

Economic inequality, perceived responsiveness and political trust

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Abstract From a representation theory point of view, trust in political institutions is strongly related to the responsiveness of these institutions to citizens' preferences. However, is this also true when the political power of citizens is not equal, which is often the case in more unequal societies? In this article, it is argued that the link between perceptions of responsiveness to individual preferences and political trust differs across equal and unequal societies. We find that in inclusive societies, perceived political responsiveness is strongly related to political trust, whereas this link becomes weaker in more unequal societies. In other words, when economic inequality and exclusion are high, traditional accountability mechanisms between political actors and their citizens are less apparent. We speculate that this weaker link is due to habituation or a lack of political engagement, causing citizens to withdraw from political life altogether. The focus of this article lies on European and OECD-member countries. The study uses data from the International Social Survey Programme and the European Social Survey.

Keywords Political trust · Perceived responsiveness · Economic inequality · International social survey programme · Political legitimacy · Institutional support

Introduction

The legitimacy and well functioning of a political system rely on whether citizens feel connected to and trust their political institutions. The responsiveness of the political system towards the needs and preferences of its citizens is a crucial

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determinant of political trust (Easton 1965, 1975; Mansbridge 2003). If a large number of citizens experience economic hardship, or when there are large discrepancies between citizens in terms of their economic resources, it could be argued that the political system is not responsive to the needs of all its citizens, as it fails to secure them full social citizenship (Marshall 1964). A body of research points out that income and wealth inequalities remain a continuing characteristic of Western democracies (Piketty 2013; Scheve and Stasavage 2017; Stiglitz 2012) and researchers have demonstrated that these inequalities go together with lower levels of citizens' support for their political institutions and democracy in general (Andersen 2012; Kriekhaus et al. 2014; Zmerli and Castillo 2015). Nevertheless, even if it is generally agreed that economic inequality, as a country characteristic, can influence citizen's individual political attitudes, the causal factors that relate economic inequality to political trust remain to a large extent unknown.

In this article, one possible causal mechanism is examined: assuming that there is indeed a correlation between political trust and inequality, it investigates whether economic inequality moderates the link between perceptions of the political system's responsiveness to individual preferences and political trust. The dependent variable, political trust, serves as a proxy measurement for the broader concept of citizens' support for their political institutions (Easton 1965).

Economic inequality negatively affects political support and participation. Inequality results in citizens who are less engaged in political life, pay less attention to what political actors are doing and have fewer possibilities to voice political concerns (Anderson and Singer 2008; Goodin and Dryzek 1980; Hakhverdian and Mayne 2012; Loveless 2013; Solt 2008, 2010, 2015; Verba et al. 1995). If there is less political interest and engagement, citizens may be less well informed to assess the performance of political actors and political responsiveness in a reliable manner (Luskin 1990). In addition, citizens living in unequal societies may hold different expectations of what their political institutions should do, thus rendering perceived responsiveness more or less salient. Hence, it is hypothesised that in more unequal societies, perceptions of political responsiveness do not have the same impact on citizens' political trust than in equal societies.

The article finds evidence that the link between individual assessments of political responsiveness to one's preferences and political trust is diluted in societies characterised by higher levels of economic inequality or exclusion. More concretely, the analyses show that in societies with more economic inequality, political trust depends less on assessments of political responsiveness to individual opinions. This research finding indicates that when political institutions fail to deliver full social citizenship and inclusion for all citizens, these citizens attach less importance to assessments of responsiveness when making up their mind about the trustworthiness of political institutions. This suggests that individual assessments of institutional support depend on the country context, with economic inequality increasing the distance between the political system and its citizens.

The article uses the International Social Survey Programme (ISSP) Citizenship rounds of 2004 and 2014 for its analyses, which cover a broad range of Western democracies. In addition, also data from the European Social Survey (2012 wave) are analysed as a robustness test. The individual level information is supplemented



with country level data on economic inequality and exclusion from the OECD, Standardised World Income Inequality Database and Eurostat. Multilevel models with cross-level interaction effects provide the evidence that economic inequality plays a moderating role in the relation between citizens' perceptions of political responsiveness and political trust.

Literature review

Political trust: a definition and the role of perceived responsiveness

Theories of democracy and political representation underline the importance of political responsiveness to citizens' preferences and support for political institutions. In order to function effectively—or in the most extreme case - to survive, a political system needs support from its population (Almond and Verba 1963; Craig 1979; Easton 1975; Niemi et al. 1991). Political trust is such a supportive attitude (Easton 1975; Norris 2011).

Political trust can be defined as a general gauge of adherence towards the political institutions and actors (the objects of trust) of a political system by its citizens (the subjects) (Easton 1965; Zmerli and Hooghe 2011; Zmerli and van der Meer 2017). Political trust thus serves as a measurement of the broader concept of institutional support, i.e. support for the institutions and actors of a given political system (Easton 1965, 1975; Norris 2011).

Political trust depends on evaluations of the competence and commitment of the political system towards its citizens (Levi and Stoker 2000; Zmerli and van der Meer 2017). Political trust is influenced by morality: it reflects what citizens consider proper and honest in terms of actual behaviour of the political system and its actors (Easton 1965). Because citizens delegate power to political institutions, they make themselves vulnerable to the decisions made by their political institutions and actors (Levi and Stoker 2000). Trust reduces monitoring costs by decreasing the uncertainty about the potential future behaviour of political institutions and actors. It facilitates the implementation of policies, even if citizens' might not agree with them (Levi and Stoker 2000; Zmerli and van der Meer 2017). In consequence, political trust is a crucial attitude for democratic societies.

One of the key determinants of political trust are citizens' evaluations of the political system. These include evaluations of the extent to which political institutions are actually delivering outputs in response to individual expectations and opinions (Mishler and Rose 2001; Easton 1965). To generate political trust, political actors need to be responsive to the preferences of citizens (Easton 1965, Mansbridge 2003). From an institutional point of view, this implies that political institutions pay attention to the public opinion, inform themselves about this opinion and act accordingly (Esaiasson et al. 2015; Mansbridge 2003). Citizens are expected to take the (in)action of their political institutions into account when making up their mind about the trustworthiness of these institutions (Dunn 2015; Torcal et al. 2012). Hence, individual assessments of whether the political system is responsive to one's own preferences should positively influence trust in



political actors and institutions. When policy outcomes are negatively evaluated, political trust will decrease (Easton 1965, 1975). Hypothesis 1 summarises this expectation.

Hypothesis 1 Perceptions of political responsiveness to individual preferences are positively related to political trust.

The literature assumes that citizens pay attention to which political decisions are made and how these affect them. It also suggests that perceived responsiveness is an equally salient determinant of political trust across different types of societies. However, the relation between perceived responsiveness and political trust may differ across political contexts. More concretely, and as explained in the next section, the argument is developed that the relation between perceived responsiveness and political trust depends on the context in which citizens live and on the benchmarks citizens apply to evaluate political outcomes. Because inequality has been found to make citizens less connected to political life (Solt 2008), citizens of more unequal societies could have different expectations of what their political system should do for them. In consequence, perceived responsiveness to individual preferences can become more or less salient for citizens when determining whether they trust their political institutions or not.

Political trust, responsiveness and the importance of individual benchmarks: the case of economic inequality

The provision of social rights to citizens has become an important characteristic of most Western democracies (Atkinson 2015; Marshall 1964). Almost every democratic government tries to influence the distribution of economic resources within their country in one way or another. Typical examples of such (re)distributive efforts are tax reductions for the poor, unemployment benefits or non-market-priced health and education services (Atkinson 2015; Stiglitz 2012). However, political actors sometimes fail to provide sufficient economic resources for citizens, or they fail to guarantee a relatively even distribution of resources among their populations, resulting in economic inequality, poverty and economic exclusion in general (Atkinson 2015). In such societies, the preferences of a large proportion of citizens are not equally or evenly represented, and the victims of economic exclusion may be less inclined to trust the political system. Economic inequality has, in this light, been found to reduce political trust (Gould and Hijzen 2016; Zmerli and Castillo 2015): countries with high levels of inequality have citizens that are on average more distrusting of the political system than citizens living in more equal countries. Citizens connect the existence of social and economic cleavages, as a societal characteristic, to their political institutions, which results in political distrust.

Therefore, it is hypothesised that citizens living in more unequal countries will report lower levels of political trust:



Hypothesis 2 Citizens living in countries characterised by high levels of economic inequality, will have lower levels of political trust than citizens living in countries where economic inequality is low.

The consequences of economic inequality on political attitudes and feelings of connectedness with political life go beyond political trust. Income inequality is negatively related to political efficacy (Norris 2015) and support for democratic principles (Andersen 2012; Krieckhaus et al. 2014). Economic inequality and economic exclusion have been associated with less democratic political engagement, including lower levels of political interest or political participation (Goodin and Dryzek 1980; Loveless 2013; Solt 2008). Perceptions of income and social inequalities make people feel that they cannot contribute to political life (Loveless 2013). These effects hold for most citizens within the studied societies. In addition, higher levels of income inequality increase the gap between more and less well-off citizens in terms of political representation of their preferences (Rosset et al. 2013). Armingeon and Schädel (2015) found that increasing social segregation resulted in lower voting turnout, with the strongest effect among the lower educated. Inequality leads the poor to vote less and to be less knowledgeable about politics (Bartels 2008), with elected representatives being more responsive to the ideological predispositions of high-income citizens (Bartels 2008; Gilens 2005; Solt 2010).

This review of the literature suggests that economic inequality and exclusion, as contextual factors, are negatively correlated with political engagement and supportive political attitudes. People participate less, pay less attention to political life and have lower levels of political support. This realisation is important. Inequality limits citizens' political interest, voice and participation across the board (i.e. for most citizens). A lack of political engagement and interest is associated with lower levels of political sophistication (Barber 1984; Luskin 1990). Thus, citizens might have less information to assess whether the political actors actually are responsive to their own preferences. As a consequence, whether political institutions act in the interest of individuals or not, could have a more limited effect on political trust in more unequal countries.

Second, the link between perceptions of responsiveness and political trust could depend on the benchmarks which citizens apply to evaluate the performance of their political institutions. Because political trust relies on the evaluation of policies, it is crucial to know what the expectations of citizens are in the first place (van der Meer 2017). Expectations serve in this regard as a starting point to evaluate the policy outputs of one's political institutions. A body of research pointed out that the impact of individual political preferences on trust depends on country characteristics and policy outputs that affect society as a whole (such as general economic strength, the quality of welfare state institutions or the protection of the rule of law) (Anderson and Singer 2008; Hakhverdian and Mayne 2012; Rosset et al. 2013; Solt 2008, 2015). Anderson and Singer (2008) for instance demonstrated that the gap between left-wing and right-wing citizens in terms of political trust becomes wider when inequality is high (with left-wing voters trusting their political institutions even less in high inequality societies). In contrast to the reasoning of the previous paragraph, this line of thinking presumes that citizens are aware that their political institutions



are (un)responsive. In result, citizens of more unequal countries would take the unequal distribution of resources within their society as a starting point to evaluate their political institutions, whereas citizens of more equal countries take a relatively equal spread of economic resources as starting point.

In the case of high inequality societies, citizens' expectations of what their political institutions can and will do for them might be lower. For example, citizens living in a country with chronically high levels of inequality, might not expect that the political institutions and actors of their country will try to be responsive to their needs. This can be a rational expectation, based on the practical experience that their political system tends to be unresponsive (Jensen and van Kersbergen 2017; Goodin and Dryzek 1980). This expectation can also be driven by system justification processes. Such processes lead citizens, especially those that are not benefiting from the system, to accept the social system they live in – even though it does not favour their preferences (Jost et al. 2003). Such processes could be used to explain why perceived responsiveness might be less salient for citizens in more unequal countries: the latter could be socialised into not expecting political responsiveness to their preferences, rendering it less influential for political trust.

On the other hand, citizens of a relatively equal country might be more demanding, precisely because they are used to living in a well-ordered country. In addition, it is easier to participate in politics and to challenge the power of incumbents in more equal democracies (Goodin and Dryzek 1980). Hence, citizens may have higher expectations of what their political institutions should do and pay more attention to whether their political institutions are responsive to them. Previous research already pointed out that when citizens are evaluating the quality of their democracy, the extent of institutional consolidation matters. Citizens of more established democracies are more demanding with respect to the quality of political representation and react more negatively when they perceive that their political actors do not sufficiently represent their views. Since they are used to living in well-ordered countries, these citizens have greater expectations (Dahlberg et al. 2015). In consequence, it could be hypothesised that perceived responsiveness could be more salient in more equal societies, since it is easier to influence political life and because citizens are more demanding.¹

Nevertheless, we should also be aware that an opposite logic could be at play. Inequality leads to greater divergences between citizens in terms of economic resources and political influence (Bartels 2008; Gilens 2005; Jensen and van Kersbergen 2017). The well-off (e.g. the rich or the higher educated) have relatively speaking more political power in more unequal countries. The larger gap with regard to turnout rates (Armingeon and Schädel 2015; Solt 2010) and a higher level of responsiveness to the political preferences of the rich (Bartels 2008; Gilens 2005; Rosset et al. 2013) were mentioned previously. When there are large differences among citizens with regard to the responsiveness of the political system to their preferences, there

¹ This line of thinking is analogous to the perspective of authors that investigate the rise of “critical citizens” and “dissatisfied democrats”, with more demanding citizens becoming more critical about their political decision-makers (e.g. Dalton and Welzel 2014 or Norris 2011).



is more at stake for those citizens who feel that the current system is not responsive to them. When personal stakes get higher, perceived political responsiveness could also become more important to explain (the lack of) political trust (Torcal 2014), especially for those citizens who think that their political system does not take their perspective into account.

Hypotheses 3, 3a and 3b give an overview of the two different pathways through which inequality could influence the impact of perceived responsiveness on political trust.

Hypothesis 3 Economic inequality will moderate the impact of perceptions of political responsiveness to individual preferences on political trust.

H3a The moderation effect will be positive: more inequality will lead to a stronger link between perceptions of responsiveness and political trust.

H3b The moderation effect will be negative: more inequality will lead to a weaker link between perceptions of responsiveness and political trust.

Data

The main source of this article is the International Social Survey Programme (ISSP). Starting from 1984 onwards, the ISSP organises thematic surveys on a yearly basis within a varied set of countries across the globe. This study draws on the 2004 and 2014 survey waves on Citizenship. As the Citizenship module contains questions on a wide set of political norms, values and behaviour, this module suits the purposes of our study particularly well. A disadvantage of the survey is that the field work was not conducted in the same year for each country. Wherever possible, the country level data in this article are adapted to the surveyed year.²

The focus of this article lies on the participating European and OECD-member countries of the study.³ A full overview of the 37 analysed countries, and the surveyed year, is presented in Table 1.

As a further test of the hypotheses, all models on the basis of the ISSP will be replicated with European Social Survey (ESS) data from the 2012 wave. This dataset contains several questions on political responsiveness and trust in institutions, with different question formulations, which makes the ESS ideal for replication analyses.

² Note that surveys were sometimes fielded in 2 years within one country. Macro-level data are based on the last year of fielding.

³ Countries participating in the ISSP round of 2004 and 2014 on Citizenship but not analysed are the Dominican Republic, Georgia, India, the Philippines, Russia, Taiwan, South Africa and Venezuela.



Table 1 Overview of ISSP participant countries by year of fieldwork

Country	Year
Australia	2005 & 2014–2015
Austria	2004 & 2016
Belgium	2004 & 2015
Brazil	2006
Bulgaria	2005
Canada	2004
Chile	2005 & 2014
Croatia	2015
Cyprus	2004
Czech Republic	2004 & 2014
Denmark	2004–2005 & 2014–2015
Finland	2004 & 2014
France	2004–2005 & 2014
Germany	2004 & 2014
Hungary	2004 & 2014
Iceland	2015
Ireland	2003
Israel	2005 & 2014
Japan	2004 & 2014
Latvia	2004
Lithuania	2015
Mexico	2006
The Netherlands	2004–2005 & 2014
New Zealand	2004
Norway	2004 & 2014
Poland	2005 & 2015
Portugal	2004
Slovakia	2005 & 2014
Slovenia	2003 & 2013
South Korea	2004 & 2014
Spain	2004 & 2014
Sweden	2004 & 2014
Switzerland	2005 & 2015
Turkey	2015
United Kingdom	2004–2005 & 2014
United States	2004–2005 & 2014
Uruguay	2004



Table 2 Average scores of political trust by country

Country	Political trust
Japan	2.18
Croatia	2.22
Bulgaria	2.26
Uruguay	2.28
Brazil	2.30
Lithuania	2.32
Poland	2.35
Slovakia	2.39
Mexico	2.41
Slovenia	2.47
Czech Republic	2.50
Germany	2.53
Latvia	2.59
Portugal	2.60
Austria	2.65
Spain	2.66
United States	2.69
United Kingdom	2.80
Belgium	2.80
Israel	2.82
Iceland	2.82
Chile	2.84
Hungary	2.87
Turkey	2.92
The Netherlands	2.94
Canada	2.96
Ireland	2.97
Australia	3.01
Norway	3.01
New Zealand	3.03
Finland	3.09
Sweden	3.18
Denmark	3.26
Switzerland	3.37
Overall	2.74

Political trust is operationalised via the variable “Most of the time we can trust people in government to do what is right”



Dependent variable: political trust

Political trust is operationalised in the ISSP via a question asking respondents whether they can trust people in government to do what is right most of the time.⁴ This 5-point scale question ranges from strongly disagree to strongly agree (more information on individual level variables is found in Appendix 1), with neither disagree or agree as middle category. Table 2 reports the average level of political trust per country. The Scandinavian countries, New Zealand and Switzerland have citizens who indicate relatively high levels of political trust. Croatia, Japan, Bulgaria and Uruguay are among the countries with the lowest levels of trust in this survey. Note that most of the countries have mean trust scores below 3, which implies that their citizens on average do not trust their government to do what is right most of the time.

Full information on the operationalisation of political trust and the independent variables from the European Social Survey is found in Table 11 in Appendix 4, given space limitations.

Independent variables

Individual level

The perception of political responsiveness to individual preferences is measured via two variables. These were designed to test the adherence of political actors towards citizens' demands and assess whether citizens think that political actors take their perspective into account (Esaiasson et al. 2015). Survey participants were asked whether they thought that (1) they had no influence on what government does and (2) government did not care what people like them thought. The questions thus focus on the (in)activity of government and whether it paid attention to the respondent's preferences. The questions focus on whether respondents thought that they had an impact on political decisions (or people similar to them). Empirically it has been common practice to use similar questions for operationalising perceived responsiveness (Kölln 2016; Torcal et al. 2012).^{5,6} Previous studies on political trust

⁴ This question is similar—though not identical—to one of the political trust questions within the American National Elections Study, which asks respondents the following: "How much of the time do you think you can trust the government in Washington to do what is right—just about always, most of the time or only some of the time?"

⁵ Note that the questions are also used to gauge external efficacy. Within the ISSP there are no distinct measurements of both concepts. When efficacy and perceived responsiveness are operationalised separately, the indicators correlate strongly (Esaiasson et al. 2015). This is not surprising, because both perceived responsiveness and external efficacy are operationalisations of the broader concept of political accountability (Weatherford 1992). In the European Social Survey 2012 round, different indicators of responsiveness are included. In this article, we will use questions that lie closer to the ideal operationalisation of perceived responsiveness, as put forward by Powell (2004) or Esaiasson et al. (2015): "how often you think the government in [country] today changes its planned policies in response to what most people think?" and "how often you think the government in [country] today sticks to its planned policies regardless of what most people think?" (more information in Appendix 4).

⁶ The correlation (Pearson's correlation) with political trust was 0.12 for whether respondents thought that they had no influence on what government does and 0.31 for the question on government did not care what people like them thought.



highlighted in this sense the important and positive impact of these indicators on political trust (e.g. Catterberg and Moreno 2006 or Torcal 2014).

Answer options on the questions ranged from 1, strongly agree, over middle category 3, i.e. neither agree nor disagree, to category 5, strongly disagree. Higher scores on these variables thus imply higher perceived political responsiveness. Both variables are closely related (Pearson's correlation coefficient of 0.51). A sum score of these variables was calculated (and divided by two) to avoid duplication in the presentation of the results. Models estimated on the basis of the original indicators gave substantially equal results and are found in Appendix 3.

At the individual level, a varied set of indicators is controlled for. More specifically, we make a distinction between different sources of political trust, including demographic (gender, age, place of residency), social (education level), economic (main activity) and political (political interest) origins of trust (Appendix 1 offers more information) (Levi and Stoker 2000; OECD 2017a, b; Zmerli and van der Meer 2017).

Country level

Most studies on the relation between economic inequality and exclusion with political attitudes remain limited to studying the effects of income inequality (e.g. Anderson and Singer 2008; Kumlin 2011; Solt 2008, 2010, 2015; Zmerli and Castillo 2015). Income inequality is a relative measure (the spread of income of all individuals is compared). The analyses, however, will also include a second measure of economic exclusion, i.e. the poverty rate. The poverty rate of a country points at which part of society cannot fully participate in social and political life because of its lack of personal income and other economic resources. It could be expected that the poverty rate and the Gini coefficient of income inequality are correlated. First, most countries with high levels of income inequality also have high rates of poverty (and vice versa) (Atkinson 2015). In addition, because our operationalisation of poverty is dependent on the mean income within a given country, it can be interpreted as a relative measurement too (Ravallion 2003)

Indicators of disposable or net income (income after taxes and transfers) are analysed for both dimensions. The Gini coefficient draws on Lorenz curve estimations. Perfect equality is marked as 0, which implies that everyone has an equal income. Perfect inequality is scored as 100, one household holds the entire national income. The poverty rate is defined as "the ratio of the number of people whose income falls below the poverty line; taken as half the median household income of the total population" (OECD 2017a, b, "Poverty"). The Gini coefficient of disposable income is taken from Solt's Standardised World Income Inequality Database (2016) and the



Table 3 Overview independent variables—country level

Country level indicator	Mean	SD
Gini coefficient of net income		
<i>Source</i> Standardized World Income Inequality Database (Solt 2016). Interpretation: a score of 0 implies that all households hold the same income, a score of 100 implies perfect inequality: one household holds the entire national income. Net income means that income was calculated on the basis of household income after taxes and transfers.	31.19	6.72
Net poverty rate		
<i>Source</i> OECD; rate of poverty after taxes and transfers, poverty line of 50%.	0.11	0.04
Rule of law index		
<i>Source</i> World Bank	1.29	0.66
Corruption perceptions index		
<i>Source</i> transparency international	70.14	17.80
GDP per capita		
<i>Source</i> World Bank; rate expressed in current US dollars	32,584.79	19,786.58

net poverty rate is based on OECD data.⁷ Note that the Gini coefficient or poverty rate for each country is not always compatible with the year in which the survey was fielded in that particular country given missing information.⁸ Data were collected for a country on the basis of last information available. The OECD, in addition, does not provide information on Brazil, Bulgaria, Croatia, Cyprus and Uruguay.⁹

The analyses include a set of control variables that have been consistently found to influence political trust and economic inequality (Uslaner 2008; Salverda et al. 2009; Zmerli and van der Meer 2017). The analyses are controlled for the size of a country's economy, which is operationalised via the GDP per capita index (World Bank). The GDP per capita at current US dollars is used.¹⁰ Second, the models include a gauge for corruption, i.e. Transparency International's Corruption Perceptions Index (CPI).¹¹ A score of 0 implies that the country is perfectly corrupt, a score of 100 implies the absence of corruption. Corruption is defined as the use of public power for private gain. Third, a more general control for the quality of democracy of the countries in the dataset is introduced via the World Bank's Rule of Law index. It is widely acknowledged that the rule of law is an indicator of strong democratic governance and induces higher trust among citizens and within the state (Rothstein 2011; Uslaner 2008). A score of -2.5 on the index means a weak rule

⁷ For the replication analyses on the basis of the ESS, we use the at-risk-of-poverty and social exclusion rate of Eurostat, which had a broader coverage of the ESS participant countries. Using the OECD country data for poverty delivered substantially equal results.

⁸ Similar problems are encountered when gathering data from other sources, such as the World Bank or Eurostat.

⁹ In addition, no information is available for Switzerland in 2005.

¹⁰ A small note on the collection of the data. In some cases, I had to impute data to acquire data for all countries. First, there are only data available until 2015. As the ISSP surveys were only fielded in 2016 in Austria and between 2015 and 2016 in Belgium, the latest available information (of 2015) was imputed.

¹¹ All CPI scores correspond with the year in which survey was fielded, with 2015 data for Australia and Denmark.



of law, a score of 2.5 means that the country has a “perfect” rule of law. Finally, a survey year dummy is included that indicates whether the respondent was part of the 2004 or 2014 Citizenship wave, to account for a possible time trend (Table 3).

Methods

The data, as presented in the previous section, are clearly structured in groups: survey respondents are structured within countries. Furthermore, there is country level information with which we want to estimate individual perceptions. Thus, multilevel regression modelling is the appropriate method to estimate the models. Multilevel modelling accounts for a hierarchical data structure by nesting individual responses at the first level within a grouping variable at a higher level, via allowing a random intercept for that grouping variable (in this article, the country serves as grouping variable, individual responses are the first level of analysis). It forms an alternative for completely pooled or non-pooled OLS regression analyses, and has as crucial benefit that it takes the clustered nature of the standard errors of the data into account (which normal OLS regression does not). Another benefit of the method is that it allows us to account for variation within countries, variation between countries and different effects of level two variables on individual variables between countries (by adding random intercepts and random slopes for specific variables) (Gelman and Hill 2007).

We have 37 groups (countries) at the second level, which is a sufficient number of units to reliably predict second- or cross-level interaction estimates (Bryan and Jenkins 2016). All models will be analysed with the Restricted Maximum Likelihood approach, which is more appropriate for estimating models with random effects and a relatively small sample size (Elff et al. 2016).

In order to correctly estimate the effect of the first and second level variables, they were centred. Because the main focus of interest lies on the interaction effect between an individual and a country level variable, the individual level variables were group-mean centred. Second level variables were grand-mean centred. This helps us to not confound any within group variance with between-group variance

Table 4 Assessment of model fit for political trust

	Null model
Intercept	2.71 (0.06)***
Variance country (intercept)	0.10
Variance round (intercept)	0.00
Variance individual level (residual)	1.00
Intra-class correlation	0.10
<i>N</i> countries	37
<i>N</i> respondents	78,936

Random intercept model, grouping variable: country and round, dependent variable: political trust, source ISSP

*** $p < 0.001$



(Enders and Tofghi 2007). All variables were furthermore standardised (by one standard deviation).

Before conducting more elaborate analyses, a random intercept-only model was estimated for the dependent variable. As such, we check whether there is enough variance at the country level to make multilevel analyses with country level predictors meaningful. Table 4 presents the results of this “empty” model (i.e. a model without predictors). The Intra-Class Correlation (ICC) points at 10% of variance at the country level, which is a sufficient amount of variance (Hox 2010). In this model, we also tested whether there was any between-group variance between the two ISSP rounds. As can be derived from the table, this was not the case (ICC of 0).

Further models will include individual and country level predictors. More crucially, models will be estimated which have a random slope for perceived responsiveness (i.e. we allow the effect of this variable to vary between countries). A part of this diverging effect will be explained by adding a cross-level interaction between perceived responsiveness and income inequality or poverty. The full model of the article takes on the following structure:

$$\begin{aligned} \text{Political trust} = & \gamma_{00} + \gamma_{1j}\text{Responsiveness}_{ij} + \gamma_{2j}\text{Political interest}_{ij} + \gamma_{3j}\text{Gender}_{ij} + \gamma_{4j}\text{Education}_{ij} \\ & + \gamma_{5j}\text{Main activity}_{ij} + \gamma_{6j}\text{Place of residency}_{ij} + \gamma_{7j}\text{Age}_{ij} \\ & + \gamma_8\text{Income inequality/Poverty}_j * \text{Responsiveness}_{ij} + \gamma_{01}\text{Income inequality/Poverty}_j \\ & + \gamma_{02}\text{Rule of law}_j + \gamma_{03}\text{GDP per capita}_j + \gamma_{04}\text{Corruption}_j + u_{1ik} + \varepsilon_{ij} + u_{0j}. \end{aligned}$$

Results

We start the analyses with political trust as dependent variable on the one hand, and perceived responsiveness and income inequality as key independent variables on the other hand. Table 5 presents the results of four models. Model 1 shows an intercept-only model, Model 2 includes the effects of individual level variables. Here, we see that perceived responsiveness has a strong and positive link with political trust (which is in line with Hypothesis 1).

With regard to the control variables, we note that political interest, the respondents’ age and being in education are positively correlated with political trust. The unemployed, urban dwellers and the higher educated report lower levels of political trust, when keeping the effect of the other variables constant.

Model 3 adds country level effects. In contrast to what was hypothesised, the Gini coefficient of net income is not significantly linked to political trust, even though its coefficient is negative. Economic performance, the absence of corruption and a strong rule of law are significantly and positively connected to trust.

Through Models 4 and 5, we move on towards the crux of this article: can we differentiate the effect of perceived responsiveness on political trust across different levels of economic inequality? In order to test this, a random slope for the effect of perceived responsiveness on trust across countries is added (Model 4). The random slope of responsiveness accounts for roughly 3% of all variance in the data, which makes introducing a random slope meaningful. Next, we try to explain this variance



Table 5 Explaining political trust: perceived responsiveness and net income inequality

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	2.71***	2.83***	2.96***	3.71***	3.11***
<i>Key variables</i>	(0.06)	(0.11)	(0.11)	(0.84)	(0.17)
Perceived responsiveness		0.23***	0.23***	0.23***	0.23***
		(0.00)	(0.00)	(0.02)	(0.01)
Gini coefficient of net income			-0.04	-0.04	-0.03
			(0.03)	(0.03)	(0.03)
Responsiveness × Gini coefficient of net income					-0.06***
					(0.00)
<i>Individual level</i>					
Female (ref.: male)		-0.02**	-0.02**	-0.02**	-0.02**
		(0.01)	(0.01)	(0.01)	(0.01)
Age		0.06***	0.06***	0.06***	0.06***
		(0.01)	(0.01)	(0.01)	(0.01)
Political interest		0.02***	0.02***	0.02***	0.02***
		(0.00)	(0.00)	(0.00)	(0.00)
Education (ref. no formal education)					
Primary school		-0.09***	-0.08***	-0.08***	-0.08***
		(0.02)	(0.02)	(0.02)	(0.02)
Lower secondary		-0.11***	-0.10***	-0.09***	-0.09***
		(0.02)	(0.02)	(0.02)	(0.02)
Upper secondary		-0.12***	-0.11***	-0.11***	-0.10***
		(0.02)	(0.02)	(0.02)	(0.02)
Post-secondary		-0.11***	-0.10***	-0.10***	-0.09***
		(0.02)	(0.02)	(0.02)	(0.02)
Tertiary education		-0.13***	-0.12***	-0.12***	-0.11***
		(0.02)	(0.02)	(0.02)	(0.02)
Place of residency (ref.: a big city)					
Suburbs		0.02	0.02	0.02	0.02
		(0.01)	(0.01)	(0.01)	(0.01)
Town/small city		0.03**	0.03**	0.03**	0.03**
		(0.01)	(0.01)	(0.01)	(0.01)
Country village		0.03**	0.03**	0.03**	0.03**
		(0.01)	(0.01)	(0.01)	(0.01)
Farm/home in country		-0.03	-0.03	-0.03	-0.02
		(0.02)	(0.02)	(0.02)	(0.02)
Main activity (ref.: in paid work)					
Unemployed		-0.10***	-0.09***	-0.09***	-0.09***
		(0.02)	(0.02)	(0.02)	(0.02)
In education		0.04*	0.04*	0.04*	0.04*
		(0.02)	(0.02)	(0.02)	(0.02)



Table 5 (continued)

	Model 1	Model 2	Model 3	Model 4	Model 5
Other		0.03** (0.01)	0.03** (0.01)	0.03** (0.01)	0.03** (0.01)
<i>Country level</i>					
GDP per capita			0.24*** (0.02)	0.24*** (0.02)	0.23*** (0.02)
Corruption perceptions index			0.08*** (0.02)	0.08*** (0.02)	0.08*** (0.02)
Rule of law index			0.12*** (0.03)	0.11*** (0.03)	0.12*** (0.03)
AIC	224,608.46	200,560.86	197,553.90	197,525.46	197,329.01
BIC	224,645.57	200,753.77	197,783.24	197,773.14	197,585.87
Log likelihood	-112,300.23	-100,259.43	-98,751.95	-98,735.73	-98,636.50
<i>N</i> Individuals	78,936	72,155	71,218	71,218	71,218
<i>N</i> country	37	37	37	37	37
Variance country (intercept)	0.10	0.10	0.11	0.11	0.11
Variance (residual)	1.00	0.94	0.93	0.93	0.93
Variance slope (responsiveness)				0.03	0.00

Grouping variable: country, dependent variable: political trust, source ISSP. All models are estimated with REML approach. Standardised coefficients are reported, standard errors in parentheses. A time trend is controlled for

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

by introducing a cross-level interaction between perceived responsiveness and the Gini coefficient of net income. We encounter a negative and significant interaction effect ($\beta = -0.06$, $p < 0.001$). This means that when countries are more unequal, the positive effect of perceived responsiveness on political trust is smaller. Before visualising or interpreting this result, we test whether we can find a similar interaction effect between the net poverty rate and perceived responsiveness.

Table 6 gives an overview of the relation between political trust, perceived responsiveness and income inequality (Model 1)¹² or poverty (Model 2). The models are multilevel, include individual level controls (not reported), a random slope (for perceived responsiveness) and a cross-level interaction between income inequality or poverty and perceived responsiveness. In line with the findings on income inequality, we observe a negative interaction effect between perceived responsiveness and poverty (Model 2) ($\beta = -0.04$, $p < 0.001$) and no direct effect of poverty on political trust (Hypothesis 2 is therefore rejected). In order to get a better grasp on the substantive implications of these findings, Fig. 1 visualises the cross-level interaction effects of the models.

These figures plot the marginal effect of perceived responsiveness on political trust, when taking the moderating effect of inequality or poverty into account (unstandardised data are reported for ease of interpretation). Here, it is clearly

¹² Model 1 is based on the same analyses as Model 5 of Table 5.



Table 6 Explaining political trust: perceived responsiveness, economic inequality and poverty

	Model 1	Model 2
Perceived responsiveness	0.23*** (0.01)	0.24*** (0.01)
Gini coefficient of net income	-0.03 (0.03)	
Net poverty rate		0.04 (0.03)
Perceived responsiveness × Gini coefficient of net income	-0.06*** (0.00)	
Perceived responsiveness × net poverty rate		-0.04*** (0.00)
AIC	197,329.01	177,747.78
BIC	197,585.87	178,001.86
Log likelihood	-98,636.50	-88,845.89
<i>N</i> individuals	71,218	64,504
<i>N</i> countries	37	32
Variance country (intercept)	0.11	0.12
Variance individual level (residual)	0.93	0.92
Variance slope	0.00	0.02

Grouping variable: country, dependent variable: political trust, source ISSP. All models are estimated with REML approach and controlled for the individual and country level indicators mentioned within the data section. Standardised coefficients are reported, standard errors in parentheses

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

visualised that with low values of income inequality or poverty, perceptions of political responsiveness to individual preferences have a (strong) positive impact on political trust. If citizens think that their political institutions take their perspective into account, they have higher trust in their political institutions than citizens who feel that their political institutions do not take their wishes into account (confirming Hypothesis 1). However, if the Gini coefficient of net income or the net poverty rate is high, perceptions of perceived responsiveness have a smaller (but still positive) effect on political trust. This finding is in line with the expectations: the effect of perceived responsiveness seems to be dependent on inequality within society. More concretely, economic inequality and exclusion negatively moderate the impact of perceptions of political responsiveness to individual preferences on political trust. More inequality will lead to a weaker link between perceptions of responsiveness and political trust (confirming Hypothesis 3 and 3b and refuting Hypothesis 3a).

The analyses of the ISSP were tested for undue influence of outlier cases (at the country level) via jackknifing: the analyses were not driven by extreme cases. In addition to jackknifing, models were tested on the European countries within the ISSP survey, coupled with the Gini coefficient of net disposable income and the at-risk-of-poverty and social exclusion rate of Eurostat. Also in this case, the main findings were replicated.



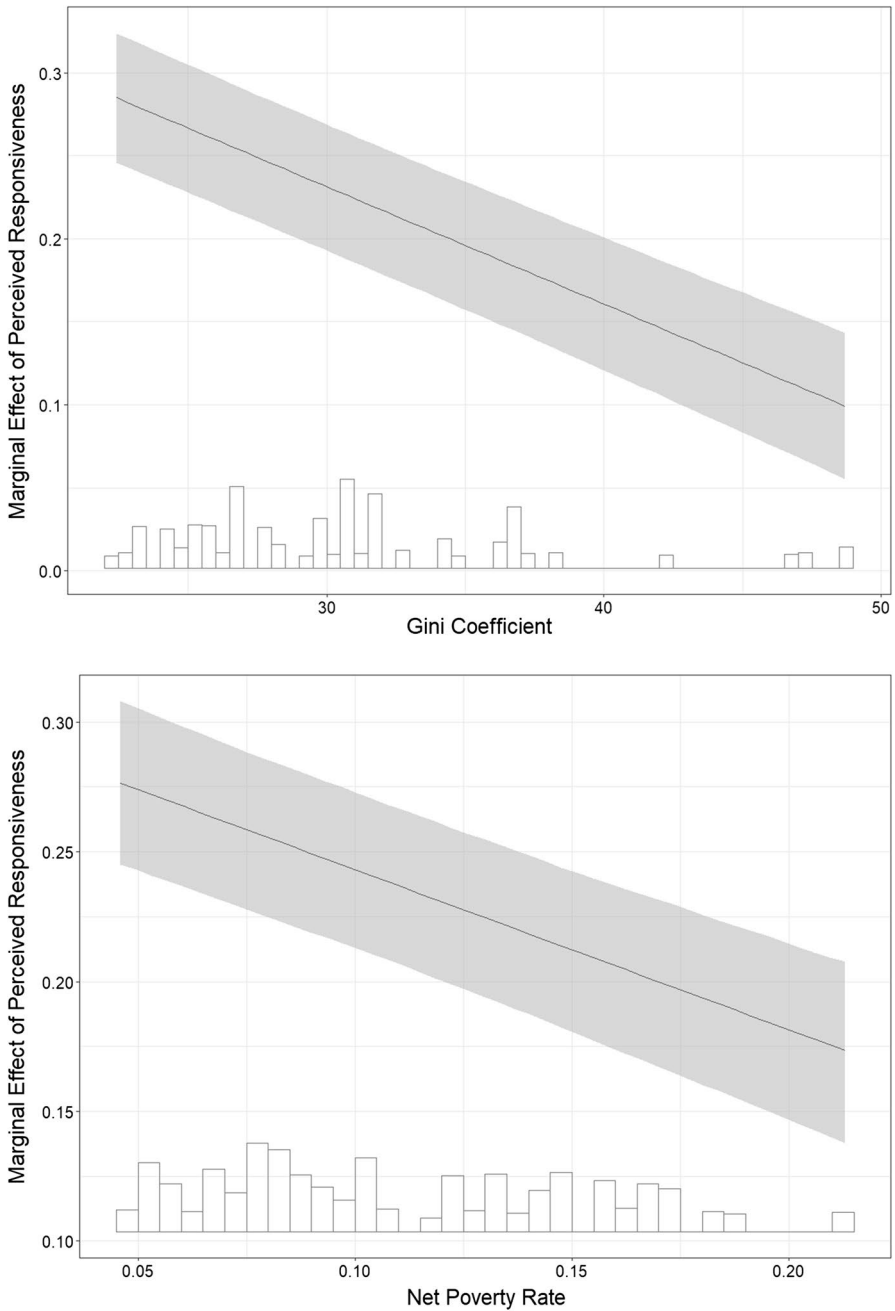


Fig. 1 Marginal effects of perceived responsiveness on political trust. *Note:* These plots represent the marginal effect of perceived responsiveness on political trust, when controlling for the effect of the Gini coefficient of income or the net poverty rate. The grey areas represent the confidence bounds (95%), and the distribution of country scores is plotted at the bottom of the figure. All models are estimated with the REML approach and controlled for the described individual and country level variables. Unstandardised data are reported for ease of interpretation. The models are robust for outliers (tested with jackknifing)



The analyses on the basis of the European Social Survey were very similar to those of the ISSP. Within Table 12 and Fig. 2 in Appendix 4, the analyses of Table 5 and Fig. 1 are replicated. The positive relation between perceived responsiveness and trust, as well as the negative interaction effect between responsiveness and inequality or poverty, is found when relying on the ESS data. In more unequal countries, responsiveness has a weaker impact on a respondent's level of political trust, and vice versa. There is, nevertheless, one important caveat when using the ESS data: the number of cases at the country levels is reduced to 24, which is just below the level of accuracy as defined by Bryan and Jenkins (2016), who stipulate that at least 25 countries are necessary for computing reliable estimates in multilevel linear regression models. Hence, we can only treat the ESS analyses as a further robustness check.¹³

Finally, some additional robustness checks were run. First, it could be argued that the link perceived responsiveness and political trust lies very close to the well-studied relation between feelings of winning or losing political power, political preferences and how these affect political legitimacy (Anderson et al. 2005). Hence, we tested whether incumbency support would alter the relation between responsiveness and trust. This could be done with the ESS data and the 2014 ISSP round.¹⁴ In both cases (see Fig. 2 in Appendix 4 and 5), this was not the case. Second, analyses were conducted which checked whether economic inequality or poverty had a direct effect on perceptions of responsiveness. This is an important test, because this would influence the regression coefficient sizes and significance. However, we could not find a direct impact of inequality or poverty on perceived responsiveness.

Discussion

The primary goal of this article was to investigate one possible causal mechanism through which economic inequality and poverty could influence citizens' political trust. We analysed whether the extent of economic inequality and poverty within a society affect the traditional linkage between assessments of political responsiveness to citizens' preferences and political trust. The analyses indicate that this seems to be the case. If poverty or inequality within a country is low, there is a clear and strong link between assessments of outcomes of the political system and the level of support citizens express for their institutions. However, if inequality or poverty is high, this link becomes weaker. How could we explain this?

Citizens' attitudes about political life depend on the context in which they live and on the benchmarks they apply to evaluate political outcomes (Dahlberg et al. 2015; van der Meer 2017). When the gap between people in terms of economic

¹³ Note that this is a recurring problem in social sciences research (Bryan and Jenkins 2016). Other studies (cited in this article) on political trust faced similar issues with a limited N at the second level, including Anderson and Singer (2008) (20 countries); Hakhverdian and Mayne (2012) (21 countries) or Zmerli and Castillo (2015) (18 countries).

¹⁴ No questions on voting behaviour during the last general election were asked in the 2004 round.



resources is high, large parts of the population may not feel that the political system is responsive to their preferences. When citizens think that their political actors generally do not deliver the outputs they desire, this could change the salience of perceived responsiveness. Within the analyses, we find that citizens of high inequality societies do base their trust judgements to a lesser extent on perceived responsiveness than citizens of more equal societies. A possible explanation for this weakened relationship is the different expectations of citizens. This suggests that when citizens do not expect political institutions and actors to be responsive to them, then political trust depends less on perceived responsiveness. On a speculative level, it could be stated that citizens seem to grow accustomed to the lack of responsiveness, which decreases perceived responsiveness' salience. As mentioned in the literature review, this habituation could be driven by rational thinking and via processes of system justification.

What about citizens living in more unequal societies who are satisfied with the outputs delivered by their political system? In the case of this research, that would probably include the richer echelons of society, since previous studies demonstrated that inequality is related to higher responsiveness to the demands of richer citizens (Gilens 2005; Rosset et al. 2013; Solt 2010). Those who consider political institutions as being responsive to their preferences, might also take this responsiveness for granted. In consequence, assessments of political outcomes might not matter that much for their political trust either.

In more equal societies, the differences among people are smaller. At least in terms of economic justice, it could be said that a larger number of people benefit from the system and its policies. In addition, citizens have higher levels of political interest and political participation (Solt 2008, 2010, 2015). If more people participate and pay attention to politics, and if citizens feel that their political institutions make decisions that matter for them, then evaluations about these decisions might become more important to explain trust in political institutions.

In unequal societies on the other hand, citizens are less engaged in politics. This brings us to a second possible explanatory mechanism of the research findings. In order to link trust in political institutions with perceived responsiveness to individual preferences, citizens have to know which political topics are on the agenda, which decisions are made and what impact policies have on their daily life. However, if inequality leads to disinterest in politics and political inactivity of citizens (Solt 2008, 2010), it is possible that citizens do not have enough information available to (correctly) evaluate whether political institutions are responsive to them. In consequence, perceived responsiveness to individual preferences might become less salient. Speculatively, it could be postulated that, in more unequal countries, political trust relies less on individual evaluations of policy, but rather on elements such as non-policy output-based determinants, including assessments of the quality of descriptive representation and procedural justice concerns.

There were hardly any statistically significant links between income inequality or poverty and political trust within the analyses. Perhaps, this is due to the small number of countries included in the analyses or because there is not enough variation in inequality scores between the countries. Note that the multilevel approach inherently assumes that citizens compare inequality levels across countries. Future research could



investigate whether changes in inequality within a given country over time, rather than between country differences, explain citizens' political trust. Nevertheless, the analyses provide evidence that the effect of inequality or poverty on political trust could manifest itself through indirect processes. Their moderating influence on the effect of perceived responsiveness on trust can be seen as an example of this.

A further limitation of the study includes the measurement of perceived responsiveness. Differentiating between assessments of responsiveness to individual interests (egotropic concerns) and social justice preferences could be an interesting pathway for future research. Previous research pointed out that social justice concerns and evaluations of the fairness of decision-making procedures are equally or even more important in their influence on political trust than egotropic concerns (Kumlin 2004; Tyler 2001). Such studies argue that citizens can make a distinction between personal gains and losses and the broader ethical aspects of policy, with the latter being more important for political support (Tyler 2001). Countries with more extensive economic inequality or exclusion could have a population that pays more attention to the (lack of) social justice and fairness within their country. Unfortunately, the ISSP survey on Citizenship did not include questions gauging social justice, which could have given us additional insights into the relation between inequality, perceived responsiveness and political trust. Finally, because of the nature of the data, we cannot make any definite claims about causality.

For those scholars and practitioners who work on the political consequences of inequality, the research findings in this article lead to more questions. The research builds on a line of literature that demonstrates that citizens become more disengaged when inequality or economic exclusion rises. In addition, traditional links between citizens and their institutions are disturbed, as the relation between what institutions deliver, i.e. their accountability and responsiveness to the demands of citizens, and the level of trust that citizens have in these institutions, becomes weaker.

Appendix 1

See Table 7.



Table 7 Overview of dependent and independent variables—individual level

Level I	Mean	SD
Political trust		
“Most of the time we can trust people in government to do what is right”	2.74	1.05
1. Strongly disagree		
2. Disagree		
3. Neither agree nor disagree		
4. Agree		
5. Strongly agree		
Perceived responsiveness		
“People like me don’t have any say about what the government does” and, “I don’t think the government cares much what people like me think”	2.77 and 2.45	1.33 and 1.19
1. Strongly agree		
2. Agree		
3. Neither agree nor disagree		
4. Disagree		
5. Strongly disagree		
Sumscale perceived responsiveness		
The questions were added and divided by two to regain the original scale	2.61	1.10
Political interest		
“How interested would you say you personally are in politics?”	2.43	0.87
1. Not at all interested		
2. Not very interested		
3. Fairly interested		
4. Very interested		
Gender		
0. Male	0.53	0.50
1. Female		
Age		
Minimum: 15, maximum: 102	48.06	17.52
Urbanisation		



Table 7 (continued)

Level 1	Mean	SD
1. A big city		
2. The suburbs or outskirts of a big city		
3. A town or small city	2.26	1.26
4. A country village		
5. A farm or home in the country		
Main activity		
1. In paid work		
2. Unemployed	2.19	1.39
3. In Education or Apprentice or trainee		
4. Other (compromises respondents indicating that they are: permanently sick or disabled, retired, in domestic work, in compulsory military service or community service, other)		
Education		
1. No formal education		
2. Primary School		
3. Lower secondary	3.96	1.46
4. Upper secondary		
5. Post-secondary, non-tertiary		
6. Lower level tertiary or upper level tertiary		
Incumbent		
Variable constructed for respondents of the 2014 round. Based on the variable "country specific party voted for during last general election". Respondents who indicated having voted for a party within their country which was part of the government in 2014, were given of a code of 1, other respondents a code of 0. Further information on which parties were part of the executive branch was taken from the ParlGov website and official parliamentary websites	0.14	0.35
0. No		
1. Yes		



Appendix 2

See Tables 8, 9.

Table 8 Overview of country level indicators 2004 round

Country	Year of fieldwork	Net poverty rate	Gini coefficient of net income	Rule of law index	GDP per capita	Corruption perceptions index
Australia	2005	0.132	30.93729	1.72	33,982.95	88
Austria	2004	0.067	26.99717	1.84	36,693.403	84
Belgium (Flanders)	2004	0.087	26.14201	1.33	35,589.713	75
Brazil	2006		48.69719	-0.37	5808.3405	33
Bulgaria	2005		30.53721	-0.10	3893.69	40
Canada	2004	0.123	31.96598	1.71	31,979.872	85
Chile	2005	0.192	49.27922	1.30	7728.6119	73
Cyprus	2004		28.18472	0.92	23,932.491	54
Czech Republic	2004	0.058	26.6959	0.78	11,667.632	42
Denmark	2004/2005	0.053	23.27046	1.95	46,511.605	95
Finland	2004	0.065	25.77302	1.96	37,636.112	97
France	2004/2005	0.072	27.99018	1.44	34,879.726	75
Germany	2004	0.083	27.85489	1.64	34,165.934	82
Hungary	2004	0.082	27.6383	0.91	10,259.526	48
Ireland	2003	0.136	30.78761	1.52	41,107.156	75
Israel	2005	0.213	36.75728	0.82	20,611.179	63
Japan	2004	0.149	30.32133	1.27	37,688.722	69
Latvia	2004	0.142	36.27862	0.59	6351.0801	40
Mexico	2006	0.184	46.50124	-0.43	8666.3354	33

Table 8 (continued)

Country	Year of fieldwork	Net poverty rate	Gini coefficient of net income	Rule of law index	GDP per capita	Corruption perceptions index
The Netherlands	2004/2005	0.084	25.29276	1.98	52,157.407	86
New Zealand	2004	0.108	38.01169	1.87	25,420.235	96
Norway	2004	0.069	25.8503	1.98	57,570.269	89
Poland	2005	0.123	31.23566	0.48	6681.1788	34
Portugal	2004	0.131	36.86931	1.25	18,045.588	63
Slovakia	2005	0.073	26.50088	0.54	10,654.794	43
Slovenia	2003	0.08	22.41587	0.97	14,880.472	59
South Korea	2004	0.157	30.81671	0.92	15,921.939	45
Spain	2004	0.148	31.62658	1.14	24,918.646	71
Sweden	2004	0.053	23.04038	1.89	42,442.22	92
Switzerland	2005		28.27828	1.91	54,797.547	91
United Kingdom	2004/2005	0.116	34.4201	1.63	39,824.762	86
United States	2004/2005	0.17	36.77526	1.54	44,307.921	76
Uruguay	2004		42.36458	0.46	4117.3089	62

The table reports country level indicators for the last year in which the survey was held



Table 9 Overview of country level indicators 2014 round

Country	Year of fieldwork	Net poverty rate	Gini coefficient of net income	Rule of law index	GDP per capita	Corruption perceptions index
Australia	2014/2015	0.128	31.78277	1.83	56,290.65	79
Austria	2016	0.09	28.77421	1.78	43,636.75	75
Belgium	2015	0.1	24.35093	1.46	41,096.16	77
Chile	2014	0.168	47.14889	1.43	14,566.15	73
Croatia	2015		30.72425	0.20	11,592.91	51
Czech Republic	2014	0.06	24.49374	1.15	19,744.56	51
Denmark	2014/2015	0.054	24.89336	2.04	53,014.64	91
Finland	2014	0.068	25.04335	2.10	49,914.62	89
France	2014	0.08	26.82098	1.47	42,843.01	69
Germany	2014	0.091	29.53925	1.86	47,902.65	79
Hungary	2014	0.101	29.25671	0.50	14,117.98	54
Iceland	2015	0.046	23.44266	1.67	50,722	79
Israel	2014	0.186	36.61599	1.11	37,582.85	60
Japan	2014	0.161	30.77229	1.60	38,139.42	76
South Korea	2014	0.144	29.79613	0.99	27,989.35	55
Lithuania	2015	0.124	34.643	1.01	14251.78	61
The Netherlands	2014	0.084	25.29276	1.98	52,157.41	83
Norway	2014	0.078	22.92272	2.03	97,005.5	86
Poland	2015	0.105	31.59472	0.84	12,558.87	62
Slovakia	2014	0.084	25.67916	0.50	18,595.15	50
Slovenia	2013	0.095	26.68656	1.00	23,150.32	57
Spain	2014	0.159	34.11901	0.95	29,600.47	60
Sweden	2014	0.088	25.46463	1.99	59,180.2	87
Switzerland	2015	0.086	29.74774	1.95	80,999.29	86



Table 9 (continued)

Country	Year of fieldwork	Net poverty rate	Gini coefficient of net income	Rule of law index	GDP per capita	Corruption perceptions index
Turkey	2015	0.172	36.36948	-0.11	9125.688	42
United Kingdom	2014	0.104	32.67851	1.89	46,412.12	78
United States	2014	0.175	37.04953	1.61	54,539.67	74

The table reports country level indicators for the last year in which the survey was held



Appendix 3

See Table 10.

Table 10 Perceived responsiveness and political trust for separate responsiveness indicators

	Model 1	Model 2	Model 3	Model 4
(Intercept)	2.24** (0.84)	2.92** (0.89)	3.84*** (1.11)	4.19** (1.48)
<i>Key variables</i>				
People like me don't have any say about what the government does (No Say)	0.13*** (0.01)	0.15*** (0.00)		
Government does not care what people like me think (no care)			0.27*** (0.01)	0.28*** (0.01)
Gini coefficient of net income	-0.04 (0.03)		-0.03 (0.03)	
Net poverty rate		0.06* (0.03)		0.03 (0.03)
Perceived responsiveness x Inequality/poverty	-0.07*** (0.00)	-0.04*** (0.00)	-0.03*** (0.00)	-0.03*** (0.00)
<i>Individual level</i>				
Female (ref.: male)	-0.03*** (0.01)	-0.03** (0.01)	-0.02* (0.01)	-0.02* (0.01)
Age	0.06*** (0.01)	0.06*** (0.01)	0.05*** (0.00)	0.05*** (0.01)
Political interest	0.03*** (0.00)	0.03*** (0.00)	0.02*** (0.00)	0.03*** (0.00)
Education (ref. no formal education)				
Primary school	-0.07** (0.02)	-0.07** (0.02)	-0.08*** (0.02)	-0.07** (0.02)
Lower secondary	-0.08*** (0.02)	-0.07** (0.02)	-0.09*** (0.02)	-0.07*** (0.02)
Upper secondary	-0.08*** (0.02)	-0.07** (0.02)	-0.11*** (0.02)	-0.09*** (0.02)
Post-secondary	-0.06** (0.02)	-0.06* (0.02)	-0.09*** (0.02)	-0.08*** (0.02)
Tertiary education	-0.05* (0.02)	-0.05* (0.02)	-0.12*** (0.02)	-0.11*** (0.02)
Place of residency (ref.: a big city)				
Suburbs	0.02 (0.01)	0.01 (0.01)	0.02 (0.01)	0.01 (0.01)
Town/small city	0.03* (0.01)	0.01 (0.01)	0.03** (0.01)	0.02* (0.01)



Table 10 (continued)

	Model 1	Model 2	Model 3	Model 4
Country village	0.02*	0.02	0.03**	0.03*
	(0.01)	(0.01)	(0.01)	(0.01)
Farm/home in country	-0.04	-0.04*	-0.02	-0.03
	(0.02)	(0.02)	(0.02)	(0.02)
Main activity (ref.: in paid work)				
Unemployed	-0.11***	-0.11***	-0.09***	-0.09***
	(0.02)	(0.02)	(0.02)	(0.02)
In education	0.05**	0.04*	0.04*	0.03
	(0.02)	(0.02)	(0.02)	(0.02)
Other	0.02	0.02	0.02*	0.03*
	(0.01)	(0.01)	(0.01)	(0.01)
<i>Country level</i>				
GDP per capita	0.26***	0.25***	0.23***	0.22***
	(0.02)	(0.02)	(0.02)	(0.02)
Corruption perceptions index	0.11***	0.12***	0.07***	0.08***
	(0.02)	(0.02)	(0.02)	(0.02)
Rule of law index	0.14***	0.20***	0.10**	0.14***
	(0.03)	(0.03)	(0.03)	(0.03)
AIC	201,763.75	181,977.39	198,231.17	178,425.67
BIC	202,020.88	182,231.75	198,488.35	178,680.06
Log likelihood	-100,853.87	-90,960.69	-99,087.59	-89,184.84
N individuals	71,933	65,150	72,041	65,212
N country	37	32	37	32
Variance country (intercept)	0.15	0.16	0.09	0.10
Variance (residual)	0.96	0.95	0.91	0.90
Variance slope (responsiveness)	-0.02	-0.00	0.02	0.03

Grouping variable: country, dependent variable: political trust, source ISSP. All models are estimated with REML approach. Standardised coefficients are reported, standard errors in parentheses. A time trend is controlled for

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Appendix 4: Replication of analyses with the 2012 European Social Survey

See Tables 11, 12 and Fig. 2.



Table 11 Overview of individual and country level variables

Level 1	Mean	SD
<p>Political trust</p> <p>“Using this card, please tell me on a score of 0–10 how much you personally trust each of the institutions I read out. 0 means you do not trust an institution at all and 10 means you have complete trust”.</p> <p>Sumscale on the basis of the following three institutions:</p> <ul style="list-style-type: none"> – Country’s parliament – Politicians – Political parties <p>0: no trust; 10: complete trust.</p> <p>Perceived responsiveness</p> <p>Index constructed on the basis of the following questions:</p> <ul style="list-style-type: none"> – “Using this card, please tell me how often you think the government in [country] today changes its planned policies in response to what most people think?” – 0: never; 10: always – “Using this card, please tell me how often you think the government in [country] today sticks to its planned policies regardless of what most people think?” – 0: never; 10: always. <p>The scale of the second questions was reversed in order to construct an index in which 0 means very low perceived responsiveness and 10 means the highest level of responsiveness.</p> <p>Political interest</p> <p>“How interested would you say you personally are in politics?”</p> <ol style="list-style-type: none"> 1. Not at all interested 2. Hardly interested 3. Quite interested 4. Very interested <p>Gender</p> <ol style="list-style-type: none"> 0. Male 1. Female 	3.61	2.3
	4.59	2.56
	2.36	0.91
	0.46	0.50



Table 11 (continued)

Level 1	Mean	SD
Age		
Minimum: 15, maximum: 103	48.67	18.61
Urbanisation		
1. A big city	2.82	1.23
2. The suburbs or outskirts of a big city		
3. A town or small city		
4. A country village		
5. A farm or home in the country		
Main activity		
1. In paid work	3.20	2.58
2. In education, (not paid for by employer) even if on vacation		
3. Unemployed and actively looking for a job		
4. Unemployed, wanting a job but not actively looking for a job		
5. Permanently sick or disabled		
6. Retired		
7. In community or military service		
8. Doing housework, looking after children or other persons		
9. Other		
Education		
1. Less than lower secondary	4.00	3.67
2. Lower secondary		
3. Lower tier upper secondary		
4. Upper tier upper secondary		
5. Advanced vocational, sub-degree		
6. Lower tertiary education, BA level		
7. Higher tertiary education, MA level or higher		



Table 11 (continued)

Level 1	Mean	SD
Incumbent	0.30	0.46
Based on the variable "Party voted for in last national election". Respondents who indicated having voted for a party which was part of the government in 2012, were given of a code of 1, other respondents a code of 0. Further information on which parties were part of the executive branch was taken from the ParfGov website and official parliamentary websites.		
0. No		
1. Yes		
Level 2		
Gini coefficient of net income	28.91	3.48
<i>Source</i> Standardized World Income Inequality Database (Solt, 2016). Interpretation: a score of 0 implies that all households hold the same income, a score of 100 implies perfect inequality: one household holds the entire national income. Net income means that income was calculated on the basis of household income after taxes and transfers.		
At-risk-of-poverty and social exclusion rate	23.63	8.24
<i>Source</i> Eurostat; percentage of population at-risk-of-poverty or social exclusion within country.		
Rule of law index	1.27	0.55
<i>Source</i> World Bank		
Corruption perceptions index	6.77	1.44
<i>Source</i> Transparency International		
GDP per capita	28,399.36	16,992.18
<i>Source</i> World Bank; Rate expressed in current US dollars		



Table 12 Replication of analyses with European social survey data

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	3.62*** (0.23)	4.27*** (0.31)	4.22*** (0.23)	3.46*** (0.10)	3.46*** (0.10)
<i>Key variables</i>					
Perceived responsiveness		0.58*** (0.01)	0.58*** (0.01)	0.58*** (0.03)	0.57*** (0.04)
Gini coefficient of net income			-0.24* (0.11)	-0.24* (0.11)	-0.24* (0.11)
Responsiveness × Gini Coefficient of net income					-0.12*** (0.03)
<i>Individual level</i>					
Political interest		0.35*** (0.01)	0.35*** (0.01)	0.35*** (0.01)	0.35*** (0.01)
Education		0.10*** (0.01)	0.10*** (0.01)	0.10*** (0.01)	0.10*** (0.01)
Place of residency (ref.: a big city)					
Suburbs		-0.04 (0.03)	-0.06 (0.03)	-0.06 (0.03)	-0.06 (0.03)
Town/small city		-0.07* (0.03)	-0.08** (0.03)	-0.08** (0.03)	-0.08** (0.03)
Country village		-0.08*** (0.03)	-0.11*** (0.03)	-0.10*** (0.03)	-0.10*** (0.03)
Farm/home in country		-0.11* (0.04)	-0.13** (0.04)	-0.13** (0.04)	-0.13** (0.04)
Main activity (ref.: in paid work)					
Education		0.58*** (0.04)	0.61*** (0.04)	0.60*** (0.04)	0.60*** (0.04)
Unemployed, looking for job		-0.27*** (0.04)	-0.26*** (0.04)	-0.26*** (0.04)	-0.26*** (0.04)
Unemployed, not looking for job		-0.22*** (0.07)	-0.25*** (0.07)	-0.24*** (0.07)	-0.24*** (0.07)
Permanently sick or disabled		-0.25*** (0.06)	-0.26*** (0.06)	-0.26*** (0.06)	-0.26*** (0.06)
Retired		0.10*** (0.03)	0.08* (0.03)	0.08* (0.03)	0.08* (0.03)
Community or military service		0.36 (0.22)	0.20 (0.34)	0.19 (0.34)	0.19 (0.34)
Housework, looking after children, others		0.02 (0.04)	0.02 (0.04)	0.01 (0.04)	0.01 (0.04)
Other		0.10 (0.09)	0.05 (0.09)	0.05 (0.09)	0.05 (0.09)
Female (ref.: male)		-0.00* (0.00)	-0.00* (0.00)	-0.00* (0.00)	-0.00* (0.00)



Table 12 (continued)

	Model 1	Model 2	Model 3	Model 4	Model 5
Age		-0.06*** (0.01)	-0.04** (0.01)	-0.04** (0.01)	-0.04** (0.01)
Incumbent (ref.: No)		0.37*** (0.02)	0.39*** (0.02)	0.38*** (0.02)	0.38*** (0.02)
<i>Country level</i>					
Rule of law index			-0.27 (0.32)	-0.27 (0.32)	-0.27 (0.32)
GDP per capita			0.37* (0.17)	0.37* (0.16)	0.37* (0.16)
Corruption perceptions Index			0.81** (0.31)	0.80** (0.30)	0.82* (0.31)
AIC	194,235.06	171,751.10	162,208.30	161,987.70	161,978.10
BIC	194,261.25	171,941.40	162,431.09	162,219.90	162,218.90
Log likelihood	-97,114.53	-85,853.54	-81,078.14	-80,966.84	-80,961.06
<i>N</i> individuals	45,754	42,257	40,139	40,139	40,139
<i>N</i> country	25	25	24	24	24
Variance country (intercept)	1.36	1.30	0.24	0.24	0.24
Variance (residual)	4.07	3.39	3.31	3.29	3.29
Variance slope (responsiveness)				0.02	0.03

Grouping variable: country, dependent variable: political trust, source European Social Survey. All models are estimated with REML approach. Standardised coefficients are reported, standard errors in parentheses. This table replicates the analyses of Table 5

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$



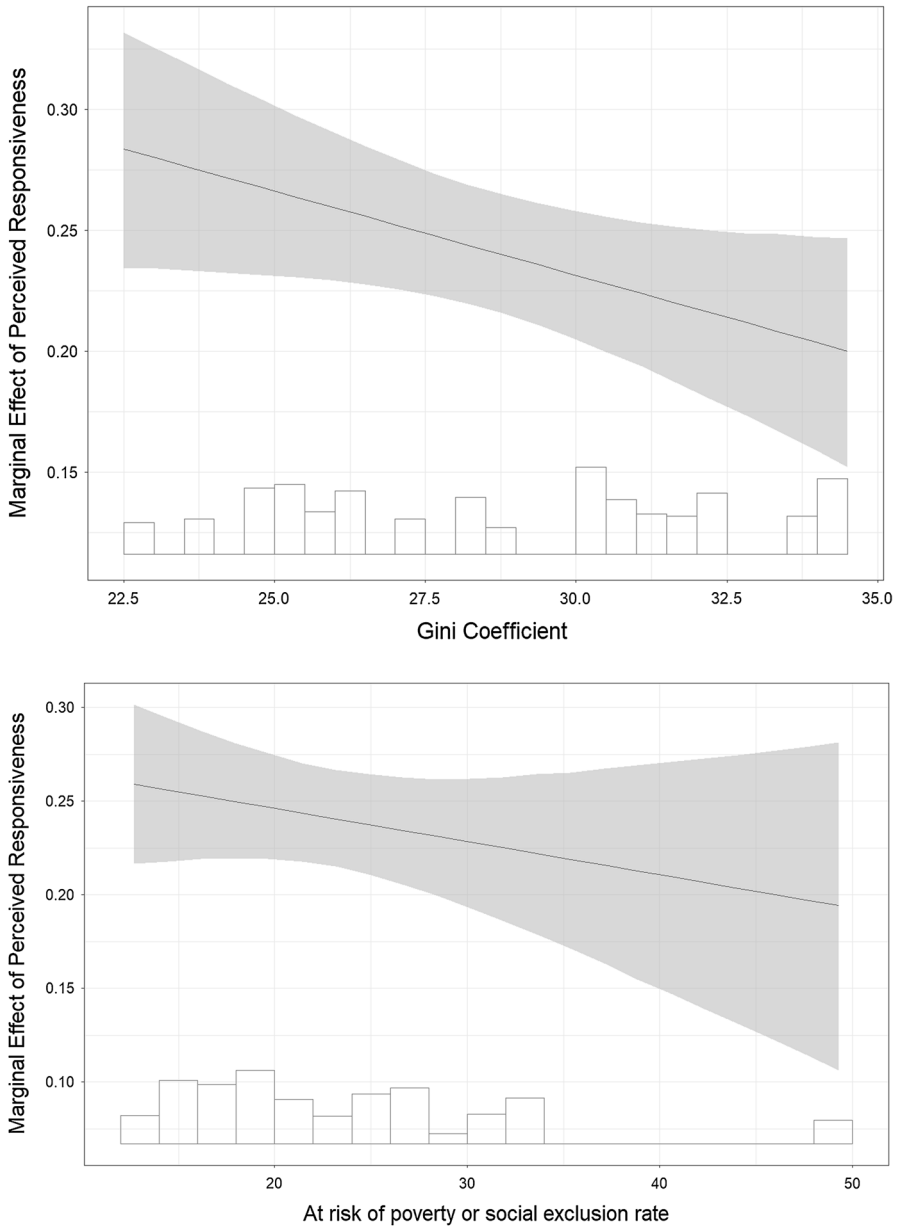


Fig. 2 Marginal Effects of Perceived Responsiveness on Political Trust. *Note:* These plots represent the marginal effect of perceived responsiveness on political trust, when controlling for the effect of the Gini coefficient of income or the at-risk-of poverty and social exclusion rate. The grey areas represent the confidence bounds (95%), the distribution of country scores is plotted at the bottom of the figure. All models are estimated with the REML approach and controlled for the described individual and country level variables. Unstandardised data are reported for ease of interpretation. The models are robust for outliers (tested with jackknifing). Data: European Social Survey. These figures are replications of Fig. 1



Appendix 5

See Table 13.

Table 13 Robustness test with incumbency support (for ISSP round 2014)

	Model 1	Model 2
Perceived responsiveness	0.24*** (0.02)	0.25*** (0.02)
Gini coefficient of net income	-0.03 (0.07)	
Net poverty rate		-0.02 (0.06)
Perceived responsiveness × Gini coefficient of net income	-0.05* (0.02)	
Perceived responsiveness × net poverty rate		-0.05* (0.02)
Incumbent	0.27*** (0.02)	0.27*** (0.02)
AIC	89,849.72	87,296.38
BIC	90,076.66	87,522.50
Log likelihood	-44,897.86	-43,621.19
<i>N</i> individuals	33,028	32,041
<i>N</i> country	26	25
Variance country (intercept)	0.07	0.06
Variance (residual)	0.88	0.88
Variance slope (responsiveness)	0.01	0.01

Grouping variable: country, dependent variable: political trust, source ISSP. All models are estimated with REML approach and controlled for the individual and country level indicators mentioned within the data section. Standardised coefficients are reported, standard errors in parentheses

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

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