quality in relation to social cohesion, for example in Easterly, Ritzen and Woolcock (2006) and Dragolov, Ignácz, Lorenz, Delhey and Boehnke (2013).

3.3.7. Internationalised internal conflict

We use a measure from the Uppsala Conflict Data Program on internationalised internal conflict. This measure reflects the number of internationalised internal conflicts per country in a given year. The Quality of Government Institute (Teorell, Sundström, Holmberg, Rothstein, Alvarado & Dalli, 2021) defines this as conflict that occurs “between the government of a state and one or more internal opposition group(s) with intervention from other states (secondary parties) on one or both sides.” (p. 514). In other words, this means that states are (in)directly involved in international conflict. For example, when states or other international organisations support another state or organisation that is involved in an (armed) conflict. This especially relevant to consider in this research, as it has to do with notions of globalisation as well. These (indirect) involvements of states and other international organisations into conflict are dependent on other treaties, transnational processes, and other agreements (Golubev & Antonova (2020).

3.3.8. Economic decline

The QoG dataset gives us a measure on economic decline, which measures different factors: “per capita income, gross national product, unemployment rates, inflation, productivity, debt,

poverty levels, or business failures. It also takes into account sudden drops in commodity prices, trade revenue, or foreign investment, and any collapse or devaluation of the national currency”. (Teorell, Sundström, Holmberg, Rothstein, Alvarado & Dalli, 2021, p. 270). It gives a measure per country in a given year.

3.3.9. Secondary dataset

In Table 2 we present the table with maximum, minimum and average scores of the variables used in our analysis. In Table 3 we present the correlation matrix. As can be seen from the correlation matrix, the single correlation between globalisation and institutional or interpersonal trust is very low implying little connection between the trust and globalisation. A positive correlation between diversity and globalisation can be found, indicating that when globalisation increases, diversity also increases as is well understood from the immigration in the countries in the first two decades of this century. The correlation between inequality and globalisation is negative, indicating that inequality *decreased* as globalisation increased in the period under observation in our panel of high-income countries. This contrasts with most studies which focus on countries with lower levels of income. The correlations between diversity and both trust measures, as well as between inequality and both trust measures are negative. This means that when diversity and inequality increase, both institutional and interpersonal trust decrease. Surprisingly, GDP is negatively correlated with trust, while Government expenditure is – as expected – positively correlated. Economic decline and conflict tend to reduce trust in the country. From other analyses, not reported here, we know that on the individual level one finds (single correlation) that older people, males, people with less income and less education tend also to be less trusting.

| Variable name | Variable label | Source | N | Mean | Standard deviation | Minimum value | Maximum value |
|---------------|---------------------------------------|--------|--------|--------|--------------------|---------------|---------------|
| KOFGI | Globalisation index | KOF | 205609 | 87.060 | 1.950 | 82.510 | 90.980 |
| pltrst | Institutional trust (factor variable) | ESS | 181638 | 5.354 | 1.803 | 0 | 10 |
| ppltrst | Interpersonal trust | ESS | 205206 | 5.627 | 2.276 | 0 | 10 |
| cny | Country | ESS | 205739 | - | - | - | - |
| year | Year | ESS | 205739 | - | - | 2000 | 2018 |
| quality | Institutional quality | QoG | 205717 | .901 | .066 | .667 | 1 |
| diversity | Foreign-born population | QoG | 138063 | 11.853 | 5.207 | 0 | 28.303 |
| wdi_gini | Gini index (World Bank estimate) | QoG | 155350 | 30.130 | 2.666 | 23.8 | 36 |

| | | | | | | | |
|------------|---|----------|--------|--------|--------|--------|--------|
| educ_exp | Expenditure on education as % of GDP | Eurostat | 205597 | 5.348 | .846 | 3.2 | 7.1 |
| cult_exp | Expenditure on culture as % of GDP | Eurostat | 205619 | 1.193 | .284 | .6 | 1.8 |
| spp_exp | Expenditure on social protection as % of GDP | Eurostat | 205597 | 18.379 | 3.737 | 9.1 | 25.5 |
| exp_3tot | Expenditure on education, culture and social protection as a % of GDP | Eurostat | 205597 | 24.920 | 4.425 | 12.9 | 33.7 |
| ffp_eco | Economic decline | QoG | 156928 | 2.783 | .856 | 1 | 4.8 |
| ln_gdp | Natural log of GDP | QoG | 205717 | 10.672 | .210 | 10.372 | 11.345 |
| ucdp_type4 | Internationalised internal conflict | QoG | 171462 | 2.0863 | 1.007 | 1 | 6 |
| rlgblg | Belonging to particular religion or denomination | ESS | 202900 | 1.454 | .498 | 1 | 2 |
| happy | How happy are you? Scale 0-10. | ESS | 205085 | 7.702 | 1.706 | 0 | 10 |
| brnentr | Born in country (1 = yes) | ESS | 205485 | 0.894 | 0.308 | 0 | 2 |
| gndr | Gender (man = 1) | ESS | 205475 | .482 | .500 | 0 | 1 |
| agea | Age of respondent | ESS | 204744 | 48.453 | 18.501 | 14 | 123 |
| edyrs | Years of full-time education completed | ESS | 182735 | 13.004 | 3.888 | 0 | 56 |
| income | Income in deciles | ESS | 171587 | 5.695 | 2.638 | 1 | 10 |

Table 3: Correlation matrix

Table 2: Summary Statistics

| | Inst. trust | Intp. trust | Glob. index | Qual. | Ineq. | Div. | Age | Gender | Educ. (years) | Born centry | Inc. GDP | Ec. decl. | Conflict | Gov. exp. | |
|------------------|-------------|-------------|-------------|---------|---------|---------|---------|---------|---------------|-------------|----------|-----------|----------|-----------|---|
| Inst. trust | 1 | | | | | | | | | | | | | | |
| Intp. trust | 0.4370 | 1 | | | | | | | | | | | | | |
| Glob. index | -0.0195 | -0.0073 | 1 | | | | | | | | | | | | |
| Qual | 0.2999 | 0.3115 | 0.0894 | 1 | | | | | | | | | | | |
| Ineq. | -0.2933 | -0.2554 | -0.0472 | -0.6347 | 1 | | | | | | | | | | |
| Div. | -0.1723 | -0.1830 | 0.2165 | -0.4233 | 0.3691 | 1 | | | | | | | | | |
| Age | -0.0565 | -0.0010 | 0.0427 | -0.0062 | 0.0266 | -0.0118 | 1 | | | | | | | | |
| Gender | 0.0187 | 0.0175 | -0.0076 | 0.0284 | -0.0302 | -0.0084 | 0.0050 | 1 | | | | | | | |
| Educ. (years) | 0.1546 | 0.1699 | 0.0071 | 0.0427 | 0.0049 | -0.0036 | -0.2336 | 0.0035 | 1 | | | | | | |
| Inc. Born centry | 0.2029 | 0.1796 | 0.0211 | 0.1150 | -0.1284 | -0.0492 | -0.1508 | 0.0848 | 0.2962 | 1 | | | | | |
| GDP | -0.0138 | 0.0414 | -0.0142 | 0.0521 | -0.0436 | -0.1037 | 0.0668 | 0.0101 | -0.0353 | 0.043 | | | | | |
| Ec. decl. | -0.2604 | -0.2439 | 0.1467 | -0.6238 | 0.5421 | 0.1208 | 0.0369 | -0.0121 | -0.0071 | -0.061 | -0.0092 | 1 | | | |
| Conflict | -0.1713 | -0.1769 | 0.1203 | -0.3937 | 0.2947 | 0.0440 | 0.0334 | -0.0236 | 0.0059 | -0.230 | -0.0106 | 0.3082 | 1 | | |
| Gov. exp. | -0.0830 | -0.0470 | 0.0079 | -0.2247 | 0.2939 | -0.1803 | 0.0136 | -0.0077 | 0.0106 | -0.020 | 0.0113 | 0.3366 | 0.0075 | 1 | |
| | 0.1149 | 0.0657 | 0.1672 | 0.1233 | -0.3607 | -0.4626 | 0.0220 | 0.0077 | -0.0368 | -0.036 | 0.0541 | -0.0307 | 0.1320 | 0.1018 | 1 |

4. Multiple Regressions

4.1 Macro

First we present in Table 4 an overall analysis on the macro-level with average scores per country per year for the independent variables with individual measures of trust.

| | Institutional trust | Interpersonal trust |
|-------------------------------------|--------------------------|--------------------------|
| Globalisation index | 6.019*** (0.0770) | 0.284* (0.125) |
| Globalisation index ² | -0.0345*** (0.000444) | -0.00123 (0.000721) |
| Inequality | -0.117*** (0.000593) | -0.0734*** (0.000985) |
| Diversity | -0.0454*** (0.000444) | -0.0702*** (0.000550) |
| GDP (natural log) | -0.211*** (0.00124) | -0.360*** (0.00170) |
| Economic decline | -0.141*** (0.00197) | -0.231*** (0.00214) |
| Internationalised internal conflict | -0.0431*** (0.00122) | 0.0264*** (0.00174) |
| Constant | -246.6*** (3.327) | 3.552 (5.388) |
| N | 81435 | 81435 |
| r ² | 0.822 | 0.751 |

Table 4: Institutional trust and interpersonal trust in a multiple regression. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

We find that globalisation is now *positively* related to institutional trust (with a negative quadratic term) and interpersonal trust (with an insignificant quadratic term). Income inequality and diversity are significantly negatively related to both trust measures. It is puzzling why GDP per capita is significantly negative related to trust. Perhaps, this is explained by the expectation of the population that income inequality might decrease with increasing GDP while the correlation matrix shows that income inequality is positively related to GDP. The coefficients of all the other macro variables are significant and have the expected sign, including the positive sign of internationalised conflict on interpersonal trust. Internationalised internal conflict can have a positive impact on interpersonal trust, as conflict can bind people together. This can, again be explained the social identity theory and social categorisation, where like-minded people tend to pull together in times of conflict (Davis, 2014). This is –to our knowledge- the

first study which finds a significant *positive* (separate) effect of globalization on trust. Contrary to most hypotheses, the idea of cosmopolitan citizenship, has been enhancing trust.

We want to check whether the potentially negative impact of globalisation, through diversity and inequality, on social cohesion has been mitigated by Government action. We have tried to establish whether this is the case for our sample of countries by adding Government expenditures as a percentage of GDP and its interaction with the quality of Governance to the multiple regression. However, the coefficient of Government expenditures turns out to be negative while that of the interaction term between the QoG is positive without changing much of the other coefficients (see Table 5). From other analyses, not presented here, we know that the independent measures of government expenditure in education and culture, in interaction with institutional quality, have a positive impact on trust.

| | Institutional trust | Institutional trust | Institutional trust | Interpersonal trust | Interpersonal trust | Interpersonal trust |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Globalisation index | 6.019*** (0.0770) | 2.056*** (0.0888) | 4.638*** (0.0933) | 0.284* (0.125) | -6.048*** (0.131) | -0.00410 (0.149) |
| Globalisation index ² | -0.0345*** (0.000444) | -0.0119*** (0.000511) | -0.0266*** (0.000537) | -0.00123 (0.000721) | 0.0349*** (0.000754) | 0.000426 (0.000855) |
| Inequality | -0.117*** (0.000593) | -0.0957*** (0.000604) | -0.107*** (0.000674) | -0.0734*** (0.000985) | -0.0446*** (0.000967) | -0.0713*** (0.00117) |
| Diversity | -0.0454*** (0.000444) | -0.0262*** (0.000452) | -0.0402*** (0.000458) | -0.0702*** (0.000550) | -0.0364*** (0.000531) | -0.0691*** (0.000589) |
| GDP (natural log) | -0.211*** (0.00124) | -0.133*** (0.00155) | -0.204*** (0.00129) | -0.360*** (0.00170) | -0.194*** (0.00191) | -0.359*** (0.00176) |
| Economic decline | -0.141*** (0.00197) | -0.104*** (0.00200) | -0.151*** (0.00198) | -0.231*** (0.00214) | -0.125*** (0.00206) | -0.233*** (0.00214) |
| Internationalized internal conflict | -0.0431*** (0.00122) | -0.0164*** (0.00120) | -0.0389*** (0.00121) | 0.0264*** (0.00174) | 0.0798*** (0.00143) | 0.0273*** (0.00179) |
| Government expenditure | | -0.0857*** (0.000791) | | | -0.201*** (0.00107) | |
| Interaction term government exp. and institutional quality | | 0.108*** (0.000956) | 0.0143*** (0.000474) | | 0.223*** (0.00129) | 0.00299*** (0.000775) |
| Constant | -246.6*** (3.327) | -76.75*** (3.832) | -187.2*** (4.027) | 3.552 (5.388) | 274.4*** (5.641) | 15.95* (6.406) |
| N | 81435 | 81435 | 81435 | 81435 | 81435 | 81435 |
| r2 | 0.822 | 0.845 | 0.824 | 0.751 | 0.829 | 0.751 |

Table 5: Institutional trust and interpersonal trust in a multiple regression. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.2 Individual trust data

Subsequently we use individual scores from the ESS data, with the country scores for KOF index and the QoG and individual independent variables: age, gender, education, being born in

the country, and individual income. As Table 5 shows, *individual trust in institutions* is now only significantly related to economic decline (negative), to diversity – now positive after adding the individual measures on “born in the country” (negatively related) – and to individual education and individual income. Government expenditures have a positive and significant ($p<0.05$) impact, with a negative interaction term ($p<0.001$). High trusting countries ($p<0.001$), compared to Austria, turn out to be, not (as we expected) the Scandinavian countries (with exception of Sweden), but France, Germany, Switzerland and (less so in the value of the coefficient) the UK. Background analyses with individual countries show that there is less trust for those born in the country (only significant in Denmark) and for being a member of a discriminated group, and more for those who indicate to be religious. Background analyses also show a high correlation between happiness and trust (in multiple regressions).

| | Institutional trust | Institutional trust | Interpersonal trust | Interpersonal trust |
|--|---------------------|---------------------|---------------------|---------------------|
| Globalisation index | -2.288 | -3.497* | -3.594* | -4.717* |
| | -1.243 | -1.621 | -1.481 | -1.886 |
| Globalisation index ² | 0.0141 | 0.0212* | 0.0213* | 0.0279* |
| | (0.00731) | (0.00951) | (0.00871) | (0.0111) |
| Inequality | -0.0232 | 0.0228 | 0.00694 | 0.0183 |
| | (0.0156) | (0.0213) | (0.0181) | (0.0242) |
| Diversity | 0.0713** | 0.0830** | 0.0259 | 0.0270 |
| | (0.0256) | (0.0258) | (0.0291) | (0.0292) |
| GDP (natural log) | -0.356 | 0.188 | -0.655 | -0.671 |
| | (0.332) | (0.364) | (0.382) | (0.416) |
| Economic decline | -0.212*** | -0.194*** | -0.0781 | -0.112 |
| | (0.0481) | (0.0579) | (0.0544) | (0.0652) |
| Internationalised internal conflict | -0.0181 | 0.0141 | -0.00377 | 0.00182 |
| | (0.0130) | (0.0158) | (0.0151) | (0.0181) |
| Age | -0.000497 | -0.000511 | 0.00557*** | 0.00557*** |
| | (0.000648) | (0.000648) | (0.000741) | (0.000742) |
| Gender | -0.000618 | -0.000240 | 0.0400 | 0.0400 |
| | (0.0212) | (0.0212) | (0.0248) | (0.0248) |
| Education (years) | 0.0471*** | 0.0472*** | 0.0753*** | 0.0753*** |
| | (0.00295) | (0.00295) | (0.00340) | (0.00340) |
| Income | 0.0859*** | 0.0855*** | 0.0867*** | 0.0869*** |
| | (0.00458) | (0.00458) | (0.00528) | (0.00529) |
| Born in country | -0.186*** | -0.187*** | 0.189*** | 0.189*** |
| | (0.0389) | (0.0389) | (0.0444) | (0.0444) |
| Government expenditure | | 0.124* | | 0.0483 |
| | | (0.0504) | | (0.0588) |
| Interaction term government exp. and institutional quality | | -0.175*** | | -0.0382 |
| | | (0.0526) | | (0.0612) |

| | | | | |
|----------------|---------------------|---------------------|---------------------|---------------------|
| Belgium | 0.150 (0.130) | -0.401* (0.192) | 0.0634 (0.149) | -0.00221 (0.221) |
| Denmark | -0.206 (0.276) | -1.134** (0.352) | 0.108 (0.315) | 0.0740 (0.395) |
| Finland | 1.046 (0.845) | -0.499 (0.940) | 1.264 (0.972) | 1.290 -1.076 |
| France | 1.795*** (0.161) | 2.530*** (0.237) | 1.832*** (0.182) | 1.821*** (0.265) |
| Germany | 2.133*** (0.224) | 2.981*** (0.308) | 1.644*** (0.253) | 1.725*** (0.344) |
| Ireland | 1.307 (0.806) | -0.678 (0.952) | 1.066 (0.926) | 0.869 -1.096 |
| Netherlands | 0.834 (0.725) | -0.970 (0.856) | 1.594 (0.830) | 1.551 (0.979) |
| Norway | 0.358 (0.204) | -0.0267 (0.223) | 0.0284 (0.231) | 0.0464 (0.251) |
| Sweden | 1.165** (0.376) | 0.589 (0.417) | 1.329** (0.431) | 1.404** (0.476) |
| Switzerland | 1.722*** (0.188) | 1.919*** (0.217) | 1.903*** (0.217) | 2.006*** (0.247) |
| United Kingdom | 0.634*** (0.116) | 0.707*** (0.119) | 1.100*** (0.131) | 1.072*** (0.135) |
| Constant | 106.0 (56.57) | 142.2* (71.92) | 171.1* (67.33) | 219.1** (83.74) |
| N | 45977 | 45977 | 51369 | 51369 |
| r2 | 0.177 | 0.177 | 0.170 | 0.171 |

Table 6: Institutional trust and interpersonal trust in a multiple regression with country dummies (Austria as base). Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Individual interpersonal trust is only highly significantly ($p < 0.001$) related to age, individual income and to educational level, similar to institutional trust. Here, “born in country” is highly significant positively related to trust. Globalisation has a slightly significant ($p < 0.05$) negative impact on individual interpersonal trust, whereas the quadratic term has a slightly significant positive impact. Note that economic decline does not affect significantly interpersonal trust. Government expenditure or the interaction term between these expenditures and QoG has no effect. High trusting countries (compared to Austria) are: France, Germany, Sweden, Switzerland and the UK. Background analyses with individual countries show that there is less trust for being a member of a discriminated group, and more for those who indicate to be religious. The correlation (in multiple regression) between happiness and religion is strong. The comparison of the outcomes of the two analyses of Table 5, without individual characteristics as explanatory variables and Table 6 with individual income and education level is tell-tale: *globalization has as a whole contributed to trust in the selected 12 European*

countries, but this increase is carried by the better educated and higher income households.

5. Conclusion

5.1. Globalisation, income inequality, diversity, and trust: a macro perspective

Institutional and interpersonal trust is generally considered an important precondition for social and economic development. Most studies to date have focused on the impact of globalisation on trust from a development perspective. Our study differs in the choice for part of the high-income countries, namely a rather homogeneous group of 12 North-West European countries in the first two decades of the 21st century. We have analysed the development of trust in institutions and trust in each other, using data from the European Social Survey. The countries are characterised by rather stable but differing levels of trust. The development of trust in each other and trust in institutions over time is considered from the different perspectives offered in the literature: globalisation, income inequality, and diversity.

In – as far as we know all – previous studies, globalisation is viewed as a potential threat to trust. This turns out not to be so simple for our panel of North-western European countries. In a simple correlation globalisation turns out to be mostly positive (albeit nonlinear) related to institutional and interpersonal trust for the period 2002-2018. Also, the results of a multiple regression model with income inequality and diversity, besides globalisation, as explanatory variables show that globalisation is only slightly negatively related with interpersonal trust, but this effect of globalisation on interpersonal trust decreases when the level of globalisation increases. Globalisation has initially a positive effect on institutional trust, but the second order effect is negative: the level of institutional trust decreases with a further increase in globalisation. This is in line with the notion that our set of countries have benefitted greatly from increased globalisation in income and wealth (Kriesi et al., 2008), as well as in an increased ease in exchange of information, humanitarian values and emancipation (Jerabek, 2021). However, as described, the positive effects from globalisation have not been affected everyone equally. It has created “winners” and “losers”. The increasing awareness of this phenomenon can explain the time lag of the negative outcome of globalisation (Kriesi et al., 2008; Eriksen, 2007). *In other words: the commonly held notion that globalisation has negatively impacted interpersonal and institutional trust, does not hold for these high-income countries.* Income inequality and diversity, which in part is the result of globalisation, affect trust negatively, in line with earlier findings (Taylor & Moghaddam, 1987; Tajfel, 1970).

5.2. What Governments Can Do: Government Quality and Expenditures

The impact of globalisation on social cohesion may have been affected by the quality of Government: the higher the quality of Government, the lower the impact of globalisation on social cohesion. Government intervention by increasing social cohesion through education and social services – as suggested by Rodrik and Stantcheva (2021) – may have prevented a negative effect of globalisation on social cohesion in the countries and time period of our study. Government expenditure in these areas can positively affect the level of trust in society, as spending on public services contributes to feelings of citizenship (Delhey and Newton, 2005). Indeed, when adding Government quality in interaction with social expenditures (broadly defined) to the multiple regression as independent variables, i.e., education and culture, we see that the effect of globalisation in itself on social cohesion becomes significantly negative, while government quality in interaction with social expenditures has a positive influence. In other words, would governments want to increase the level of trust in society, it would be advisable to increase their expenditure on education and culture, whilst improving the quality of their institutions. This latter would mean that they focus on efficiency, accountability and stability of their policies and interventions (Erkkilä & Piironen, 2014).

5.3. Globalisation and trust: the individual level

The macro analysis has been refined with an analysis on the individual level, using the macro variables as explanatory variables per country and year, but “explaining” individual trust, while including individual income, age, gender, and years of education, born in the country and whether one is a member of a discriminated group and religiousness. The results are mostly as expected. Higher trust is associated with higher incomes, more years of education, with non-migrants, with not being a member of a discriminated group and with being religious. Gender is not significant. High trusting countries (compared to Austria) are: France, Germany, Sweden, Switzerland and the UK. Institutional trust is on the individual level associated with economic decline. Government expenditures have a positive and significant ($p < 0.05$) impact, with a negative interaction term ($p < 0.001$).

Interpersonal trust is only highly significantly ($p < 0.001$) related to age, years of education, income and being born in the country. Globalisation has a slightly significant ($p < 0.05$) negative impact on individual interpersonal trust. Government expenditure or the interaction term between these expenditures and QoG has no effect. There is less trust for individuals who regard themselves as a member of a discriminated group, and more for those who indicate to be religious. The correlation (in multiple regression) between happiness and

religion is strong.

The fact that within the regressions on the individual level, the effect of globalisation and other macro measures, is mediated through individual characteristics like age, income, and education level, shows how the effect of globalisation is asymmetrical (Foster & Frieden, 2017). As argued, globalisation creates winners and losers, where people with less resources are unable to take advantage of the possibilities of globalisation, and vice-versa, the ones better off are able to accumulate from the benefits of globalisation (Kriesi et al., 2008). This result shows how the assumption of globalisation resulting in more nationalistic feelings of identification for some, aligned with populist voting behaviour and polarisation as a consequence (Eriksen, 2007), is relevant to investigate further.

5.4. Overall conclusion

The overall conclusion is that the North-western countries considered have managed the waves of globalisation well with respect to institutional trust and interpersonal trust. Globalisation has not been anathema to trust, even though income inequality (slightly) and diversity (strongly) increased. Government expenditures on education and culture, in combination of the quality of Government, have contributed to trust, in the first two decades of this century. *Globalization has on the whole contributed to trust in the selected 12 European countries*, but this increase is carried by the better educated and higher income households. We are especially interested in successive research on the topic, including the new round of ESS, to see the effect of the current COVID-19 crisis on the levels of trust in Europe.

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