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Income Inequality, Value Systems, and Macroeconomic Performance

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GINI Discussion Paper 17
September 2011

GROWING INEQUALITIES' IMPACTS

Acknowledgement

September 2011

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Bibliographic Information

Corneo, G. (2011). Income Inequality, Value Systems, and Macroeconomic Performance. Amsterdam, AIAS, GINI Discussion Paper 17.

This paper can be downloaded from our website www.gini-research.org.

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18 September 2011
DP 17

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Abstract

This paper offers a comprehensive econometric investigation of the impact of income inequality on the values endorsed by people. Using survey data from thirty-three OECD countries over a period of twenty-eight years, the following dimensions of value systems are investigated: work ethic, civism, obedience, honesty, altruism, and tolerance. In most cases, no robust effects from inequality on values are detected. However, there is some weak evidence that a more equal income distribution might reduce the work ethic of the population and increase its tolerance.

Keywords: Income inequality, Symbolic values.

JEL-Classification: D63, O15, O57, Z1

1. Introduction

The values and norms that prevail in society are not time-invariant, rather they evolve, especially in the wake of economic development. Some recent empirical studies based on cross-country survey data over a few decades offer some corroborating evidence for the view that values change. By way of an example, Inglehart and Baker (2000) suggest that developed countries after World War II have experienced a transition from "traditional" to "modern" values. While the existence of some value change across generations can hardly be disputed, its precise pattern and causes are not well understood yet.

This paper documents variation along several dimensions of value systems since the 1980s and uses econometric techniques to pin down the impact of changes in income inequality on value change. The income distribution is a distinctive key trait of societies, as income inequality has been shown to affect societal outcomes in terms of well-being, health, trust, and crime. Income inequality is therefore a natural candidate for explaining value change - although it may also be affected by it.

The main contribution of this paper is to offer a comprehensive empirical analysis of multi-country data on values and attitudes over a time horizon of almost three decades. My search for empirical regularities is only loosely guided by theoretical considerations as no canonical model exists that predicts how income inequality affects the values endorsed by people. Thus, this paper is not concerned about some particular mechanism through which inequality might affect values but merely about assessing that impact. Issues of the following kind are addressed: does income inequality affect honesty? Do societies become more or less honest if income disparities grow? Is it current or past inequality that matter for how values change?

The following six dimensions of value systems are investigated in this paper: work ethic, civism, obedience, honesty, altruism, and tolerance. Each of those dimensions is likely to generate incentive effects in important areas of economic, social, and political behavior. For instance, work ethic is bound to affect households' labor supply and civism is a likely determinant of tax compliance. Value systems are said to affect choices and welfare through two main mechanisms: an internal and a social channel. The internal channel is the unpleasant feeling of guilt that one has if one's behavior violates one's own moral standards, and the corresponding pride if one behaves in line with internalized values. The social channel refers to the esteem received by relevant others, which in turn depends

on those others' value systems: social approval is obtained by conforming to others' values, while stigma is obtained if one's behavior infringes upon them. Both mechanisms drive behavior and affect well-being.

As a result, value systems are likely to affect macroeconomic performance, and a distinctive concern of this paper is how inequality might impinge upon macroeconomic performance through its effect on values.

Hints about how income inequality may affect value formation can be obtained from theoretical approaches that have been developed to explain in general terms the pattern and dynamics of value systems. In future work, one may use them to understand whatever relationship between inequality and values emerges from the data. Two main theoretical approaches to the determinant of values may be distinguished: the evolutionary approach and the intentional approach. The evolutionary approach mainly deals with values viewed as preferences that evolve through a process of natural selection. Typically, that approach posits some time-invariant symmetric two-person game that individuals play once. The material payoffs obtained from the game are interpreted as a measure of fitness that determines selection and shapes the evolutionary process. Individual preferences belong to some prespecified set, for instance individuals may either be interested only in their own material payoff (egoism) or they may also care about the material payoff of their opponent (altruism). Criteria of evolutionary stability are then employed to characterize the preferences or values that prevail in the long run.[1]

The second main approach emphasizes the intentional element in the formation of values and therefore the incentives to instill certain values rather than different ones. In the models developed by Bisin and Verdier (2000, 2001) preferences are formed as a result of both the intentional transmission of cultural traits from parents to children and the influence of horizontal socialization. Akerlof and Kranton (2000, 2005) employ instead the notion of identity, which is considered to be partly malleable. Corneo and Jeanne (2009, 2010) model an individual's value system as a mapping that determines the self-esteem received by the individual and the esteem that the individual confers upon others. Parents and other agents, like the school and the church, are assumed to purposively exert efforts to influence value systems.

Income inequality may be incorporated into models of either the evolutionary or the intentional approach in order to study its effects on value formation. I hope that the current paper can provide some empirical ground for future theoretical works of that kind. This paper is organized as follows. First, the empirical sources for the subsequent analysis are described. Then, the estimation strategy is explained. The core of the paper is built around a set of regressions relating each single dimension of value systems with various measures of income inequalilty. That part also deals with the issue of endogenous inequality, i.e. the possibility that inequality itself may be influenced

1 The evolutionary approach has been used among others by Bester and Güth (1998), Fershtman and Weiss (1998), and, more recently, by Alger (2010).

by values. Estimation results are discussed separately for each dimension of value systems and briefly summarized in the final Section.

In most cases, this paper finds no robust effects from inequality on values. However, there is some weak evidence that a more equal income distribution might reduce the work ethic of the population and increase its tolerance.

2. Data

The information on the values endorsed by individuals exploited in the subsequent analysis is obtained from the *European Value Studies* and the *World Values Survey*, together referred to as WVS. The World Values Survey Network provides a harmonized file of European and World Values Surveys, extending over five survey waves carried out around 1981, 1990, 1995, 2000 and 2005.[2] In addition, the European Values Survey 2008 provides a sixth round of survey data.[3] In each wave, the entire survey project was conducted over a period of about three years and for each country the year when the survey was actually conducted is known. That year is used in the regressions discussed in this paper: directly, as a control for time fixed effects, and indirectly, since macro controls, including income inequality in the country of the respondent, are taken for the year when the survey was actually conducted. The empirical analysis is restricted to OECD countries in order to reduce problems of data quality and comparability. As a result, the WVS sample analyzed in this paper covers about 190,000 individuals surveyed during a period of 28 years in 33 countries.

From the WVS data, I recover individually endorsed values pertaining to the following six domains:

1. Work ethic
2. Civism
3. Obedience
4. Honesty
5. Altruism
6. Tolerance

Each dimension of an individual's value system is measured by means of responses given to one or more survey questions. The exact wording of each survey question is reported and briefly discussed at due time. Income inequality in a given country and year is measured using the Gini coefficient. That variable is taken from the *Standardized World Income Inequality Database* (SWIID).[4]The SWIID improves upon older collections of international income inequality datasets, like Deininger and Squire (1996) and the World Income Inequality Database from UNWIDER[5] and aims at minimizing problems associated with secondary data on income inequality as discussed by Atkinson and Brandolini (2001). The SWIID provides Gini coefficients for both gross and net income. The data is compiled from various sources using different reference units and income definitions. The benchmark for stand-

2 See http://www.worldvaluessurvey.org.
3 http://www.europeanvaluesstudy.eu.
4 The construction of the SWIID is explained in Solt (2009).
5 http://www.wider.unu.edu/research/Database.

ardization is the LIS dataset which uses household adult-equivalent net and gross income (Solt, 2009). Accordingly, the measure of inequality used throughout this paper is the Gini coefficient of household adult-equivalent income. The contemporary values of the Gini coefficients of net and gross income for all OECD countries with corresponding observations in the WVS are respectively shown in Tables 1 and 2. Incidentally, those tables reveal for each country the WVS waves in which it participated.

Table 1. Gini coefficient of household adult-equivalent net income by country and wave

country	*1*	*2*	*3*	*4*	*5*	6
Australia	28.10	.	30.80	.	31.57	.
Austria	.	25.10	.	25.91	.	26.67
Belgium	22.44	23.29	.	26.82	.	.
Canada	28.71	27.48	.	31.50	31.55	.
Czech Rep	.	21.18	25.30	25.24	.	25.27
Denmark	27.22	25.91	.	22.39	.	24.98
Estonia	.	22.48	36.17	35.86	.	31.96
Finland	.	20.95	21.94	24.60	25.69	.
France	28.80	27.12	.	26.75	27.94	28.00
Germany	.	26.55	26.28	26.51	28.53	29.96
Greece	.	.	.	33.56	.	33.53
Hungary	22.08	32.30	28.85	29.20	.	27.67
Iceland	.	.	.	.	.	28.63
Ireland	33.30	33.01	.	32.15	.	30.66
Israel	.	.	.	34.60	.	.
Italy	30.61	30.66	.	33.71	33.99	.
Japan	25.20	28.03	29.08	32.82	35.88	.
South-Korea	36.07	31.97	29.01	32.25	31.84	.
Luxembourg	.	.	.	26.35	.	28.42
Mexico	.	47.24	47.70	49.10	46.05	.
Netherlands	25.75	26.21	.	23.10	27.36	27.82
New Zealand	.	.	36.40	.	32.92	.
Norway	22.17	23.25	23.47	.	24.08	24.08
Poland	.	25.74	30.76	28.90	31.29	29.67
Portugal	.	31.01	.	35.43	.	35.90
Slovakia	.	17.64	23.76	23.71	.	22.99
Slovenia	.	21.79	24.43	24.90	24.50	25.37
Spain	31.12	30.30	35.30	33.65	31.44	31.28
Sweden	20.13	20.70	21.73	23.33	23.52	.
Switzerland	.	30.91	28.73	.	.	.
Turkey	.	43.68	43.41	43.54	.	.
UK	26.96	32.77	34.29	34.70	34.96	.
USA	30.36	33.53	36.26	37.04	36.87	.

Table 2. Gini coefficient of household adult-equivalent gross income by country and wave

country	*1*	*2*	*3*	*4*	*5*	6
Australia	39.06	.	43.35	.	43.94	.
Austria	.	38.61	.	44.07	.	48.96
Belgium	25.76	31.32	.	45.39	.	.
Canada	37.90	38.89	.	43.04	42.93	.
Czech Rep	.	30.06	35.51	35.75	.	34.85
Denmark	48.69	48.76	.	46.80	.	50.08
Estonia	.	36.20	47.89	51.56	.	45.83
Finland	.	36.56	40.38	45.96	48.62	.
France	31.28	43.67	.	42.79	41.21	41.28
Germany	.	45.46	45.49	47.85	53.35	55.95
Greece	.	.	.	42.97	.	39.63
Hungary	27.76	40.66	43.57	43.63	.	40.24
Iceland	.	.	.	.	.	46.39
Ireland	47.33	44.74	.	39.79	.	39.27
Israel	.	.	.	45.08	.	.
Italy	39.78	43.72	.	44.30	45.29	.
Japan	36.04	35.77	37.31	40.24	41.70	.
South-Korea	41.57	38.44	36.50	37.97	38.03	.
Luxembourg	.	.	.	41.05	.	43.96
Mexico	.	49.28	50.33	48.96	47.01	.
Netherlands	38.26	40.48	.	38.72	42.66	43.68
New Zealand	.	.	43.48	.	45.95	.
Norway	38.69	41.65	45.54	.	44.85	44.85
Poland	.	34.34	42.86	36.80	46.08	42.67
Portugal	.	47.42	.	55.32	.	59.42
Slovakia	.	27.56	33.86	34.13	.	34.97
Slovenia	.	29.20	33.17	34.61	33.52	35.35
Spain	34.61	37.25	46.64	39.80	38.84	37.30
Sweden	48.76	45.97	46.08	45.61	45.89	.
Switzerland	.	39.61	41.52	.	.	.
Turkey	.	45.40	44.19	42.04	.	.
UK	41.49	46.62	47.98	47.97	47.75	.
USA	40.48	42.68	46.18	47.08	46.95	.

Information about country-level macro variables – viz. log of per capita GDP, unemployment rate, growth rate of real GDP – is obtained from the *OECD* and the *World Bank.* Since those two sources use slightly different definitions for some variables, estimations were conducted separately with macro data from the OECD (OECD, 2011) and data from the World Bank Development Indicators (WDI, 2011). Since the estimation results concerning income inequality are very similar, only those obtained using the OECD data are presented in this paper.

3. Estimation Strategy

The effect of income inequality on value systems is estimated using a set of stepwise more complex specifications or models. A set of six models is called a configuration. The basic configuration is progressively augmented to extend the analysis and assure robustness of results.

For binary dependent variables a logit model is estimated. If dependent variables have an ordinal coding, an ordinal logit estimation is employed. Also OLS regressions were run; since they delivered very similar results, they are not reported here to save space.[6] The specifications in the *basic configuration* can be summarized by:

$$V^*_{ict} = \alpha + \beta Gini_{ct} + \gamma_c C + \lambda' X_{ict} + \varepsilon_{ict}$$

$$\Pr(V_{ict} = 1) = \Pr(V^*_{ict} > 0)$$

The symbolic value V of individual i at time t in country c is explained by the Gini coefficient at time t in country c, a set of individual control variables $\boldsymbol{X}$ and country fixed effects. To control for unobserved heterogeneity across countries and idiosyncracies due to the way in which survey questions are translated in the various languages, country dummies are included in all estimations. As shown by Moulton (1990), the inclusion of macro variables in the estimation of micro data can bias standard errors. Accordingly, all standard errors are corrected for clustering at the country level.[7]

The six models in the basic configuration become stepwise richer by including more regressors into $\boldsymbol{X}$. In model (1), vector $\boldsymbol{X}$ only includes

- gender,
- age,
- age squared

which are all unambiguously exogenous traits. Further models insert additional individual controls for which a mutual influence with the values endorsed by the individual cannot be a priori excluded. By including more regressors, the number of observations used in the regressions is typically reduced because of individually missing items or because some surveys did not collect the corresponding information. Thus, in model (2), also educational achievements of respondents are included. Model (3) adds dummies for quintiles of a respondent's household income. In model (4), also dummies for family status status in the labour market are included. Model (5) then adds dummies for frequency of attendance to religious services, which are substituted in model (6) with dummies for town size. All control variables are described in some detail in Appendix A. The six models of the basic

6 They can be obtained from the author upon request.

7 Results from cross-country regressions without country fixed effects are reported in the Appendix. There, also results for single-country regressions for selected values are reported.

configuration do not control for macroeconomic variables. Augmenting those models with controls for log of per capita GDP, unemployment rate, real growth rate of GDP is called the *B + Macro configuration*. Neither the basic configuration nor the basic configuration with macro controls includes time dummies. The measured impact of inequality thus refers to the effect of inequality changes over time. The final configuration, which is called the *B + M + Year FE configuration*, controls instead also for the year in which the survey was conducted. Since country effects are always included, the estimated effect from income inequality in this configuration is merely due to the variation of the intertemporal changes of the country-specific Gini coefficients.

Those three configurations yield eighteen models. Each of those models is separately estimated using the Gini coefficient of *net incomes* or the Gini coefficient of *gross incomes* as the inequality measure. Arguably, it is inequality in purchasing power and thus in net income which is the kind of inequality more likely to have an impact on value formation. Therefore, regression equations that use the Gini coefficient of net income are referred to as preferred specifications.

The basic configuration, the one including macro controls, and the one adding year fixed effects use as a regressor the *contemporary Gini coefficient*. That is, the analysis focuses on the relationship between values expressed in a given country in a given year and the income inequality observed in the same country in the same year. Contemporary inequality might affect endorsed values if the latter can easily be changed in response to changing inequality. This is however not the usual way of thinking about value formation. According to conventional wisdom, an individual's value system forms during the first two decades of his life and hardily changes afterwards. An alternative route through which contemporary inequality might affect values is perfect foresight since contemporary inequality is then equivalent to inequality that was expected in the past. Today observed values are likely to have been in part instilled by the respondents' parents many years ago. To the extent that those parents correctly anticipated the amount of inequality faced by their children and that inequality matters for the type of values that are transmitted, contemporaneous inequality may indeed affect endorsed values.

Since both perfect value flexibility and perfect foresight are rather unpalatable assumptions, the empirical exercise in this paper also explores lagged effects from income inequality. Thus, models are investigated where for each configuration the contemporary Gini coefficient is replaced by the *Gini coefficient ten years before*. In another set of models, the contemporary Gini coefficient is replaced by the *Gini coefficient twenty years* before.

Those models incorporate the conjecture that the process by which inequality affects value formation takes time because values are sticky.

A somewhat different idea about the effect of past inequality on values is that what matters is the inequality level experienced when an individual's values were formed. This may occur because experienced inequality during youth has a lasting effect on the values endorsed by the individuals. Or it may be so because values are transmitted by parents and parents have myopic expectations about future inequality. Thus, I present an additional set of models where the contemporaneous Gini coefficient is substituted with the *average Gini coefficient when the respondent was young*, i.e. aged eighteen to twenty-five. Experiences during that period of life are said to exert an especially strong influence on future attitudes of individuals.[8]

The last element of the current empirical strategy deals with the potential problem of endogeneity of contemporaneous income inequality in the configurations with the contemporary Gini coefficient. To this end, the Gini coefficient is *instrumented with the population ratio of those aged 40 to 59 to the whole working age population* (15 to 69). The respective variable will be called "mature". The idea is that "large mature working-age cohorts are associated with lower aggregate inequality, and large young-adult cohorts are associated with higher aggregate inequality" (Higgins and Williamson, 2002).[9] The simple correlation across all countries and waves between "mature" and the Gini coefficient of net incomes is -0.33. For the Gini of gross incomes the correlation is only 0.04. Additional insight is provided by the correlation coefficients for each survey wave across countries, as shown in Table 3. Based on those findings, the instrumental variable approach is only pursued for the Gini coefficient of net incomes, my preferred measure of inequality.

Table 3. Correlation between Gini coefficient and mature by survey wave

wave	*mature-net*	*mature-gross*	Freq.
1	-0.20	-0.19	17
2	-0.39	-0.17	31
3	-0.76	-0.31	20
4	-0.75	-0.11	30
5	-0.70	0.08	19
6	-0.13	0.41	24
Total	-0.49	-0.05	141

Instrumental variables estimation is performed using the STATA 11 module "ivprobit" which performs maximum likelihood estimation if one continuous variable is endogenous. Since there are no established methods to handle the instrumental variable approach with ordinal dependent variables, measures of symbolic values with

8 See Alesina and Giuliano (2011) and references therein.
9 This IV-strategy has also been used by Leigh (2006) in an analysis of the effect of inequality on trust.

ordinal information are recoded to binary variables with a cut-off at “1” if there are five categories and at “2” if there are ten response categories.

4. Work Ethic

The first dimension of value systems considerd in the current investigation is work ethic, understood as the value that individuals attach to actively contributing to the production of goods and services for one's employer or the market *per se*, i.e. independently of the monetary rewards and the concrete conditions under which the work is performed. Against the background of history, work ethic seems to be a relatively recent invention. According to the Bible, work was a curse devised by God to punish Adam and Eve for their original sin. Also the slave societies of Greek polis and ancient Rome regarded work as an inferior activity. Medieval aristocracy used the clergy to try to convince the peasants in their land holdings that work was peasants' duty as decreed by God. The rise of the modern work ethic is usually associated with the development of early capitalism and Protestantism.

At first glance, the implications of a strong work ethic for macroeconomic performance are relatively straightforward. Ceteris paribus, a stronger work ethic will cause individuals to devote a larger share of their time and energy to work, thereby increasing labor supply and output. People looking for a job will do it more intensely if they have a stronger work ethic and they will be less choosy when the available jobs are paid badly; hence, a stronger work ethic will tend to lower labor costs and to reduce the rate of unemployment. On second thought, the impact of the work ethic on the macroeconomy appears more complex. A too strong work ethic could be harmful for economic growth in advanced knowledge-based economies that rely so much on the development of human talent and its efficient allocation. Obsessions to have a job may lead individuals to avoid risk taking in the choice of their career, possibly sacrifying their personal talent for an occupation where the risk of personal failure is comparatively large. A very strong emphasis on work may also be harmful for innovation because some "creative idleness" is often a fertile soil for the arrival of new ideas. Heavy stigmatization of the unemployed may prove highly divisive for society, politically destabilizing and costly in terms of social policy. Altogether, this suggests that work ethic might have a non-monotonic effect on macroeconomic performance, improving it at low levels of work ethic and worsening it at high levels.

There are three survey questions in the WVS that proxy an individual's work ethic. Each item will now separately be presented and employed in a regression analysis along the lines described in the previous Section.

4.1. Child-hardwork

A first proxy for work ethic is the variable *child-hardwork*: a binary variable indicating whether respondents think that teaching children to work hard is important. Hard work is an element in a list of eleven qualities from which respondents can choose up to five. The corresponding survey question reads:

Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five.

Hard Work; 0 'Not mentioned' 1 'Important'.

This survey question has been used by Lindbeck and Nyberg (2006) as a measure of work ethic in order to study the long-run viability of the welfare state. A few caveats are in order. While it is likely that respondents with a stronger work ethic mentioned hard work as an important quality, this is by no mean obvious. Respondents may think that their children should not be encouraged to learn the importance of hard work e.g. because children will live in a society where hard work does not pay in terms of disposable income. By the same token, an individual who personally disvalues hard work may want children to have a strong work ethic because hard work will be necessary in order for them to have economic success – and, possibly, because this raises the probability for the respondent to be helped by his children when they are adult and the respondent is old. In all thoses cases, the item may be seen as a proxy for the work ethic of the respondents' children rather than of the respondents themselves.[10]

Another source of ambiguity in the survey question is the reference to the home as to the place where a particular quality can be learnt. Additionally to the family, children may learn values from their peers, at school, the church, and so on. Thus, two individuals who want their children to have the same value system may react in different ways to that survey question because their children face different social environments. By way of an example, a parent who considers altruism an important quality may fail to mention altruism in that survey question if children are taught altruism in school or at the church. Table 4 shows the fraction of respondents per country and survey wave which find that hard work is an important quality. There are 193,933 observations for *child-hardwork*. According to raw averages, Denmark and Austria have a particularly weak work ethic as measured by this proxy, whereas Estonia and Slovakia have a particularly strong one.

10 This empirical measure of work ethic has also been used by Maystre et al. (2009) to construct a measure of cultural distance and relate it to trade openness.

Table 4. Mean of child-hardwork by country and wave

country	*1*	*2*	*3*	*4*	*5*	*6*	Mean
Australia	0.119	.	0.359	.	0.477	.	0.332
Austria	.	0.143	.	0.090	.	0.129	0.120
Belgium	0.325	0.343	.	0.425	.	0.367	0.367
Canada	0.202	0.350	.	0.506	0.526	.	0.420
Czech Rep	.	0.838	0.789	0.739	.	0.740	0.785
Denmark	0.021	0.024	.	0.021	.	0.045	0.029
Estonia	.	0.920	0.871	0.812	.	0.828	0.854
Finland	.	0.059	0.147	0.115	0.153	0.076	0.114
France	0.334	0.529	.	0.504	0.623	0.489	0.491
Germany	.	0.149	0.099	0.226	0.275	0.171	0.180
Greece	.	.	.	.	.	0.289	0.289
Hungary	0.285	0.704	0.337	0.714	.	0.759	0.569
Iceland	0.239	0.779	.	0.443	.	0.456	0.460
Ireland	0.235	0.276	.	0.365	.	0.601	0.346
Italy	0.128	0.236	.	0.361	0.393	0.388	0.298
Japan	0.154	0.306	0.244	0.271	0.324	.	0.258
Luxembourg	.	.	.	.	.	0.511	0.511
Mexico	.	0.233	0.360	0.287	0.243	.	0.290
Netherlands	0.118	0.138	.	0.137	0.294	0.210	0.181
New Zealand	.	.	0.372	.	0.407	.	0.387
Norway	0.038	0.066	0.107	.	0.127	0.113	0.089
Poland	.	0.867	0.160	0.864	0.211	0.826	0.597
Portugal	.	0.691	.	0.672	.	0.695	0.687
South-Korea	0.400	0.643	0.622	0.716	0.726	.	0.630
Slovakia	.	0.831	0.703	0.753	.	0.859	0.794
Slovenia	.	0.320	0.329	0.292	0.338	0.325	0.321
Spain	0.405	0.367	0.644	0.451	0.626	0.206	0.421
Sweden	0.038	0.052	0.066	0.041	0.102	0.095	0.063
Switzerland	.	0.375	0.431	.	0.266	0.258	0.333
Turkey	.	0.725	0.616	0.724	0.787	1.000	0.758
UK	0.149	0.282	0.371	0.378	0.443	0.442	0.344
USA	0.263	0.489	0.534	0.595	0.616	.	0.468
Mean	0.217	0.412	0.406	0.456	0.406	0.447	0.403

Does income inequality affect work ethic as measured by *child-hardwork*? The empirical strategy presented in Section 3 is now employed, starting with the configurations that use the contemporaneous Gini coefficient as a regressor. The sample size for each regression equation varies a lot, ranging from 174,934 to 70,572 observations.

Since the empirical strategy entails a very large number of regressions,[11] only the estimated coefficients for income inequality are presented. I start with results for the contemporaneous Gini coefficient of net incomes, which is the preferred measure of inequality in this paper. As can be seen from Table 5, the variable of interest, called *Gini-net*, has a mostly positive, weakly significant relation with *child-hardwork*. When macroeconomic controls are excluded (basic configuration, first row), the coefficient is never statistically significant at conventional levels. Controlling for the level of economic development, unemployment and yearly GDP growth (second row) yields

11 There are two measures of contemporaneous inequality, three configurations, and six models for each of them. This makes 36 regressions. However, also ten-years and twenty-years lagged inequality measures are considered, that require 72 regressions. Further 36 regressions are conducted using inequality when the respondent was young. The instrumental variable approach is only adopted to instrument for the Gini coefficient of net income, which gives other 18 regressions. Altogether, 162 regressions are performed for each item covering a given symbolic value.

uniformly positive coefficients; in two out of six cases, those estimates are significant at the ten percent level. Adding time fixed effects (third row) yields even more statistically significant results indicating that income inequality strengthens the work ethic endorsed by individuals.

Table 5 Coefficients of contemporary Gini-net for child-hardwork

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	0.039	0.001	0.009	0.036	0.036	-0.013
	(0.94)	(0.01)	(0.13)	(0.56)	(0.56)	(-0.12)
B + Macro	0.046	0.070	0.100	0.125^{+}	0.128^{+}	0.082
	(1.33)	(1.04)	(1.40)	(1.73)	(1.71)	(0.70)
B + M + Year FE	0.060*	0.105	0.127^{+}	0.150^{+}	0.155^{+}	0.113
	(2.01)	(1.55)	(1.71)	(1.90)	(1.88)	(0.93)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 6. Coefficients of contemporary Gini-gross for child-hardwork

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.020	-0.003	-0.002	0.007	0.007	0.012
	(0.88)	(-0.05)	(-0.03)	(0.13)	(0.14)	(0.20)
B + Macro	0.013	0.001	0.004	0.027	0.027	0.027
	(0.66)	(0.01)	(0.06)	(0.63)	(0.64)	(0.78)
B + M + Year FE	0.012	-0.001	0.003	0.025	0.026	0.028
	(0.63)	(-0.02)	(0.08)	(0.70)	(0.72)	(0.57)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

The coefficients for the Gini coefficient of gross income in Table 6 deliver a less clear picture. Failing to control for macroeconomic variables leads to both positive and negative and statistically insignificant estimated coefficients. If macro controls are taken into consideration, estimates are mostly positive but lack statistical significance. I now turn to the question about the effect on value change from past changes in inequality. In this case, results are similar for the Gini coefficient of gross income and net income. Quite surprisingly, for ten-year-lagged inequality there is sometimes a statistically significant *negative* relation, as documented by Tables 7 and 8. This suggests that past income inequality tends to reduce the work ethic of the population.

Table 7. Coefficients of ten-year-lags Gini-net for child-hardwork

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.004	0.001	-0.011	-0.023	-0.025	-0.023
	(0.18)	(0.05)	(-0.61)	(-0.88)	(-0.95)	(-0.62)
B + Macro	-0.023	-0.011	-0.029	-0.061	-0.064	-0.129
	(-0.86)	(-0.26)	(-0.66)	(-0.99)	(-1.05)	(-1.53)
B + M + Year FE	-0.014	-0.103*	-0.143**	-0.151**	-0.151**	-0.182***
	(-0.42)	(-2.18)	(-2.83)	(-2.88)	(-2.90)	(-3.83)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 8. Coefficients of ten-year-lags Gini-gross for child-hardwork

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.001	-0.011	-0.018	-0.029	-0.029	-0.029
	(-0.05)	(-0.76)	(-1.24)	(-1.16)	(-1.17)	(-0.95)
B + Macro	-0.009	-0.025	-0.038	-0.074	-0.074	-0.129^{+}
	(-0.46)	(-0.71)	(-1.08)	(-1.38)	(-1.40)	(-1.74)
B + M + Year FE	-0.013	-0.090	-0.112^{+}	-0.124*	-0.126*	-0.146*
	(-0.35)	(-1.60)	(-1.93)	(-2.06)	(-2.08)	(-2.01)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Further surprising findings are obtained from the regressions that use the Gini coefficient twenty years before the survey was conducted. In that case, the estimated coefficients are positive and moderately significant.

Table 9. Coefficients of twenty-year-lags Gini-net for child-hardwork

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	-0.023	0.026	0.017	0.010	0.007	0.067
	(-0.62)	(0.54)	(0.35)	(0.18)	(0.13)	(1.15)
B + Macro	0.039	0.067^{+}	0.062^{+}	0.072*	0.072*	0.143*
	(1.08)	(1.85)	(1.68)	(2.36)	(2.28)	(2.36)
B + M + Year FE	0.042	0.118^{+}	0.122^{+}	0.130^{+}	0.130^{+}	0.190*
	(0.90)	(1.76)	(1.79)	(1.91)	(1.92)	(2.10)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 10. Coefficients of twenty-year-lags Gini-gross for child-hardwork.

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.017	0.026	0.013	0.017	0.014	0.045
	(-1.05)	(0.95)	(0.49)	(0.59)	(0.46)	(1.61)
B + Macro	0.007	0.046^{+}	0.035	0.050^{+}	0.050^{+}	0.096^{+}
	(0.65)	(1.95)	(1.58)	(1.71)	(1.67)	(1.83)
B + M + Year FE	0.017	0.075^{+}	0.076^{+}	0.077^{+}	0.078^{+}	0.144**
	(0.74)	(1.90)	(1.90)	(1.90)	(1.91)	(2.63)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

I now turn to the effect on work ethic generated by inequality experienced during youth. As shown by Tables 11 and 12, the mean value of income inequality when agents have been aged eighteen to twenty-five mostly has a positive relation with *child-hardwork*. Effects are similar for the Gini of gross and net income.

Table 11. Coefficients of Gini-net when aged 18-25 for child-hardwork.

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.013	0.002	0.002	-0.000	-0.001	0.003
	(1.38)	(0.31)	(0.33)	(-0.08)	(-0.23)	(0.58)
B + Macro	0.017**	0.008^{+}	0.009^{+}	0.005	0.005	0.006
	(3.28)	(1.66)	(1.91)	(1.22)	(1.09)	(1.28)
B + M + Year FE	0.017***	0.005	0.006	0.005	0.005	0.005
	(3.39)	(0.83)	(1.22)	(1.02)	(0.92)	(0.89)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 12. Coefficients of Gini-gross when aged 18-25 for child-hardwork

Table 8. Coefficients of ten-year-lags Gini-gross for child-hardwork

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.016^{+}	0.005	0.004	0.002	0.001	0.006
	(1.70)	(0.76)	(0.65)	(0.30)	(0.21)	(1.11)
B + Macro	0.020***	0.010*	0.010*	0.006^{+}	0.006	0.008^{+}
	(3.92)	(2.23)	(2.24)	(1.67)	(1.56)	(1.66)
B + M + Year FE	0.020***	0.007	0.007	0.006	0.006	0.007
	(3.97)	(1.28)	(1.50)	(1.38)	(1.30)	(1.25)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

I now turn to instrumental variable estimation. The Gini coefficient of net incomes is instrumented with the ratio of the mature working population to the whole population at working age. Results are presented in Table 13. Notice that no results for model (6) are presented because the likelihood function failed to converge and no estima-

tions were obtained.[12] In all remaining estimations but one, the p-values of the Wald test of exogeneity (*p_exog*) indicate no problem of endogeneity. Only in the first regression, the one with the lowest number of controls, the Gini coefficient of net incomes seems to be affected by *childhardwork*, and the IV-estimation produces a statistically significant result. It is found in that case that more inequality causes a stronger work ethic.

Table 13. IV Coefficients of Gini-net for child-hardwork

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	0.255***	0.123	0.201	0.112	0.092
	(3.58)	(0.40)	(0.49)	(0.69)	(0.57)
p_exog	0.012	0.706	0.638	0.612	0.699
B + Macro	0.272	-0.550	-0.435	-0.194	-0.216
	(1.56)	(-0.41)	(-0.31)	(-0.23)	(-0.24)
p_exog	0.194	0.741	0.779	0.795	0.790
B + M + Year FE	0.542	-0.138	-0.228	-0.233	-0.200
	(1.40)	(-0.18)	(-0.17)	(-0.13)	(-0.15)
p_exog	0.285	0.812	0.831	0.866	0.838

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

A comment on the macro controls in all presented regressions is in order. Not only the numerical value but sometimes even the sign of the estimated coefficient change when using WDI data instead of OECD data. However, whenever an estimated coefficient is statistically significant the sign of the coefficient is the same for both data. This is also true for the estimation results presented in the rest of this paper.

4.2. Money-work

The second proxy for the work ethic of respondents is a variable referred to as *moneywork*. It is based on the following survey question:

Do you agree or disagree with the following statement? It is humiliating to receive money without having to work for it. 5 'Strongly agree' 4 'Agree' 3 'Neither agree or disagree' 2 'Disagree' 1 'Strongly disagree'.

The original item has been recoded, so that higher values indicate a stronger work ethic.[13] Respondents who agree with the above statement are likely to feel ashamed or guilty when being unemployed and to stigmatize those who live on unemployment benefits or related social transfers.

Table 14 depicts the mean response by country and survey wave for *money-work*. Differently from the previous proxy for work ethic, the current one is based on a question that was only asked in the last three waves. There is a maximum of 93,803 observations for *money-work*. Denmark stands out as the country with the lowest work ethic and Turkey as the country with the highest work ethic.

12 The same problem occurred for the IV estimations about other measures of value systems discussed in the rest of the paper. This is the reason why for some models no result will be presented.

13 Minkov and Blagoev (2009) use this item in a factor analysis to study the relation between culture and economic growth.

Table 14. Mean of money-work by country and wave

country	*4*	*5*	*6*	Mean
Australia	.	3.283	.	3.283
Austria	.	.	3.365	3.365
Belgium	3.070	.	3.086	3.077
Canada	3.306	3.150	.	3.224
Czech Rep	3.326	.	3.402	3.363
Denmark	2.888	.	2.771	2.818
Estonia	3.390	.	3.487	3.449
Finland	3.084	3.105	3.080	3.089
France	3.093	.	3.151	3.121
Germany	3.011	3.143	3.420	3.192
Greece	.	.	3.776	3.776
Hungary	3.484	.	3.544	3.521
Iceland	3.090	.	2.910	3.008
Ireland	3.248	.	3.419	3.332
Italy	3.807	3.663	3.762	3.759
Japan	3.380	3.367	.	3.374
Luxembourg	.	.	3.509	3.509
Mexico	3.344	3.255	.	3.299
Netherlands	2.643	.	2.952	2.830
Norway	.	3.356	3.216	3.286
Poland	3.719	3.596	3.356	3.533
Portugal	3.427	.	3.698	3.592
South-Korea	3.793	3.648	.	3.720
Slovakia	3.474	.	3.465	3.470
Slovenia	3.453	3.284	3.320	3.348
Spain	3.210	3.142	2.963	3.121
Sweden	3.038	2.893	3.176	3.039
Switzerland	.	3.209	3.024	3.116
Turkey	4.242	4.270	4.292	4.273
UK	3.017	.	3.248	3.157
USA	3.022	3.287	.	3.157
Mean	3.298	3.341	3.372	3.337

I now turn to estimating the effect of income inequality on *money-work*. The sample size for each specification ranges from 80,027 to 55,933 observations. Table 15 shows results about effects from the contemporaneous Gini coefficient of net income. It clearly has a positive relation with *money-work*, significant at levels of 5% to 10%. The Gini of gross incomes also exhibits a positive relation, but is statistically insignificant. In sum, I uncover a positive correlation between the level of income inequality and the likelihood to find receiving money without working for it, humiliating.

Table 15. Coefficients of contemporary Gini-net for money-work

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.050^{+}	0.056*	0.056*	0.059*	0.057*	0.060*
	(1.95)	(2.07)	(1.97)	(2.04)	(1.99)	(2.12)
B + Macro	0.056^{+}	0.064*	0.065*	0.068*	0.065*	0.071*
	(1.91)	(2.18)	(2.15)	(2.19)	(2.11)	(2.43)
B + M + Year FE	0.043^{+}	0.049*	0.050*	0.052*	0.050*	0.033
	(1.94)	(2.19)	(2.03)	(2.07)	(2.03)	(0.93)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 16. Coefficients of contemporary Gini-gross for money-work

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.020	0.023	0.020	0.022	0.022	0.019
	(0.96)	(1.06)	(0.86)	(0.93)	(0.92)	(0.89)
B + Macro	0.020	0.023	0.023	0.024	0.024	0.019
	(0.74)	(0.85)	(0.79)	(0.84)	(0.82)	(0.69)
B + M + Year FE	0.005	0.009	0.010	0.012	0.012	0.005
	(0.23)	(0.36)	(0.45)	(0.52)	(0.52)	(0.21)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

In contrast to contemporary values, ten-year lags of the Gini of income inequality exhibit a *negative* statistical relation with *money-work* (see Tables 17 and 18). This is similar to the sign reversal obtained for child-hardwork, but in this case the estimates for the Gini of net income mostly lack statistical significance.

Table 17. Coefficients of ten-year-lags Gini-net for money-work

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.001	0.001	-0.003	-0.003	-0.002	-0.006
	(-0.14)	(0.13)	(-0.43)	(-0.31)	(-0.26)	(-0.73)
B + Macro	0.003	-0.003	-0.010	-0.011	-0.009	-0.036^{+}
	(0.19)	(-0.22)	(-0.60)	(-0.65)	(-0.53)	(-1.94)
B + M + Year FE	-0.007	-0.015	-0.014	-0.013	-0.010	-0.002
	(-0.30)	(-0.72)	(-0.45)	(-0.43)	(-0.33)	(-0.04)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 18. Coefficients of ten-year-lags Gini-gross for money-work

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.002	0.000	-0.003	-0.002	-0.002	-0.004
	(-0.37)	(0.08)	(-0.73)	(-0.54)	(-0.52)	(-0.81)
B + Macro	-0.004	-0.005	-0.011	-0.012	-0.011	-0.028**
	(-0.40)	(-0.61)	(-1.37)	(-1.43)	(-1.37)	(-2.96)
B + M + Year FE	-0.026*	-0.029*	-0.032**	-0.031*	-0.031*	-0.034*
	(-2.10)	(-2.54)	(-2.63)	(-2.46)	(-2.40)	(-2.53)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Again, conclusions are reversed if we look at twenty-year lags. In that case, past income inequality has a positive effect on *money-work*, see Tables 19 and 20.

Table 19. Coefficients of twenty-year-lags Gini-net for money-work

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.033*	0.032*	0.030*	0.032*	0.032*	0.032^{+}
	(2.38)	(2.33)	(2.04)	(2.05)	(2.14)	(1.90)
B + Macro	0.038*	0.038*	0.035*	0.036*	0.036*	0.065***
	(2.27)	(2.31)	(2.32)	(2.44)	(2.43)	(4.41)
B + M + Year FE	0.060**	0.061**	0.062**	0.066**	0.064**	0.060*
	(3.08)	(3.20)	(3.02)	(3.15)	(3.02)	(2.25)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 20. Coefficients of twenty-year-lags Gini-gross for money-work

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.011	0.014	0.013	0.014	0.014	0.007
	(0.89)	(1.23)	(1.09)	(1.17)	(1.22)	(0.60)
B + Macro	0.004	0.006	0.006	0.006	0.006	0.004
	(0.28)	(0.44)	(0.44)	(0.46)	(0.48)	(0.16)
B + M + Year FE	0.011	0.015	0.017	0.020	0.019	-0.004
	(0.42)	(0.61)	(0.72)	(0.80)	(0.74)	(-0.13)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

I now turn to the effect of inequality when respondents were aged eighteen to twentyfive. As shown by Tables 21 and 22, the experience of inequality when young has a positive effect on *money-work*, but results fail to be statistically significant.

Table 21. Coefficients of Gini-net when aged 18-25 for money-work

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.006	0.006	0.004	0.005	0.007	0.005
	(0.87)	(0.90)	(0.58)	(0.72)	(0.96)	(0.73)
B + Macro	0.005	0.004	0.002	0.003	0.003	0.001
	(0.68)	(0.61)	(0.31)	(0.42)	(0.40)	(0.14)
B + M + Year FE	0.005	0.004	0.002	0.002	0.002	0.001
	(0.63)	(0.53)	(0.24)	(0.35)	(0.34)	(0.10)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 22. Coefficients of Gross-Gini when aged 18-25 for money-work

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.008	0.007	0.005	0.006	0.008	0.007
	(1.14)	(1.10)	(0.82)	(0.96)	(1.16)	(1.06)
B + Macro	0.007	0.006	0.004	0.005	0.005	0.004
	(0.98)	(0.81)	(0.55)	(0.67)	(0.62)	(0.53)
B + M + Year FE	0.006	0.005	0.003	0.004	0.004	0.003
	(0.91)	(0.69)	(0.44)	(0.55)	(0.52)	(0.44)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

I now turn to instrumental variable estimations. In order to instrument the Gini coefficient of net incomes with "mature", a binary variable is used: *money-work-agree.* It takes value 1 if the respondent strongly agrees with the survey question and it takes 0 otherwise. Resulting estimation coefficients, exhibited in Table 23, have both positive and negative signs and lack statistical significance. In any case, the Wald test for exogeneity suggests that endogeneity is not an issue for the Gini of net incomes. Note that for five models of the basic configuration the likelihood function does not converge, so that no estimation results can be obtained.

Table 23. IV Coefficients of Gini-net for money-work-agree

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	0.355	x			
	(0.03)	x			
p_exog	0.979	x			
B + Macro	0.111	0.101	0.450	0.499	0.458
	(0.09)	(0.06)	(0.10)	(0.10)	(0.09)
p_exog	0.955	0.972	0.931	0.937	0.941
B + M + Year FE	-0.019	-0.020	-0.009	-0.008	-0.015
	(-0.21)	(-0.22)	(-0.10)	(-0.09)	(-0.15)
p_exog	0.599	0.571	0.665	0.664	0.635

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Taken all together, results obtained using *money-work* are remarkably similar to those obtained using *child-hardwork*. By and large, more income inequality comes with a higher probability that respondents exhibit a stronger work ethic.

4.3. Work-duty

The third proxy constructed to capture a respondent's work ethic asks whether work is a duty toward society:

Do you agree or disagree with the following statement? Work is a duty towards society 5 'Strongly agree' 4 'Agree' 3 'Neither agree or disagree' 2 'Disagree' 1 'Strongly disagree'

There has been a recoding so that higher values indicate stronger work ethic. However, it is not clear whether this survy question gives a good proxy for work ethic as defined above, i.e. the value associated to actively contributing to the production of goods and services for one's employer or the market. An individual may have a strong ethic in the above sense without being convinced that work is a duty towards society. That individual may think that work is a duty towards God or towards the individual itself but not towards society. Conversely, someone with a weak work ethic in the above sense may agree that work is a duty towards society and therefore engage in a lot of volunteering to help the needy or to preserve the natural environment for the future generations.[14] This caveat should be borne in mind when evaluating the results from the regression analysis.

In Table 24 the mean of *work-duty* by country and wave is depicted. There are a total of 93,965 observations for *work-duty*. The highest share of agreement is observed for Turkey, while the lowest one is observed for Iceland.

14 In fact, Balan and Knack (2011) use work-duty as a proxy for morality in an analysis of the determinants of human capital investment

Table 24. Mean of work-duty by country and wave

country	*4*	*5*	*6*	Mean
Australia	.	3.491	.	3.491
Austria	.	.	3.888	3.888
Belgium	3.581	.	3.848	3.700
Canada	3.622	3.623	.	3.623
Czech Rep	3.645	.	3.499	3.575
Denmark	3.750	.	3.991	3.895
Estonia	3.505	.	3.480	3.489
Finland	3.486	3.643	3.503	3.543
France	3.455	.	3.858	3.649
Germany	3.576	3.749	3.762	3.696
Greece	.	.	3.738	3.738
Hungary	3.830	.	3.788	3.804
Iceland	3.435	.	3.411	3.424
Ireland	3.538	.	3.753	3.644
Italy	3.760	3.802	3.826	3.791
Japan	3.640	3.726	.	3.679
Luxembourg	.	.	4.066	4.066
Mexico	3.876	3.953	.	3.916
Netherlands	3.387	.	3.731	3.596
Norway	.	4.082	4.211	4.146
Poland	3.930	3.792	3.328	3.642
Portugal	4.143	.	4.117	4.127
South-Korea	3.666	3.724	.	3.695
Slovakia	3.682	.	3.680	3.681
Slovenia	3.934	3.924	3.875	3.907
Spain	3.598	3.703	3.628	3.632
Sweden	3.456	3.536	3.660	3.529
Switzerland	.	3.710	3.784	3.747
Turkey	4.284	4.208	4.225	4.235
UK	3.290	.	3.695	3.536
USA	3.473	3.522	.	3.498
Mean	3.652	3.757	3.788	3.730

In regression analysis, the sample size for each estimated model varies from 80,179 to 56,050 cases. Table 25 reports the estimation results for contemporaneous inequality of net income. The coefficients are positive and often statistically significant. No significant results are obtained in the case of the Gini of gross income.

Table 25. Coefficients of contemporary Gini-net for work-duty

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.066***	0.076**	0.079**	0.082**	0.079**	0.082**
	(3.32)	(3.04)	(3.11)	(3.03)	(2.81)	(3.11)
B + Macro	0.071***	0.084***	0.085***	0.088***	0.084***	0.091***
	(4.75)	(4.81)	(4.51)	(4.29)	(3.97)	(4.36)
B + M + Year FE	0.058*	0.065*	0.033	0.033	0.029	0.008
	(2.24)	(2.39)	(1.26)	(1.25)	(1.07)	(0.20)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 26. Coefficients of contemporary Gini-gross for work-duty

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.012	0.017	0.021	0.023	0.023	0.017
	(0.56)	(0.75)	(0.83)	(0.88)	(0.83)	(0.67)
B + Macro	0.009	0.016	0.022	0.023	0.023	0.017
	(0.36)	(0.56)	(0.75)	(0.79)	(0.75)	(0.58)
B + M + Year FE	-0.017	-0.013	-0.017	-0.015	-0.016	-0.025
	(-0.54)	(-0.40)	(-0.60)	(-0.52)	(-0.55)	(-0.97)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Results from lagged inequality data are exhibited in Tables 27 and 28. As in the case of the two other proxies, the sign of the coefficients is reversed when applied to the ten-yearlagged measure of inequality. Differently from those two proxies, the sign stays mostly negative when the twenty-year-lagged Gini is used (Tables 29 and 30).

Table 27. Coefficients of ten-year-lags Gini-net for work-duty

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.011	-0.007	-0.009	-0.008	-0.007	-0.013
	(-1.05)	(-0.60)	(-0.84)	(-0.76)	(-0.62)	(-1.28)
B + Macro	-0.029	-0.038	-0.036	-0.036	-0.034	-0.045
	(-1.23)	(-1.53)	(-1.36)	(-1.39)	(-1.30)	(-1.35)
B + M + Year FE	-0.044^{+}	-0.056*	-0.027	-0.026	-0.023	-0.016
	(-1.71)	(-2.10)	(-1.17)	(-1.12)	(-0.99)	(-0.68)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 28. Coefficients of ten-year-lags Gini-gross for work-duty

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.003	0.007	0.006	0.007	0.007	0.006
	(0.28)	(0.74)	(0.66)	(0.73)	(0.78)	(0.60)
B + Macro	-0.005	-0.006	-0.000	-0.001	-0.000	0.000
	(-0.36)	(-0.44)	(-0.03)	(-0.07)	(-0.02)	(0.01)
B + M + Year FE	-0.030^{+}	-0.034*	-0.021	-0.021^{+}	-0.021^{+}	-0.026^{+}
	(-1.74)	(-2.03)	(-1.56)	(-1.67)	(-1.68)	(-1.72)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 29. Coefficients of twenty-year-lags Gini-net for work-duty

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.006	0.005	0.004	0.004	0.003	-0.004
	(0.37)	(0.26)	(0.23)	(0.25)	(0.19)	(-0.28)
B + Macro	-0.031	-0.030	-0.035	-0.035	-0.037	-0.025
	(-1.15)	(-1.11)	(-1.32)	(-1.31)	(-1.41)	(-0.88)
B + M + Year FE	-0.011	-0.006	-0.009	-0.008	-0.010	-0.036
	(-0.45)	(-0.22)	(-0.36)	(-0.30)	(-0.41)	(-0.91)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 30. Coefficients of twenty-year-lags Gini-gross for work-duty

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.001	0.002	0.001	0.002	0.002	-0.011
	(-0.06)	(0.08)	(0.03)	(0.07)	(0.09)	(-0.48)
B + Macro	-0.049*	-0.046*	-0.048*	-0.047*	-0.048*	-0.067*
	(-2.38)	(-2.15)	(-2.26)	(-2.26)	(-2.30)	(-2.46)
B + M + Year FE	-0.038	-0.030	-0.028	-0.025	-0.027	-0.065*
	(-1.47)	(-1.33)	(-1.31)	(-1.22)	(-1.29)	(-2.14)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

The mean level of income inequality experienced by respondents when aged eighteen to twenty-five does instead produce positive coefficients. The positive statistical relation with *work-duty* is however rarely significant.

Table 31. Coefficients of Gini-net when aged 18-25 for work-duty

	(1)	(2)	(3)	(4)	(5)	(6)
Basic	0.007	0.007	0.007	0.008	0.009	0.007
	(1.02)	(0.93)	(1.00)	(1.10)	(1.15)	(0.96)
B + Macro	0.010	0.008	0.010	0.010	0.010	0.010
	(1.34)	(1.11)	(1.23)	(1.36)	(1.28)	(1.27)
B + M + Year FE	0.011	0.009	0.011	0.011	0.011	0.010
	(1.46)	(1.21)	(1.37)	(1.50)	(1.43)	(1.24)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 32. Coefficients of Gini-gross when aged 18-25 for work-duty

	(1)	(2)	(3)	(4)	(5)	(6)
Basic	0.010	0.009	0.010	0.010	0.011	0.010
	(1.47)	(1.34)	(1.38)	(1.49)	(1.49)	(1.39)
B + Macro	0.013^{+}	0.010	0.012	0.012^{+}	0.011	0.012^{+}
	(1.80)	(1.49)	(1.61)	(1.74)	(1.61)	(1.76)
B + M + Year FE	0.014*	0.011	0.012^{+}	0.013^{+}	0.012^{+}	0.011^{+}
	(1.97)	(1.62)	(1.78)	(1.92)	(1.80)	(1.71)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Results from IV-estimations are ambiguous and do not reveal a problem of endogeneity – see Table 33.

Table 33. IV Coefficients of Gini-net for work-duty-agree

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	x				
	x				
p_exog	x				
B + Macro	-0.552	-0.679	-0.831	-0.869	x
	(-0.10)	(-0.09)	(-0.16)	(-0.16)	x
p_exog	0.929	0.946	0.922	0.929	x
B + M + Year FE	-0.005	0.011	-0.037	-0.034	-0.045
	(-0.06)	(0.14)	(-0.40)	(-0.38)	(-0.47)
p_exog	0.395	0.472	0.390	0.415	0.385

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

There are some contradictory results for the relation of work-duty and income inequality. If anything, there is a positive relationship between levels of inequality and the probability to consider work a duty towards society.

4.4. Conclusion on Inequality and Work Ethic

Does income inequality have an effect on the work ethic of the population? Even after a careful analysis of the data, this question is difficult to answer. Inequality of net incomes in the same year definitively seems to have a positive effect on the work ethic of individuals. This is observed for all three proxies used (Tables 5, 15, and 25). However, when past inequality is considered as a driver of value systems, results are mixed. In particular, income inequality ten years before the surveys were conducted seems to have rather a negative effect on current

work ethic. Income inequality twenty years before the survey and at the time the respondent was aged 17 to 25 are positively correlated with work ethic but the effect is mostly not significant.

Instrumental variables estimations, employed to account for endogeneity, do not contradict those for the contemporary Gini coefficient. In almost all cases, the Wald test of exogeneity is not rejected, i.e. endogeneity does not seem to be a major problem. If anything, the current results suggest that it is inequality of net incomes rather than inequality of gross incomes that matters for the work ethic of the population. Growing income disparities today and twenty years ago are associated with a stronger work ethic.

5. Civism

Civism refers to that part of an individual's value system that evaluates behavior towards the polity. It shapes attitudes about complying with rules and laws independently of their enforcement through police and tribunals. Civic virtues include paying taxes, rejecting bribes, testifying before courts, and voting on political elections.

As a general presumption, stronger civic virtues are thought to favour macroeconomic performance since more cooperation obtains at lower social costs. In a recent contribution, Guiso et al. (2010) indeed propose a concept of civic capital and argue that civic capital can explain persisting differences in economic performance across countries. However, the notion that civic values are good for the economy does not go undisputed. Paying bribes to avoid a queue can increase overall efficiency by having those with the highest opportunity cost of time being served first. In Leviathan or predatory states, tax evasion can be necessary for economic initiative to florish. But the kind of state institutions that emerge in a country is itself likely to be the result of the values endorsed by its citizens. Conforming this, Algan and Cahuc (2009) show that countries with stronger civic virtues tend to have more generous unemployment benefits and a less strict regulations for job protection.

From WVS data one can construct four interesting proxies for civic values that emphasize different aspects of those values. All are used in the subsequent investigation of the effect of income inequality on civism. Each item refers to the justifiability of a specific behavior towards the polity. Their common part reads:

Please tell me for each of the following statements whether you think it can always be justified (1), never be justified (10), or something in between, using this card.

The single statements are:

Claiming government benefits to which you are not entitled to.

Avoiding a fare on public transport.

Cheating on taxes if you have a chance.

Someone accepting a bribe in the course of their duties.

These items will now be investigated in turn.[15]

15 Knack and Keefer (1997) used cheating on benefits, on taxes and on fares and other variables to construct a measure of civic cooperation to proxy for social capital. Östling (2009) uses those items to proxy for moral values. Other papers that employed those items are Halla et al. (2010), Heinemann (2008), Schneider and Torgler (2006), and You and Khagram (2005).

5.1. Justify-govbenefit

To begin with, civism is measured by the respondent's attitude towards the justifiability of claiming government benefits to which one is not entitled to. A higher number in a scale from 1 to 10 indicates stronger civic values. Table 34 shows the mean of the resulting variable, called *justify-govbenefit*, by country and wave. There is a total of 181,683 observations. The country with the lowest level of civic capital as measured by this variable is Mexico; the country with the highest level is Denmark.

Table 34. Mean of justify-govbenefit by country and wave

Country	*1*	*2*	*3*	*4*	*5*	*6*	Mean
Australia	9.206	.	9.294	.	9.246	.	9.257
Austria	.	9.343	.	8.908	.	8.505	8.915
Belgium	8.879	8.381	.	8.451	.	8.916	8.585
Canada	8.573	9.112	.	9.120	9.134	.	9.025
Czech Rep	.	7.188	8.207	9.194	.	8.626	8.145
Denmark	9.644	9.520	.	9.619	.	9.624	9.606
Estonia	.	8.719	8.828	7.801	.	8.388	8.430
Finland	.	6.258	8.976	8.653	8.927	9.119	8.608
France	7.567	7.533	.	7.621	7.848	7.366	7.572
Germany	.	9.062	8.787	9.002	8.878	8.960	8.953
Greece	.	.	.	6.964	.	6.879	6.915
Hungary	9.467	8.191	8.239	9.359	.	9.414	9.070
Iceland	9.335	9.228	.	9.248	.	9.501	9.328
Ireland	9.133	9.061	.	9.171	.	8.976	9.088
Italy	9.533	8.924	.	9.118	9.383	9.166	9.182
Japan	9.088	9.012	8.914	8.908	8.910	.	8.963
Luxembourg	.	.	.	8.131	.	7.898	7.997
Mexico	.	6.076	7.699	7.283	6.906	.	7.076
Netherlands	9.540	9.389	.	9.512	9.536	9.520	9.503
New Zealand	.	.	9.132	.	9.147	.	9.138
Norway	9.579	9.567	9.362	.	8.936	9.093	9.320
Poland	.	8.874	8.705	8.638	8.684	8.198	8.626
Portugal	.	8.201	.	8.946	.	8.901	8.690
South-Korea	8.888	8.796	.	.	8.365	.	8.667
Slovakia	.	6.998	7.718	8.090	.	8.065	7.693
Slovenia	.	8.192	7.620	8.180	7.996	8.405	8.100
Spain	8.647	8.425	9.078	8.617	8.473	8.334	8.556
Sweden	9.569	9.372	8.848	8.919	9.129	9.061	9.113
Switzerland	.	9.082	8.669	.	9.417	9.262	9.112
Turkey	.	9.477	.	9.761	9.394	9.628	9.575
UK	9.175	9.177	.	9.027	8.837	9.444	9.164
USA	9.267	9.057	9.374	8.831	8.818	.	9.108
Mean	9.108	8.554	8.682	8.715	8.798	8.764	8.740

Does contemporary income inequality affect civic attitudes as measured by the variable at hand? The sample size of the estimated specification varies from 162,646 to 69,784 cases. As shown by Tables 35 and 36, there is a mostly positive but hardily significant correlation of benefit moral with the level of income inequality.

Table 35. Coefficients of contemporary Gini-net for justify-govbenefit

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.015	0.019	0.024	0.022	0.022	0.007
	(-0.76)	(0.64)	(0.86)	(0.78)	(0.76)	(0.17)
OECD	-0.001	0.007	0.016	0.011	0.010	0.008
	(-0.07)	(0.35)	(1.06)	(0.63)	(0.57)	(0.39)
B + M + Year FE	-0.020	0.031	0.037*	0.038+	0.035+	0.018
	(-1.61)	(1.50)	(1.97)	(1.78)	(1.67)	(0.73)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 36. Coefficients of contemporary Gini-gross for justify-govbenefit

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.010	-0.003	0.002	0.002	0.002	0.006
	(-0.99)	(-0.17)	(0.09)	(0.11)	(0.10)	(0.37)
B + Macro	0.002	-0.004	0.004	-0.002	-0.002	0.000
	(0.20)	(-0.40)	(0.47)	(-0.18)	(-0.19)	(0.01)
B + M + Year FE	0.001	0.003	0.007	0.008	0.008	0.008
	(0.10)	(0.29)	(0.81)	(0.68)	(0.67)	(0.56)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Results are also ambiguous for ten-year lags of inequality data, with positive and negative coefficients and very little statistical significance. If instead the Gini coefficients from twenty years ago are used, there is a mostly positive, mostly significant relation with benefit morals.

Table 37. Coefficients of ten-year-lags of Gini-net for justify-govbenefit

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.001	-0.011	-0.015	-0.023*	-0.022*	-0.015
	(-0.11)	(-0.91)	(-1.17)	(-2.35)	(-2.29)	(-0.85)
B + Macro	0.015	0.027+	0.023+	0.008	0.008	0.006
	(0.92)	(1.89)	(1.75)	(0.52)	(0.48)	(0.31)
B + M + Year FE	0.006	-0.008	-0.022	-0.026	-0.025	-0.013
	(0.39)	(-0.42)	(-1.12)	(-1.29)	(-1.22)	(-0.73)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 38. Coefficients of ten-year-lags of Gini-gross for justify-govbenefit

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.000	-0.006	-0.009	-0.012	-0.011	-0.007
	(0.04)	(-0.70)	(-1.01)	(-1.45)	(-1.40)	(-0.62)
B + Macro	0.005	0.014	0.012	0.003	0.002	-0.009
	(0.43)	(1.43)	(1.28)	(0.30)	(0.27)	(-0.68)
B + M + Year FE	-0.012	-0.012	-0.019*	-0.017*	-0.018*	-0.008
	(-0.93)	(-1.31)	(-2.26)	(-2.08)	(-2.07)	(-0.90)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 39. Coefficients of twenty-year-lags of Gini-net for justify-govbenefit

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.048**	0.044+	0.038	0.053**	0.052**	0.045+
	(2.71)	(1.87)	(1.47)	(2.67)	(2.64)	(1.93)
B + Macro	0.031+	0.033*	0.028*	0.034*	0.033*	0.022*
	(1.75)	(2.32)	(2.41)	(2.55)	(2.48)	(2.00)
B + M + Year FE	0.038*	0.017	0.017	0.030*	0.030*	0.015+
	(2.31)	(1.24)	(1.29)	(2.36)	(2.35)	(1.77)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 40. Coefficients of twenty-year-lags of Gini-gross for justify-govbenefit

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.001	0.037*	0.032+	0.032+	0.032+	0.024
	(0.08)	(2.13)	(1.73)	(1.71)	(1.74)	(1.14)
B + Macro	-0.014	0.033*	0.028*	0.027*	0.027*	0.012
	(-0.81)	(2.31)	(2.36)	(2.16)	(2.18)	(1.25)
B + M + Year FE	-0.006	0.029**	0.026**	0.026*	0.026**	0.015**
	(-0.44)	(2.77)	(2.62)	(2.56)	(2.60)	(2.62)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Results are reversed if one looks at the effect of inequality when aged eighteen to twenty-five. In that case, more inequality is found to be harmful for civism and the effect is sometimes statistically significant.

Table 41. Coefficients of Gini-net when aged 18-25 for justify-govbenefit

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.011+	-0.010*	-0.012*	-0.011*	-0.012*	-0.010
	(-1.91)	(-2.02)	(-2.41)	(-2.42)	(-2.43)	(-1.60)
B + Macro	-0.008	-0.008	-0.009	-0.009	-0.009	-0.007
	(-1.15)	(-1.23)	(-1.49)	(-1.36)	(-1.37)	(-1.00)
B + M + Year FE	-0.010	-0.009	-0.011+	-0.009	-0.009	-0.007
	(-1.29)	(-1.55)	(-1.80)	(-1.49)	(-1.49)	(-0.96)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 42. Coefficients of Gini-gross when aged 18-25 for justify-govbenefit

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.010+	-0.009*	-0.012**	-0.011**	-0.012**	-0.009+
	(-1.95)	(-2.13)	(-2.66)	(-2.71)	(-2.74)	(-1.73)
B + Macro	-0.008	-0.007	-0.009	-0.009	-0.009	-0.007
	(-1.19)	(-1.25)	(-1.60)	(-1.54)	(-1.57)	(-1.09)
B + M + Year FE	-0.009	-0.009	-0.011+	-0.009+	-0.010+	-0.007
	(-1.31)	(-1.58)	(-1.90)	(-1.65)	(-1.68)	(-1.01)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

I now turn to the IV-estimation. The Gini coefficient of net incomes is instrumented with the ratio of the mature working population to the whole population at working age. Results are presented in Table 43. In all estimations but one, the p-values of the Wald test of exogeneity (*p_exog*) indicate no problem of endogeneity. Only in the first regression, the one with the lowest number of controls, the Gini coefficient of net incomes seems to be affected by government benefit morals. Taking that endogeneity into account suggests that income inequality is detrimental to civism as measured by the variable *justify-govbenefit-never*.

Table 43. IV Coefficients of Gini-net for justify-govbenefit-never

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	-0.123+	1.042*			
	(-1.85)	(2.09)			
p_exog	0.075	0.917			
B + Macro	-0.137	0.827	0.543	-0.656	-0.643
	(-0.61)	(0.38)	(0.32)	(-0.23)	(-0.23)
p_exog	0.546	0.844	0.797	0.865	0.863
B + M + Year FE	-0.274	0.033	0.023	0.022	0.025
	(-0.81)	(0.39)	(0.28)	(0.25)	(0.28)
p_exog	0.463	0.869	0.991	0.995	0.960

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Overall, results for *justify-govbenefit* are quite inconclusive. Estimated coefficients displayboth positive and negative signs and mostly fail to be statistically significant.

5.2. Justify-nofare

The second proxy for a respondent's civism deals with the illegal use of public transportation. Table 44 shows the mean of the variable *justify-nofare* constructed as of above by country and wave. Mexico displays again the weakest civic values; Japan displays in this case the strongest ones. There are 170,824 observations for *justify-nofare*.

Table 44. *Mean of justify-nofare by country and wave*

country	*1*	*2*	*3*	*4*	*5*	*6*	Mean
Australia	8.635	.	8.922	.	8.665	.	8.770
Austria	.	9.131	.	8.739	.	8.126	8.661
Belgium	8.834	8.541	.	8.608	.	8.528	8.599
Canada	8.656	8.874	.	8.770	8.778	.	8.778
Czech Rep	.	8.875	7.794	8.048	.	7.830	8.204
Denmark	9.223	9.244	.	9.228	.	9.143	9.203
Estonia	.	8.716	7.974	.	.	8.623	8.465
Finland	.	8.782	8.692	8.502	8.723	8.379	8.596
France	8.338	8.376	.	8.324	8.158	8.490	8.348
Germany	.	8.922	7.888	9.043	8.780	8.594	8.679
Greece	.	.	.	7.567	.	8.515	8.114
Hungary	9.309	7.718	7.230	.	.	8.249	8.325
Iceland	8.647	8.149	.	.	.	8.276	8.380
Ireland	8.440	8.762	.	.	.	8.062	8.428
Italy	9.207	8.906	.	8.832	8.906	8.678	8.895
Japan	9.406	9.476	9.438	9.377	9.419	.	9.420
Luxembourg	.	.	.	8.340	.	8.210	8.265
Mexico	.	6.796	7.641	7.208	6.687	.	7.146
Netherlands	8.540	8.767	.	8.236	8.982	8.622	8.629
New Zealand	.	.	8.953	.	8.941	.	8.948
Norway	9.449	9.300	9.066	.	8.716	8.732	9.064
Poland	.	9.124	9.035	.	8.502	8.019	8.615
Portugal	.	8.134	.	.	.	8.986	8.618
South-Korea	8.923	8.227	8.357	8.254	8.210	.	8.369
Slovakia	.	8.232	7.388	.	.	7.808	7.813
Slovenia	.	8.504	8.246	.	7.779	8.632	8.322
Spain	8.541	8.652	9.034	8.778	8.594	8.071	8.602
Sweden	9.395	9.014	8.115	.	8.269	7.778	8.491
Switzerland	.	9.301	8.717	.	9.195	8.834	9.021
Turkey	.	9.040	.	.	9.145	9.614	9.353
UK	8.750	8.929	.	8.368	8.618	8.683	8.693
USA	9.015	8.841	9.130	8.357	8.556	.	8.831
Mean	8.887	8.702	8.426	8.499	8.576	8.495	8.596

The sample size for each estimated model varies, ranging from 152,637 to 62,969 cases. The estimated coefficients for the contemporary level of inequality are mostly positive. The relation between *justify-nofare* and the Gini of net income is often statistically significant if macro controls are included.

Table 45. Coefficients of contemporary Gini-net for justify-nofare

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.060***	0.039	0.042	0.036	0.033	0.070*
	(-3.54)	(1.27)	(1.46)	(1.14)	(1.05)	(2.05)
B + Macro	0.003	0.055*	0.071***	0.071***	0.068***	0.072***
	(0.22)	(2.21)	(3.69)	(3.60)	(3.38)	(4.58)
B + M + Year FE	0.012	0.099***	0.102***	0.070***	0.067***	0.035
	(0.66)	(5.21)	(5.72)	(3.55)	(3.53)	(1.26)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 46. Coefficients of contemporary Gini-gross for justify-nofare

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.030**	0.019	0.027+	0.030+	0.029+	0.035*
	(-2.67)	(1.09)	(1.70)	(1.94)	(1.93)	(2.25)
B + Macro	0.007	0.016	0.030**	0.031**	0.031**	0.029**
	(0.76)	(1.15)	(2.86)	(2.79)	(2.75)	(2.86)
B + M + Year FE	0.020+	0.025	0.030*	0.010	0.011	-0.015
	(1.74)	(1.64)	(2.07)	(0.78)	(0.84)	(-0.89)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

The estimated relation for ten-year-lagged inequality is mostly negative, with a few coefficients being significant. For twenty-year lags, results fail to be statistically significant.

Table 47. Coefficients of ten-year-lags Gini-net for justify-nofare

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.023	-0.019	-0.023	-0.019	-0.017	-0.044*
	(-1.36)	(-1.02)	(-1.18)	(-0.98)	(-0.92)	(-2.04)
B + Macro	0.012	0.003	-0.011	-0.007	-0.006	-0.020
	(0.74)	(0.15)	(-0.70)	(-0.46)	(-0.37)	(-0.80)
B + M + Year FE	0.005	-0.038*	-0.043**	-0.029+	-0.026	-0.035+
	(0.32)	(-2.33)	(-2.98)	(-1.79)	(-1.60)	(-1.80)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 48. Coefficients of ten-year-lags Gini-gross for justify-nofare

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.022*	-0.015	-0.018	-0.014	-0.013	-0.025+
	(-2.24)	(-1.35)	(-1.64)	(-1.22)	(-1.17)	(-1.94)
B + Macro	-0.009	-0.002	-0.010	-0.008	-0.008	-0.029
	(-0.86)	(-0.15)	(-0.82)	(-0.63)	(-0.60)	(-1.43)
B + M + Year FE	-0.018	-0.041***	-0.043***	-0.027*	-0.027*	-0.027*
	(-1.58)	(-3.39)	(-4.00)	(-2.24)	(-2.14)	(-2.44)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 49. Coefficients of twenty-year-lags Gini-net for justify-nofare

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.046	0.018	0.007	0.021	0.022	0.013
	(1.56)	(0.60)	(0.24)	(0.62)	(0.65)	(0.32)
B + Macro	0.025	0.012	-0.003	0.002	0.003	-0.008
	(1.16)	(0.55)	(-0.13)	(0.07)	(0.13)	(-0.30)
B + M + Year FE	0.024	0.002	-0.007	0.012	0.012	-0.008
	(1.15)	(0.10)	(-0.38)	(1.00)	(1.17)	(-1.02)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Coefficients of twenty-year-lags of Net-Gini-lag20 from ologit estimations on the sample of OECD countries

Table 50. Coefficients of twenty-year-lags Gini-gross for justify-nofare

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.046	0.018	0.007	0.021	0.022	0.013
	(1.56)	(0.60)	(0.24)	(0.62)	(0.65)	(0.32)
B + Macro	0.025	0.012	-0.003	0.002	0.003	-0.008
	(1.16)	(0.55)	(-0.13)	(0.07)	(0.13)	(-0.30)
B + M + Year FE	0.024	0.002	-0.007	0.012	0.012	-0.008
	(1.15)	(0.10)	(-0.38)	(1.00)	(1.17)	(-1.02)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Coefficients of twenty-year-lags of Gross-Gini-lag20 from ologit estimations on the sample of OECD countries

The effect of inequality when aged eighteen to twenty-five is exhibited by Tables 51 and 52. There is a mostly negative, but insignificant relation between the mean level of the Gini of gross- and net income while the respondent was young and *justify-nofare*.

Table 51. Coefficients of Gini-net when aged 18-25 for justify-nofare

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.010	-0.006	-0.006	-0.005	-0.005	-0.004
	(-1.37)	(-0.86)	(-0.88)	(-0.68)	(-0.68)	(-0.51)
B + Macro	0.000	-0.003	-0.004	-0.003	-0.003	-0.001
	(0.03)	(-0.39)	(-0.61)	(-0.41)	(-0.44)	(-0.07)
B + M + Year FE	0.000	-0.004	-0.005	-0.004	-0.005	-0.002
	(0.04)	(-0.58)	(-0.66)	(-0.59)	(-0.60)	(-0.27)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 52. Coefficients of Gini-gross when aged 18-25 for justify-nofare

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.009	-0.006	-0.006	-0.005	-0.005	-0.003
	(-1.34)	(-0.87)	(-0.88)	(-0.66)	(-0.72)	(-0.44)
B + Macro	0.000	-0.002	-0.004	-0.003	-0.003	0.000
	(0.05)	(-0.37)	(-0.55)	(-0.36)	(-0.45)	(0.04)
B + M + Year FE	0.000	-0.004	-0.004	-0.004	-0.005	-0.002
	(0.05)	(-0.57)	(-0.62)	(-0.58)	(-0.65)	(-0.22)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

IV-estimation results are shown in Table 43. In all estimations but one, the p-values of the Wald test of exogeneity (*p_exog*) indicate no problem of endogeneity. Only in the first regression, the one with the lowest number of controls, the Gini coefficient of net incomes seems to be affected by government benefit morals. Taking that endogeneity into account suggests that income inequality is detrimental to civism as measured by the variable *justifynofare-never*.

Table 53. IV Coefficients of Gini-net for justify-nofare-never

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	-0.197**				
	(-2.78)				
p_exog	0.014				
B + Macro	-0.230	-0.743			
	(-1.57)	(-0.47)			
p_exog	0.144	0.773			
B + M + Year FE	-0.302+	0.410	0.279	0.296	0.275
	(-1.74)	(0.49)	(0.38)	(0.54)	(0.54)
p_exog	0.108	0.694	0.778	0.656	0.654

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

In sum, there is a positive relation between contemporary levels of inequality and the moral attitude towards paying for public transport. However, if lagged variables, the inequality experience when young or IV estimations are observed, a mostly negative effect of income inequality on the probability to find cheating on fares in public transport acceptable, is found. IV-estimations tend to contradict the results from regressions that use contemporary levels of inequality as a regressor.

5.3. Justify-taxcheat

The third proxy for civic virtue is constructed from the survey question about cheating on taxes. In Table 54 the mean of *justify-taxcheat* by country and wave is depicted. The country with the weakest civism in this respect is Belgium; Turkey has the strongest civism according to this measure. There is a maximum of 182,487 observations for *justify-taxcheat*.

Table 54. Mean of justify-taxcheat by country and wave

country	*1*	*2*	*3*	*4*	*5*	*6*	Mean
Australia	7.927	.	8.843	.	8.965	.	8.641
Austria	.	9.026	.	8.900	.	8.435	8.785
Belgium	7.679	6.894	.	7.389	.	7.814	7.332
Canada	8.756	8.600	.	8.984	9.186	.	8.911
Czech Rep	.	9.185	8.020	8.977	.	8.515	8.768
Denmark	8.489	8.555	.	8.995	.	9.188	8.835
Estonia	.	8.920	7.627	7.824	.	8.723	8.327
Finland	.	7.843	8.433	8.454	8.858	9.072	8.603
France	7.555	7.918	.	7.965	8.176	8.530	8.049
Germany	.	8.435	8.014	8.629	8.861	9.028	8.576
Greece	.	.	.	7.843	.	8.585	8.271
Hungary	.	7.907	8.598	8.915	.	9.369	8.793
Iceland	8.467	8.447	.	8.773	.	9.024	8.683
Ireland	7.623	8.259	.	8.710	.	8.684	8.286
Italy	9.094	8.466	.	8.608	8.824	8.746	8.708
Japan	9.522	9.520	9.491	9.537	9.544	.	9.524
Luxembourg	.	.	.	7.650	.	8.308	8.029
Mexico	.	7.199	7.918	8.693	8.375	.	8.029
Netherlands	7.810	8.038	.	8.262	8.737	8.739	8.344
New Zealand	.	.	8.698	.	8.835	.	8.757
Norway	7.665	7.904	8.287	.	8.718	8.668	8.234
Poland	.	8.284	8.514	8.860	8.545	8.374	8.478
Portugal	.	7.182	.	8.564	.	8.855	8.247
South-Korea	9.444	9.452	9.213	9.409	9.336	.	9.367
Slovakia	.	8.873	7.740	8.852	.	8.669	8.561
Slovenia	.	8.971	8.185	8.663	8.630	9.015	8.714
Spain	8.148	8.392	9.082	8.750	8.937	8.574	8.555
Sweden	9.196	8.535	8.419	8.575	8.706	8.679	8.665
Switzerland	.	8.628	8.354	.	8.918	8.828	8.684
Turkey	.	9.755	.	9.820	9.661	9.713	9.730
UK	8.171	8.476	.	8.569	8.709	9.157	8.643
USA	8.880	9.052	9.315	8.777	9.045	.	9.011
Mean	8.402	8.412	8.477	8.637	8.903	8.789	8.605

The sample size for each estimated model varies, ranging from 164,746 to 70,093 cases. Results for contemporary inequality are contradictory, see Tables 55 and 56.

Table 55. Coefficients of contemporary Gini-net for justify-taxcheat

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.036**	0.021	0.017	0.016	0.018	0.004
	(2.79)	(1.56)	(1.14)	(1.00)	(1.14)	(0.23)
B + Macro	0.014	0.017	0.010	-0.010	-0.008	-0.056**
	(0.74)	(0.88)	(0.51)	(-0.48)	(-0.40)	(-2.98)
B + M + Year FE	0.017	-0.002	-0.003	0.002	0.005	-0.022
	(0.92)	(-0.11)	(-0.17)	(0.12)	(0.26)	(-1.31)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 56. Coefficients of contemporary Gini-gross for justify-taxcheat

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.006	0.015	0.016	0.015	0.015	0.014
	(0.49)	(0.78)	(0.78)	(0.69)	(0.66)	(0.59)
B + Macro	0.012	0.018	0.022	0.013	0.013	0.010
	(1.04)	(0.86)	(1.01)	(0.53)	(0.53)	(0.36)
B + M + Year FE	0.000	-0.002	-0.000	-0.007	-0.007	-0.011
	(0.03)	(-0.18)	(-0.03)	(-0.40)	(-0.38)	(-0.51)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Unfortunately, no clear effect is detected for inequality levels in the past (Tables 57 – 62).

Table 57. Coefficients of ten-year-lags Gini-net for justify-taxcheat

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.036**	0.021	0.017	0.016	0.018	0.004
	(2.79)	(1.56)	(1.14)	(1.00)	(1.14)	(0.23)
OECD	0.014	0.017	0.010	-0.010	-0.008	-0.056**
	(0.74)	(0.88)	(0.51)	(-0.48)	(-0.40)	(-2.98)
B + M + Year FE	0.017	-0.002	-0.003	0.002	0.005	-0.022
	(0.92)	(-0.11)	(-0.17)	(0.12)	(0.26)	(-1.31)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 58. Coefficients of ten-year-lags of Gini-gross for justify-taxcheat

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.026***	0.020**	0.018*	0.017*	0.019**	0.012
	(3.94)	(2.88)	(2.47)	(2.42)	(2.65)	(1.50)
B + Macro	0.013	0.022	0.018	0.005	0.006	-0.021
	(1.02)	(1.51)	(1.17)	(0.37)	(0.42)	(-1.30)
B + M + Year FE	-0.005	-0.017	-0.023+	-0.020	-0.020	-0.039**
	(-0.35)	(-1.29)	(-1.69)	(-1.45)	(-1.45)	(-3.23)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 59. Coefficients of twenty-year-lags of Gini-net for justify-taxcheat

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.012	-0.011	-0.014	0.001	0.000	-0.008
	(-0.51)	(-0.41)	(-0.47)	(0.03)	(0.00)	(-0.25)
B + Macro	-0.016	-0.019	-0.021	-0.002	-0.002	-0.032
	(-0.68)	(-0.71)	(-0.74)	(-0.07)	(-0.07)	(-1.31)
B + M + Year FE	0.013	0.019	0.021	0.025	0.025	0.010
	(0.64)	(1.09)	(1.13)	(1.33)	(1.27)	(0.50)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 60. Coefficients of twenty-year-lags of Gini-gross for justify-taxcheat

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.021	0.002	-0.001	0.003	0.004	-0.002
	(-1.49)	(0.09)	(-0.08)	(0.17)	(0.22)	(-0.09)
B + Macro	-0.023+	-0.002	-0.005	-0.005	-0.004	-0.029+
	(-1.74)	(-0.10)	(-0.26)	(-0.31)	(-0.28)	(-1.88)
B + M + Year FE	-0.010	0.017+	0.016	0.018+	0.018+	0.007
	(-0.78)	(1.74)	(1.55)	(1.69)	(1.72)	(0.58)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 61. Coefficients of Gini-net when aged 18-25 for justif-taxcheat

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.010*	0.005	0.005	0.004	0.004	0.002
	(2.10)	(1.23)	(1.29)	(1.08)	(1.10)	(0.43)
B + Macro	0.006	0.002	0.003	0.001	0.001	-0.002
	(1.33)	(0.51)	(0.62)	(0.18)	(0.18)	(-0.51)
B + M + Year FE	0.005	-0.000	-0.000	-0.000	-0.000	-0.001
	(1.10)	(-0.11)	(-0.08)	(-0.02)	(-0.02)	(-0.26)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 62. Coefficients of Gini-gross when aged 18-25 for justify-taxcheat

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.010*	0.007+	0.007+	0.007+	0.006+	0.005
	(2.42)	(1.72)	(1.93)	(1.75)	(1.71)	(1.31)
B + Macro	0.008+	0.004	0.005	0.003	0.003	0.001
	(1.69)	(0.94)	(1.22)	(0.77)	(0.70)	(0.29)
B + M + Year FE	0.006	0.001	0.002	0.002	0.002	0.002
	(1.50)	(0.35)	(0.63)	(0.57)	(0.49)	(0.53)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Instrumenting the Gini coefficient with "mature" does not yield clearcut results, see Table 63.

Table 63. IV Coefficients of Gini-net for justify-taxcheat-never

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	0.016	0.242	0.277	0.198	0.212
	(0.22)	(0.36)	(0.37)	(0.61)	(0.61)
p_exog	0.793	0.782	0.769	0.653	0.643
B + Macro	-0.174	0.180	0.299	0.214	0.223
	(-0.72)	(0.32)	(0.36)	(0.38)	(0.39)
p_exog	0.434	0.814	0.774	0.764	0.758
B + M + Year FE	-0.339	0.003	-0.020	-0.008	-0.009
	(-1.00)	(0.02)	(-0.06)	(-0.02)	(-0.03)
p_exog	0.348	0.881	0.888	0.919	0.920

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Given the above results, no clear relation between the inequality of incomes and tax morals can be identified.

5.4. Justify-bribe

The final proxy for civic values is the justifiability of accepting bribes. In Table 64 the mean of *justify-bribe* by country and wave is presented. The lowest civic capital is observed in Slovenia, the highest one in Denmark. There is a maximum of 186,620 observations.

Table 64. Mean of justify-bribe by country and wave

country	*1*	*2*	*3*	*4*	*5*	*6*	Mean
Australia	9.325	.	9.731	.	9.518	.	9.561
Austria	.	9.401	.	9.430	.	9.078	9.302
Belgium	8.702	8.650	.	9.023	.	9.014	8.834
Canada	9.340	9.384	.	9.449	9.454	.	9.416
Czech Rep	.	8.806	8.719	8.820	.	8.432	8.713
Denmark	9.791	9.788	.	9.854	.	9.804	9.808
Estonia	.	9.072	9.493	9.074	.	9.479	9.304
Finland	.	9.431	9.587	9.560	9.402	9.722	9.553
France	8.384	8.888	.	8.923	8.809	9.086	8.838
Germany	.	9.080	9.087	9.065	9.291	9.152	9.129
Greece	.	.	.	9.073	.	9.209	9.152
Hungary	9.139	8.298	7.306	8.413	.	9.083	8.635
Iceland	9.614	9.589	.	9.731	.	9.782	9.682
Ireland	9.482	9.666	.	9.596	.	8.994	9.439
Italy	.	.	.	9.575	.	.	9.575
Japan	8.984	9.334	.	9.498	9.681	9.426	9.379
Luxembourg	9.126	9.211	9.421	9.472	9.460	.	9.345
Mexico	.	.	.	9.177	.	9.282	9.238
Netherlands	.	8.248	8.450	8.872	8.564	.	8.522
New Zealand	8.990	9.215	.	9.436	9.448	9.527	9.333
Norway	.	.	9.543	.	9.550	.	9.546
Poland	9.651	9.541	9.679	.	9.481	9.590	9.589
Portugal	.	9.441	9.630	9.474	9.615	8.925	9.391
South-Korea	.	9.313	.	9.217	.	9.302	9.282
Slovakia	8.912	9.189	9.494	9.582	9.409	.	9.336
Slovenia	.	8.517	8.384	8.076	.	8.508	8.382
Spain	.	9.327	9.170	9.224	9.141	9.441	9.273
Sweden	9.418	9.522	9.581	9.346	9.181	9.504	9.441
Switzerland	9.400	9.363	9.205	9.149	9.016	8.936	9.169
Turkey	.	9.407	9.412	.	9.481	9.474	9.443
UK	.	9.804	.	9.880	9.718	9.769	9.786
USA	9.294	9.485	.	9.220	9.347	9.568	9.405
	9.502	9.535	9.783	9.440	9.413	.	9.541
Mean							

Sample size varies in this case from 167,462 to 70,187 cases. Basic results from contemporary inequality data show that for the Gini of net incomes there is a consistent negative relation with justify-bribe, with some statistical significance. So, in this case growing income disparities seem to be harmful for civic virtues.

Table 65. Coefficients of contemporary Gini-net for justify-bribe

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.004	-0.005	-0.001	-0.009	-0.011	-0.016
	(-0.32)	(-0.17)	(-0.06)	(-0.41)	(-0.49)	(-0.56)
OECD	0.007	-0.016	-0.009	-0.020	-0.021	-0.025
	(0.38)	(-0.50)	(-0.34)	(-0.68)	(-0.72)	(-0.81)
B + M + Year FE	-0.016	-0.043	-0.063^{+}	-0.072^{+}	-0.075^{+}	-0.066
	(-0.93)	(-1.20)	(-1.69)	(-1.85)	(-1.93)	(-0.98)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 66. Coefficients of contemporary Gini-gross for justify-bribe

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.003	-0.019	-0.014	-0.016	-0.017	-0.013
	(0.36)	(-1.17)	(-1.07)	(-1.23)	(-1.25)	(-1.06)
B + Macro	0.011	-0.028	-0.020	-0.025	-0.025	-0.031^{+}
	(0.97)	(-1.55)	(-1.35)	(-1.64)	(-1.61)	(-1.93)
B + M + Year FE	0.010	-0.037^{+}	-0.036*	-0.044*	-0.044*	-0.048*
	(0.89)	(-1.94)	(-2.15)	(-2.42)	(-2.38)	(-2.00)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Opposed to the findings for contemporaneous values, levels of income inequality ten years ago have a positive, statistically highly significant relation with *justify-bribe.* Twentyyear lagged inequalilty has no obvious relation with anti-corruption morals.

Table 67. Coefficients of ten-year-lags of Gini-net for justify-bribe

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.005	0.008	0.002	0.006	0.008	0.012
	(0.52)	(0.62)	(0.22)	(0.53)	(0.68)	(0.84)
B + Macro	0.024	0.060**	0.059**	0.071***	0.072***	0.091***
	(1.38)	(2.80)	(3.19)	(4.15)	(4.25)	(4.08)
B + M + Year FE	0.026	0.076**	0.089***	0.095***	0.097***	0.108***
	(1.44)	(3.16)	(4.47)	(4.80)	(4.98)	(4.02)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 68. Coefficients of ten-year-lags of Gini-gross for justify-bribe

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.003	0.001	-0.003	-0.001	0.000	0.002
	(0.56)	(0.10)	(-0.49)	(-0.08)	(0.06)	(0.19)
B + Macro	0.011	0.025^{+}	0.021^{+}	0.030^{+}	0.031*	0.021
	(1.10)	(1.68)	(1.67)	(1.95)	(2.04)	(0.90)
B + M + Year FE	0.012	0.037^{+}	0.031	0.035^{+}	0.035^{+}	0.022
	(0.91)	(1.82)	(1.56)	(1.68)	(1.72)	(0.86)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 69. Coefficients of twenty-year-lags of Gini-net for justify-bribe

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.006	0.016	0.008	0.013	0.012	-0.008
	(0.25)	(0.52)	(0.29)	(0.43)	(0.40)	(-0.25)
B + Macro	-0.012	-0.006	-0.015	-0.019	-0.020	-0.058*
	(-0.43)	(-0.15)	(-0.48)	(-0.54)	(-0.55)	(-2.50)
B + M + Year FE	-0.014	-0.017	-0.014	-0.020	-0.021	-0.053
	(-0.51)	(-0.51)	(-0.40)	(-0.55)	(-0.57)	(-1.43)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 70. Coefficients of twenty-year-lags of Gini-gross for justify-bribe

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.006	0.018	0.007	0.007	0.007	-0.001
	(-0.42)	(0.62)	(0.27)	(0.26)	(0.27)	(-0.04)
B + Macro	-0.010	0.016	0.006	0.002	0.002	-0.029
	(-0.68)	(0.52)	(0.23)	(0.07)	(0.07)	(-1.13)
B + M + Year FE	-0.004	0.008	0.008	0.008	0.008	-0.018
	(-0.53)	(0.40)	(0.35)	(0.36)	(0.34)	(-1.13)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Somewhat surprisingly, inequality experienced when young consistently reveals a negative relation between justify-bribe and the Gini coefficient. For most estimations, the effect is statistically significant at levels between five and ten percent. This is in line with the effect of contemporaneous inequality levels but contradicts the estimations for lagged inequality.

Table 71. Coefficients of Gini-net when aged 18-25 for justify-bribe

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.009^{+}	-0.013*	-0.016**	-0.013*	-0.013*	-0.013*
	(-1.91)	(-2.40)	(-2.74)	(-2.36)	(-2.36)	(-2.04)
B + Macro	-0.008	-0.012^{+}	-0.014*	-0.011^{+}	-0.011^{+}	-0.012^{+}
	(-1.48)	(-1.79)	(-2.07)	(-1.70)	(-1.70)	(-1.77)
B + M + Year FE	-0.009^{+}	-0.013*	-0.014*	-0.012^{+}	-0.011^{+}	-0.010
	(-1.80)	(-2.09)	(-2.22)	(-1.88)	(-1.85)	(-1.61)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 72. Coefficients of Gini-gross when aged 18-25 for justify-bribe

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.008^{+}	-0.013*	-0.015**	-0.012*	-0.012*	-0.012^{+}
	(-1.73)	(-2.35)	(-2.69)	(-2.33)	(-2.31)	(-1.95)
B + Macro	-0.007	-0.011^{+}	-0.012^{+}	-0.010	-0.010	-0.011
	(-1.20)	(-1.71)	(-1.91)	(-1.60)	(-1.58)	(-1.61)
B + M + Year FE	-0.008	-0.012*	-0.013*	-0.010^{+}	-0.010^{+}	-0.009
	(-1.44)	(-1.97)	(-2.02)	(-1.73)	(-1.69)	(-1.44)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Instrumenting the Gini coefficient with "mature" does not yield clearcut results, see Table 73.

Table 73. IV Coefficients of Gini-net for justify-bribe-never

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	0.049	-0.148	-0.048	-0.041	-0.028
	(0.77)	(-0.25)	(-0.12)	(-0.19)	(-0.13)
p_exog	0.542	0.804	0.892	0.843	0.892
B + Macro	0.160	0.164	0.368	0.279	0.287
	(0.91)	(0.22)	(0.33)	(0.35)	(0.35)
p_exog	0.381	0.817	0.759	0.733	0.729
B + M + Year FE	0.264	-0.149	-0.268	-0.295	-0.297
	(0.90)	(-0.46)	(-0.41)	(-0.41)	(-0.41)
p_exog	0.365	0.693	0.718	0.724	0.725

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Altogether, a weakly negative relationship between levels of income inequality and a civic attitude toward bribing can be observed. Higher income inequality comes with a somewhat higher probability that respondents find bribing justifiable, but this result is not stable.

5.5. Conclusion on Income Inequality and Civism

Our findings do not support the existence of a robust effect from income inequality on civism. Furthermore, how civism is proxied matters for the results. If one uses a survey question about tax morality, inequality tends to be good for civism, whereas using a question about corruption and bribing indicates that more inequality tends to reduce civism. However, even the results about single proxies are shaky and do not allow one to draw firm conclusions. One may have to accept the preliminary conclusion that income inequality is not a major determinant of civism.

6. Obedience

Obedience presupposes an authority relation. Obedience is stressed in an individual's value system if the individual attaches importance to executing the orders received from an upper layer in the relevant hierarchy, e.g. a child obeying his parents, an employee obeying the employer, a common soldier obeying an officer. When obedience carries a symbolic value, the individual feels guilty if he does not follow his superiors' instructions – independently of the content of the orders.

The implications of a taste for obedience for macroeconomic performance are varied. Obedient workers make firms more flexible since the firm can re-direct the activity of its workers as required by transitory changes in production or market conditions. Thus, for given contractual arrangements between the firm and its employees, more obedience is predicted to reduce production costs. At the aggregate level, a higher output level obtains from a given employment level.

However, being very obedient entails the risk of being exploited. If an employment contract is very incomplete, i.e. it loosely specifies the employee's tasks, and assigns authority to the employer, the latter has an incentive to use his authority to extract as much labor as possible from the employee. Knowing this, a very obedient worker has an interest to sign an employment contract where his tasks are rigidly defined so as to avoid being exploited ex post. In situations where - because of market conditions or state institutions - the bargaining power of workers is very low, this will not materialize and the firms will profit from an addomesticated, obedient, workforce. If instead workers have enough bargaining power, more respect for authority will come along with contractual arrangements that protect them from ex-post exploitation. The ensuing rigidity will tend to reduce firms' productivity. So, more obedient individuals need not be good for macroeconomc performance.

There are two survey questions in the WVS that can be used to proxy an individual's taste for obedience. Each item will now separately be presented and employed in a regression analysis.[16]

6.1. Child-Obedience

The first proxy comes from the same survey question used to capture a respondent's work ethic. Obedience is an element in a list of eleven qualities from which respondents can choose up to five. The survey question used reads:

16 Inglehart and Welzel (2005) use similar data and interpret a taste for obedience as an element of traditional value systems as opposed to modern ones. See also Maystre et al. (2009), Berry et al. (2009), and Di Tella and Dubra (2010) for papers that employ similar items.

Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five. Obedience; 0 'Not mentioned' 1 'Important'.

Table 74 shows the fraction of respondents by country and wave that indicate *childobedience* to be an important child quality. Accordingly, Japan is the country where obedience is valued the least; Mexico is the country where obedience is valued the most. There are 192,675 observations of *child-obedience* for OECD countries.

Table 74. Mean of child-obedience by country and wave

country	*1*	*2*	*3*	*4*	*5*	*6*	Mean
Australia	0.411	.	0.287	.	0.366	.	0.343
Austria	.	0.254	.	0.177	.	0.140	0.190
Belgium	0.288	0.365	.	0.421	.	0.365	0.367
Canada	0.210	0.282	.	0.311	0.313	.	0.287
Czech Rep	.	0.208	0.140	0.166	.	0.256	0.199
Denmark	0.128	0.203	.	0.144	.	0.142	0.152
Estonia	.	0.188	0.270	0.283	.	0.275	0.256
Finland	.	0.256	0.281	0.298	0.330	0.202	0.274
France	0.175	0.530	.	0.364	0.415	0.275	0.341
Germany	.	0.230	0.123	0.139	0.165	0.101	0.161
Greece	.	.	.	.	.	0.245	0.245
Hungary	0.307	0.448	0.308	0.297	.	0.416	0.360
Iceland	0.155	0.678	.	0.174	.	0.129	0.262
Ireland	0.333	0.352	.	0.479	.	0.573	0.414
Italy	0.259	0.320	.	0.278	0.261	0.316	0.291
Japan	0.061	0.101	0.063	0.043	0.051	.	0.062
Luxembourg	.	.	.	.	.	0.293	0.293
Mexico	.	0.451	0.506	0.586	0.583	.	0.529
Netherlands	0.232	0.330	.	0.254	0.413	0.293	0.301
New Zealand	.	.	0.219	.	0.241	.	0.229
Norway	0.256	0.313	0.259	.	0.287	0.195	0.264
Poland	.	0.420	0.487	0.346	0.486	0.316	0.406
Portugal	.	0.494	.	0.367	.	0.298	0.379
South-Korea	0.129	0.181	0.144	0.132	0.105	.	0.139
Slovakia	.	0.358	0.268	0.262	.	0.352	0.315
Slovenia	.	0.398	0.283	0.251	0.313	0.219	0.291
Spain	0.294	0.419	0.438	0.488	0.369	0.291	0.392
Sweden	0.133	0.249	0.159	0.122	0.162	0.163	0.159
Switzerland	.	0.210	0.262	.	0.206	0.147	0.206
Turkey	.	0.314	0.318	0.401	0.452	1.000	0.432
UK	0.358	0.417	0.509	0.468	0.461	0.418	0.435
USA	0.275	0.379	0.368	0.322	0.287	.	0.325
Mean	0.245	0.328	0.292	0.301	0.313	0.281	0.297

The sample size for each estimated model varies between 174,602 and 70,292 cases. Basic results from contemporary inequality data are exhibited in Tables 75 and 76. Results are rather inconclusive.

Table 75. Coefficients of contemporary Gini-net for child-obedience

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	-0.000	0.030	0.028	0.031	0.030	0.027
	(-0.01)	(1.04)	(1.12)	(1.24)	(1.20)	(0.88)
OECD	-0.022	0.035	0.035	0.011	0.010	0.013
	(-1.04)	(1.11)	(1.20)	(0.45)	(0.43)	(0.51)
B + M + Year FE	-0.008	0.042	0.028	0.013	0.013	0.065
	(-0.36)	(1.10)	(0.76)	(0.38)	(0.39)	(1.57)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 76. Coefficients of contemporary Gini-gross for child-obedience

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.002	0.006	0.007	0.005	0.005	0.008
	(0.17)	(0.38)	(0.46)	(0.32)	(0.32)	(0.49)
B + Macro	-0.004	0.006	0.011	-0.007	-0.007	-0.012
	(-0.25)	(0.43)	(0.74)	(-0.80)	(-0.82)	(-1.43)
B + M + Year FE	0.017	0.003	0.001	-0.014	-0.013	-0.011
	(1.16)	(0.19)	(0.05)	(-1.21)	(-1.16)	(-0.69)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Results from lagged inequality data in the Tables 77 – 82 are also inconclusive.

Table 77. Coefficients of ten-year-lags Gini-net for child-obedience

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.012	0.009	0.010	0.010	0.011	0.031
	(-0.72)	(0.37)	(0.39)	(0.38)	(0.40)	(1.46)
B + Macro	-0.009	0.008	0.016	0.005	0.007	-0.029
	(-0.42)	(0.27)	(0.56)	(0.18)	(0.28)	(-0.74)
B + M + Year FE	-0.010	-0.036	-0.016	-0.021	-0.020	-0.093***
	(-0.45)	(-0.99)	(-0.36)	(-0.47)	(-0.45)	(-3.90)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 78. Coefficients of ten-year-lags Gini-gross for child-obedience

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.022*	0.000	0.002	0.004	0.005	0.014
	(-2.10)	(0.03)	(0.14)	(0.27)	(0.31)	(1.36)
B + Macro	-0.033*	-0.005	0.003	-0.002	-0.001	-0.025
	(-2.19)	(-0.25)	(0.17)	(-0.14)	(-0.08)	(-1.39)
B + M + Year FE	-0.019	-0.028+	-0.016	-0.008	-0.010	-0.023+
	(-1.26)	(-1.91)	(-1.07)	(-0.59)	(-0.69)	(-1.78)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 79. Coefficients of twenty-year-lags of Gini-net for child-obedience

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	-0.007	-0.032	-0.043	-0.043	-0.044	-0.021
	(-0.18)	(-0.71)	(-0.98)	(-0.91)	(-0.91)	(-0.43)
B + Macro	0.031	0.009	0.001	0.019	0.021	0.016
	(1.11)	(0.34)	(0.03)	(0.77)	(0.84)	(0.56)
B + M + Year FE	0.017	0.015	0.012	0.028	0.028	0.034*
	(0.72)	(0.71)	(0.61)	(1.56)	(1.53)	(2.49)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 80. Coefficients of ten-year-lags of Gini-gross for child-obedience

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	-0.002	-0.006	-0.013	-0.014	-0.014	-0.004
	(-0.11)	(-0.21)	(-0.42)	(-0.43)	(-0.41)	(-0.12)
B + Macro	0.007	0.012	0.007	0.002	0.003	-0.009
	(0.44)	(0.76)	(0.43)	(0.14)	(0.20)	(-0.44)
B + M + Year FE	-0.008	0.006	0.007	0.006	0.006	-0.002
	(-0.52)	(0.40)	(0.43)	(0.38)	(0.38)	(-0.09)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 81. Coefficients of Gini-net when aged 18-25 for child-obedience

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.002	-0.005	-0.005	-0.004	-0.004	0.000
	(-0.39)	(-0.85)	(-0.75)	(-0.71)	(-0.70)	(0.05)
B + Macro	0.000	-0.002	-0.001	-0.000	-0.000	-0.003
	(0.10)	(-0.52)	(-0.31)	(-0.02)	(-0.03)	(-0.61)
B + M + Year FE	0.002	-0.003	-0.002	-0.001	-0.001	-0.003
	(0.71)	(-0.88)	(-0.55)	(-0.20)	(-0.24)	(-0.50)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 82. Coefficients of Gini-gross when aged 18-25 for child-obedience

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.000	-0.005	-0.005	-0.004	-0.004	0.000
	(-0.03)	(-0.81)	(-0.77)	(-0.70)	(-0.74)	(0.04)
B + Macro	0.002	-0.002	-0.001	-0.000	-0.000	-0.003
	(0.57)	(-0.48)	(-0.35)	(-0.01)	(-0.09)	(-0.76)
B + M + Year FE	0.004	-0.003	-0.002	-0.001	-0.001	-0.003
	(1.13)	(-0.85)	(-0.61)	(-0.22)	(-0.32)	(-0.65)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Results for the IV-estimations (Table 83) are insignificant and the test for exogeneitycan not be rejected.

Table 83. IV Coefficients of Gini-net for child-obedience

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	0.018	-0.304	-0.231	-0.125	-0.106
	(0.47)	(-0.29)	(-0.28)	(-0.36)	(-0.33)
p_exog	0.563	0.767	0.764	0.664	0.686
B + Macro	-0.032	-0.752	-0.715	-0.733	-0.712
	(-0.39)	(-0.67)	(-0.59)	(-0.68)	(-0.64)
p_exog	0.866	0.674	0.692	0.639	0.647
B + M + Year FE	0.002	0.862	1.039	1.098	0.981
	(0.01)	(0.79)	(0.76)	(0.66)	(0.61)
p_exog	0.984	0.582	0.682	0.755	0.714

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

6.2. Instructions-follow

The second proxy for the value attached to obedience is based on the following survey question:

People have different ideas about following instructions at work. Some say that one should follow one's superior's instructions even when one does not fully agree with them. Others say that one should follow one's superior's instructions only when one is convinced that they are right. With which of these two opinions do you agree?

1 'Follow instructions' 2 'Must be convinced first' 3 'Depends'

Accordingly, a binary variable has been constructed that is called *instructions-follow*. That variable is one if respondents answer "Fellow instructions" and zero otherwise.[17] A higher value of instructions-follow is interpreted as a higher symbolic value attached to being obedient.

Descriptive Statistic in Table 84 shows the fraction of respondents per country and survey wave which follow the instructions of their superiors without questioning them. There are 159,127 observations for *instructions-follow*. The country with the lowest taste for obedience is Slovenia; individuals with the strongest propensity to be obedient are found in the USA.

Table 84. Mean of instructions-follow by country and wave

country	*1*	*2*	*3*	*4*	*5*	*6*	Mean
Australia	.	.	0.489	.	.	.	0.489
Austria	.	0.395	.	0.248	.	0.228	0.288
Belgium	0.370	0.307	.	0.304	.	0.345	0.323
Canada	0.545	0.525	.	0.581	0.439	.	0.518
Czech Rep	.	0.172	0.245	0.313	.	0.250	0.257
Denmark	0.614	0.354	.	0.357	.	0.432	0.441
Estonia	.	0.127	0.264	0.208	.	0.249	0.216
Finland	.	0.146	0.293	0.291	.	0.158	0.230
France	0.243	0.357	.	0.334	.	0.310	0.311
Germany	.	0.424	0.260	0.394	.	0.334	0.364
Greece	.	.	.	.	.	0.405	0.405
Hungary	0.286	0.283	0.357	0.425	.	0.356	0.338
Iceland	0.477	0.380	.	0.423	.	0.327	0.406
Ireland	0.465	0.471	.	0.385	.	0.348	0.420
Italy	0.221	0.285	.	0.269	.	0.291	0.269
Japan	0.360	0.326	.	0.289	.	.	0.323
Luxembourg	.	.	.	.	.	0.318	0.318
Mexico	.	0.388	0.356	0.444	.	.	0.389
Netherlands	0.408	0.384	.	0.283	.	0.298	0.340
New Zealand	.	.	0.350	.	0.325	.	0.339
Norway	0.632	0.617	0.603	.	.	0.472	0.583
Poland	.	0.215	.	0.266	.	0.264	0.251
Portugal	.	0.460	.	0.403	.	0.313	0.383
South-Korea	0.270	0.088	0.163	0.494	.	.	0.250
Slovakia	.	0.159	0.210	0.336	.	0.370	0.297
Slovenia	.	0.195	0.224	0.187	.	0.199	0.201
Spain	0.315	0.316	0.378	0.403	.	0.283	0.336
Sweden	0.409	0.440	0.407	0.371	.	0.277	0.377
Switzerland	.	.	0.333	.	.	0.316	0.324
Turkey	.	0.268	0.233	0.387	.	0.401	0.348
UK	0.496	0.446	.	0.438	.	0.370	0.433
USA	0.673	0.620	0.665	0.647	.	.	0.653
Mean	0.430	0.357	0.348	0.369	0.406	0.318	0.360

The sample size for each model varies from 142,704 to 58,138 cases. Basic results from contemporary inequality data indicate that the Gini coefficient of net income has a statistically significant, positive relation with

17 Estimations were also performed for a binary variable that assigns one to "Must be convinced first" and zero otherwise. Since results do not vary much from those from instructions-follow, they are not reported here for the sake of brevity.

instructions-follow. In countries with a more unequal distribution, respondents are more likely to uncritically follow the instructions of their superiors.

Table 85. Coefficients of contemporary Gini-net for instructions-follow

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	0.011	0.052*	0.058*	0.082+	0.080+	0.046+
	(0.67)	(2.12)	(2.25)	(1.95)	(1.92)	(1.93)
OECD	0.006	0.046+	0.051+	0.082*	0.079*	0.060*
	(0.34)	(1.89)	(1.91)	(2.10)	(2.05)	(2.48)
B + M + Year FE	-0.001	0.080**	0.073**	0.079**	0.076**	0.072*
	(-0.07)	(3.18)	(2.85)	(3.11)	(3.04)	(2.56)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*
Coefficients of Net-Gini from logit estimations on the sample of OECD countries

Table 86. Coefficients of contemporary Gini-gross for instructions-follow

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.004	0.004	0.010	0.015	0.016	0.023***
	(-0.47)	(0.27)	(0.69)	(1.03)	(1.12)	(3.30)
B + Macro	-0.009	-0.001	0.007	0.015	0.015	0.025**
	(-0.84)	(-0.04)	(0.51)	(1.29)	(1.28)	(3.18)
B + M + Year FE	-0.000	0.014	0.014	0.016	0.016	0.021+
	(-0.07)	(0.97)	(1.05)	(1.24)	(1.29)	(1.80)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*
Coefficients of Gross-Gini from logit estimations on the sample of OECD countries

Results for historical inequality values contradict those for contemporaneous values. Coefficients are negative for ten and twenty-year-lags for gross and net-gini. Results are often significant.

Table 87. Coefficients of ten-year-lags of Gini-net for instructions-follow

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	-0.030*	-0.025	-0.027	-0.022	-0.021	-0.001
	(-1.97)	(-1.19)	(-1.19)	(-1.10)	(-1.07)	(-0.05)
B + Macro	-0.033	-0.080*	-0.075*	-0.070*	-0.071*	-0.072**
	(-1.39)	(-2.53)	(-2.17)	(-1.99)	(-2.11)	(-2.71)
B + M + Year FE	-0.017	-0.087***	-0.096***	-0.088***	-0.086***	-0.083***
	(-1.35)	(-5.11)	(-4.89)	(-5.45)	(-5.32)	(-5.12)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 88. Coefficients of ten-year-lags of Gini-gross for instructions-follow

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.015	-0.008	-0.008	-0.003	-0.002	0.007
	(-1.50)	(-0.63)	(-0.59)	(-0.25)	(-0.19)	(0.79)
B + Macro	-0.031*	-0.057**	-0.051*	-0.041+	-0.042+	-0.037*
	(-2.06)	(-2.91)	(-2.33)	(-1.73)	(-1.84)	(-2.17)
B + M + Year FE	-0.013	-0.045***	-0.042***	-0.039***	-0.039***	-0.041**
	(-1.53)	(-3.43)	(-3.53)	(-3.30)	(-3.36)	(-2.99)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 89. Coefficients of twenty-year-lags of Gini-net for instructions-follow

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	0.014	0.003	0.001	-0.035	-0.033	-0.011
	(0.71)	(0.11)	(0.05)	(-1.15)	(-1.11)	(-0.34)
B + Macro	0.027	-0.041	-0.043	-0.078	-0.077	-0.004
	(0.96)	(-0.67)	(-0.67)	(-0.89)	(-0.89)	(-0.07)
B + M + Year FE	0.022	-0.019	-0.009	-0.004	-0.004	-0.011
	(0.99)	(-0.80)	(-0.35)	(-0.15)	(-0.16)	(-0.46)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 90. Coefficients of twenty-year-lags of Gini-gross for instructions-follow

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.005	-0.016	-0.018	-0.032*	-0.031*	-0.033+
	(0.50)	(-1.01)	(-1.15)	(-2.04)	(-1.98)	(-1.89)
B + Macro	0.007	-0.142***	-0.147***	-0.145***	-0.143***	-0.113***
	(0.56)	(-4.64)	(-4.60)	(-4.12)	(-4.08)	(-4.13)
B + M + Year FE	0.016	-0.076***	-0.076***	-0.076***	-0.074***	-0.101***
	(1.16)	(-5.13)	(-4.76)	(-4.75)	(-4.66)	(-5.64)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

For inequality levels when young, no robust association between the level of Gini coefficients and *instructions-follow* can be identified. Estimated coefficients often change the sign and are insignificant.

Table 91. Coefficients of Gini-net when aged 18-25 for instructions-follow

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.001	-0.005	-0.006	-0.002	-0.001	0.004
	(0.19)	(-0.74)	(-0.83)	(-0.37)	(-0.21)	(0.69)
B + Macro	-0.001	-0.007	-0.007	-0.003	-0.002	0.001
	(-0.11)	(-1.34)	(-1.37)	(-0.66)	(-0.46)	(0.20)
B + M + Year FE	0.003	-0.004	-0.004	-0.002	-0.001	0.001
	(0.65)	(-0.80)	(-0.86)	(-0.34)	(-0.13)	(0.22)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 92. Coefficients of Gini-gross when aged 18-25 for instructions-follow

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.003	-0.005	-0.006	-0.002	-0.001	0.004
	(0.51)	(-0.71)	(-0.94)	(-0.45)	(-0.31)	(0.71)
B + Macro	0.001	-0.007	-0.007+	-0.004	-0.003	0.001
	(0.22)	(-1.38)	(-1.66)	(-0.88)	(-0.69)	(0.16)
B + M + Year FE	0.004	-0.004	-0.005	-0.002	-0.002	0.001
	(0.94)	(-0.87)	(-1.18)	(-0.58)	(-0.37)	(0.19)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Results for the IV-estimations (Table 93) are insignificant and the test for exogeneity can not be rejected.

Table 93. IV Coefficients of Gini-net for instructions-follow

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	-0.048	0.044	0.102	0.066	0.062
	(-0.79)	(0.24)	(0.52)	(0.51)	(0.50)
p_exog	0.465	0.981	0.752	0.976	0.986
B + Macro	-0.077	-0.079	0.007	0.007	0.008
	(-0.93)	(-0.38)	(0.04)	(0.05)	(0.07)
p_exog	0.371	0.601	0.879	0.713	0.728
B + M + Year FE	0.016	x			
	(0.18)	x			
p_exog	0.795	x			

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

In sum, there might be a positive relationship between income inequality today and the attitude that instructions of superiors have to be followed. On the other hand, historical experience of high levels of income inequality seems to lower the probability that people hold such views.

6.3. Conclusion on Income Inequality and Obedience

The degree of obedience in a society is not or only weakly associated with the contemporary level of income inequality as measured by the Gini of net income. If anything, higher levels and income inequality today make respondents less critical against the instructions of their superiors.

7. Honesty

The symbolic value of honesty refers to the intrinsic importance attached to truth telling. People raised to be honest feel guilty when lying, whereas people who were differently raised do not care about telling lies. Thus, they more often lie if it is in their material interest to do so. In some instances, honesty and civism generate the same normative judgements. Thus, both valuing honesty and valuing civic virtues make one refrain from declaring less than one's true income for tax purposes. However, civism also refers to civic duties like voting, the violation of which deos not entail that one behaves dishonestly.

Moreover, honesty goes much beyong the behavior of the individual towards the polity as it also speaks of how individuals relate to other individuals or group of individuals. Thus, some persons may be at the same time uncivic towards the polity and violate laws but quite honest when dealing with with other persons in economic or social interactions.

Honesty is a crucial attitude for conducting market transactions as it reduces the incidence of breach of contracts. The trustworthiness of a society of honest individuals enlarges the scope for labor division and exchange and thereby enhances the whole economy. Honesty also benefits collective decision making since it makes it possible to credibly transmit information that is useful for choosing among policy options. As a result, one may presume that macroeconomic performance increases with the strength of the value associated to honesty.

7.1. Justify-lying

To measure the weight attached to honesty, the following survey question is scrutinized:

Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card. (Read out statements. Code one answer for each statement). Lying in your own interest 1 'Never justifiable' 10 'Always justifiable'

Answers have been re-coded so that higher values of the variable *justify-lying* indicate a stronger attachment to honesty. [18]Table 94 shows the mean of *justify-lying* per country and survey wave. The lowest measured level of honesty is in Mexico; the highest one in Turkey. There are 123,634 observations for *justify-lying*.

18 This survey question has been used by Guiso et al. (2010) to construct a measure for civic capital.

Table 94. Mean of justify-lying by country and wave

country	*1*	*2*	*4*	*6*	Mean
Austria	.	8.266	7.925	7.781	7.988
Belgium	7.645	7.055	7.385	7.346	7.290
Canada	8.317	8.203	.	.	8.251
Czech Rep	.	7.730	8.217	7.839	7.897
Denmark	8.864	8.913	9.016	8.963	8.939
Estonia	.	8.416	7.988	8.526	8.343
Finland	.	8.128	8.150	8.435	8.260
France	7.488	7.258	7.326	7.878	7.507
Germany	.	7.717	7.805	8.046	7.832
Greece	.	.	7.896	8.540	8.268
Hungary	.	7.297	8.496	8.270	8.056
Iceland	9.277	9.236	9.253	9.187	9.240
Ireland	8.391	8.650	8.780	8.312	8.529
Italy	8.920	8.258	8.587	8.815	8.605
Japan	.	8.747	.	.	8.747
Luxembourg	.	.	7.806	7.972	7.902

How is contemporary inequality associated with honesty? The sample size for each estimated model varies, ranging from 110578 to 42495 cases. The Gini coefficient of net income has a mostly positive and sometimes significant relation with the item measuring honesty.

Table 95. Coefficients of contemporary Gini-net for justify-lying

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.018	0.020	0.027	0.029	0.028	0.016
	(-1.34)	(0.75)	(0.86)	(0.86)	(0.78)	(0.54)
B + Macro	0.018	0.048**	0.058**	0.062*	0.061*	0.045*
	(1.05)	(2.84)	(2.70)	(2.46)	(2.23)	(2.16)
B + M + Year FE	0.015	0.031	0.009	0.004	-0.001	-0.003
	(1.00)	(1.05)	(0.25)	(0.12)	(-0.02)	(-0.08)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 96. Coefficients of contemporary Gini-gross for justify-lying

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.010	-0.012	-0.008	-0.006	-0.005	-0.012
	(-1.26)	(-0.55)	(-0.29)	(-0.21)	(-0.16)	(-0.46)
B + Macro	0.001	-0.006	0.002	0.004	0.006	-0.002
	(0.14)	(-0.26)	(0.07)	(0.17)	(0.24)	(-0.10)
B + M + Year FE	-0.002	-0.028	-0.028	-0.028	-0.026	-0.030
	(-0.18)	(-1.14)	(-1.27)	(-1.25)	(-1.16)	(-1.41)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

For historical Gini levels, results are ambiguous. For ten-year-lags, algebraic signs often switch and estimated coefficients are not statistically different from zero. This is also true for the twenty-year lagged measure of inequality.

Table 97. Coefficients of ten-year-lags Gini-net for justify-lying

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.015	0.002	0.001	0.003	0.005	0.001
	(1.18)	(0.15)	(0.07)	(0.25)	(0.36)	(0.09)
B + Macro	0.012	-0.032	-0.037	-0.036	-0.032	-0.026
	(0.84)	(-1.57)	(-1.38)	(-1.24)	(-1.09)	(-0.97)
B + M + Year FE	0.019	-0.026	-0.007	-0.002	0.004	0.000
	(0.95)	(-1.37)	(-0.26)	(-0.06)	(0.16)	(0.02)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 98. Coefficients of ten-year-lags Gini-gross for justify-lying

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.007	0.004	0.004	0.006	0.007	0.004
	(0.96)	(0.55)	(0.49)	(0.71)	(0.88)	(0.54)
B + Macro	0.004	-0.008	-0.009	-0.004	-0.002	-0.002
	(0.31)	(-0.38)	(-0.31)	(-0.13)	(-0.06)	(-0.09)
B + M + Year FE	0.001	-0.028	-0.033	-0.029	-0.028	-0.022
	(0.03)	(-1.34)	(-1.34)	(-1.17)	(-1.11)	(-1.01)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 99. Coefficients of twenty-year-lags of Gini-net for justify-lying

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.027	0.028	0.027	0.026	0.024	0.020
	(0.89)	(1.23)	(1.11)	(1.03)	(0.93)	(0.75)
B + Macro	-0.011	-0.119	-0.138	-0.143	-0.152	-0.115
	(-0.45)	(-0.82)	(-0.89)	(-0.92)	(-1.01)	(-0.83)
B + M + Year FE	-0.006	-0.084	-0.096	-0.097	-0.107	-0.081
	(-0.20)	(-0.69)	(-0.72)	(-0.75)	(-0.85)	(-0.68)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 100. Coefficients of twenty-year-lags Gini-gross for justify-lying

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.002	-0.010	-0.012	-0.010	-0.010	-0.019
	(-0.14)	(-0.49)	(-0.58)	(-0.49)	(-0.46)	(-0.92)
B + Macro	-0.017	-0.099*	-0.119*	-0.114*	-0.108*	-0.103*
	(-1.54)	(-2.13)	(-2.44)	(-2.32)	(-2.15)	(-2.36)
B + M + Year FE	-0.022+	-0.091*	-0.107*	-0.101*	-0.095+	-0.093*
	(-1.67)	(-1.97)	(-2.23)	(-2.08)	(-1.89)	(-2.08)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

The levels of income inequality when young do not exhibit any statistical significant relation to the symbolic value of honesty. For the Gini of net incomes, all estimated coefficients are negative.

Table 101. Coefficients of Gini-net when aged 18-25 for justify-lying

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.004	-0.004	-0.003	-0.004	-0.004	-0.003
	(-0.63)	(-0.67)	(-0.56)	(-0.78)	(-0.79)	(-0.62)
B + Macro	-0.002	-0.005	-0.006	-0.007	-0.007	-0.007
	(-0.37)	(-0.92)	(-0.97)	(-1.28)	(-1.25)	(-1.24)
B + M + Year FE	-0.003	-0.005	-0.006	-0.007	-0.007	-0.007
	(-0.46)	(-0.98)	(-1.01)	(-1.26)	(-1.23)	(-1.23)

Table 102. Coefficients of Gini-gross when aged 18-25 for justify-lying

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.002	-0.002	-0.001	-0.002	-0.003	-0.001
	(-0.29)	(-0.31)	(-0.25)	(-0.46)	(-0.56)	(-0.22)
B + Macro	0.001	-0.001	-0.001	-0.003	-0.003	-0.002
	(0.17)	(-0.11)	(-0.21)	(-0.50)	(-0.62)	(-0.45)
B + M + Year FE	0.001	-0.001	-0.001	-0.003	-0.003	-0.002
	(0.10)	(-0.18)	(-0.25)	(-0.49)	(-0.62)	(-0.44)

*t t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

IV-estimation results are shown in Table 103. In all estimations but one, the p-values of the Wald test of exogeneity (*p_exog*) indicate no problem of endogeneity. Only in the first regression, the one with the lowest number of controls, the Gini coefficient of net incomes seems to be affected by the honesty of respondents. Taking that endogeneity into account suggests that income inequality is detrimental to civism as measured by the variable *justifylying-never*.

Table 103. IV Coefficients of Gini-net for justify-lying-never

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	-0.198^{+}	0.102	x		
	(-1.67)	(1.13)	x		
p_exog	0.077	0.443	x		
B + Macro	x				
	x				
p_exog	x				
B + M + Year FE	-0.328	x			
	(-1.24)	x			
p_exog	0.221	x			

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

7.2. Conclusion on Inequality and Honesty

In sum, the taste for truth-telling exhibits a very weak correlation with income inequality. If anything, an increase of contemporary inequality of net incomes tends to strengthen the intrinsic attachment to honesty, but this is contradicted by the IV-estimations.

8. Altruism

An individual's value system may stress the importance of helping others at personal cost when they are in need. I refer to this as to altruism. People who are intrinsically altruist feel bad if they refrained from helping others. Conversely, selfish people do not experience any feeling of guilt in such cases. The focus of the subsequent investigation is on altruism towards unrelated individuals. While there is substantial agreement that altruism towards own children and other relatives has a strong basis in natural selection and may somehow be hardwired in the human brain, altruism towards strangers is hard to explain on the basis of natural selection and should be apprehended as a broader cultural phenomenon.

The economic implications of altruism are complex. In a direct way, altruism entails transfers from the well-to-do to the needy and therefore raises social welfare. Of course, this does not mean that economic performance as measured by GDP has to increase. If highly productive individuals reduce their working hours in order to volunteer in assisting people with social problems, GDP may go down. Furthermore, altruism is the source of the Samaritan problem: the presence of altruists may encourage opportunistic behavior by those who expect to be helped by the altruists. Similarly to social policy, in an altruistic society some subgroups may remain in a poverty trap because they face no incentive to invest if they get rescued anyway from the altruists. Thus, while altruism may make social interactions more pleasant and be useful as an insurance mechanism, it may possibly worsen macroeconomic performance as usually measured.

8.1. Child-unselfish

The proxy used in this paper to measure the degree of altruism comes from the same survey question used to capture a respondent's work ethic. Unselfishness is an element in a list of eleven qualities from which respondents can choose up to five. The survey question reads:

Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five.

Unselfishness; 0 'Not mentioned' 1 'Important'.[19]

19 Aghion et al. (2010) employ this question to construct an index of civic education. Gorodnichenko and Roland (2011) employ it to build an index of the propensity to contribute to the provision of public goods. See also Maystre et al. (2009).

In Table 104 are depicted the fractions of respondents per country and survey wave which find unselfishness an important child quality. There are 191,335 observations for *childunselfish.* Accordingly, altruism is lowest in Germany and highest in the UK.

Table 104. Mean of child-unselfish by country and wave

country	*1*	*2*	*3*	*4*	*5*	*6*	Mean
Australia	0.377	.	0.396	.	0.536	.	0.434
Austria	.	0.073	.	0.054	.	0.100	0.075
Belgium	0.144	0.272	.	0.361	.	0.225	0.265
Canada	0.204	0.423	.	0.456	0.464	.	0.406
Czech Rep	.	0.369	0.323	0.363	.	0.343	0.355
Denmark	0.249	0.506	.	0.559	.	0.634	0.494
Estonia	.	0.249	0.168	0.164	.	0.158	0.182
Finland	.	0.211	0.182	0.218	0.303	0.280	0.242
France	0.217	0.399	.	0.402	0.556	0.409	0.393
Germany	.	0.080	0.054	0.087	0.069	0.051	0.070
Greece	.	.	.	.	.	0.283	0.283
Hungary	0.140	0.258	0.288	0.230	.	0.343	0.249
Iceland	0.209	0.752	.	0.346	.	0.314	0.385
Ireland	0.227	0.526	.	0.492	.	0.512	0.421
Italy	0.022	0.399	.	0.414	0.439	0.408	0.345
Japan	0.281	0.440	0.378	0.532	0.503	.	0.429
Luxembourg	.	.	.	.	.	0.323	0.323
Mexico	.	0.110	0.365	0.487	0.476	.	0.361
Netherlands	0.090	0.222	.	0.279	0.235	0.227	0.208
New Zealand	.	.	0.328	.	0.386	.	0.353
Norway	0.055	0.095	0.112	.	0.198	0.174	0.125
Poland	.	0.094	0.139	0.120	0.184	0.191	0.148
Portugal	.	0.302	.	0.402	.	0.389	0.365
South-Korea	0.119	0.106	0.107	0.147	0.120	.	0.119
Slovakia	.	0.223	0.189	0.186	.	0.264	0.218
Slovenia	.	0.331	0.293	0.376	0.380	0.310	0.337
Spain	0.044	0.078	0.143	0.119	0.334	0.016	0.103
Sweden	0.102	0.293	0.237	0.332	0.347	0.313	0.281
Switzerland	.	0.391	0.326	.	0.221	0.120	0.268
Turkey	.	0.278	0.227	0.234	0.320	1.000	0.293
UK	0.406	0.566	.	0.602	0.547	0.499	0.522
USA	0.188	0.368	0.348	0.391	0.400	.	0.321
Mean	0.175	0.273	0.247	0.308	0.347	0.292	0.278

The sample size for each estimated model varies from 173,524 to 70,305 cases. Basic results from contemporary inequality data suggest very small positive effect. The association with contemporary Gini levels exhibits mostly positive but insignificant coefficients.

Table 105. Coefficients of contemporary Gini-net for child-unselfish

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	0.050*	0.019	0.013	0.020	0.019	0.037
	(2.04)	(0.84)	(0.55)	(0.78)	(0.75)	(0.85)
B + Macro	0.004	0.017	0.010	0.008	0.006	0.034
	(0.24)	(0.73)	(0.41)	(0.29)	(0.23)	(0.68)
B + M + Year FE	-0.013	0.018	0.011	0.007	0.007	0.044
	(-0.54)	(0.50)	(0.30)	(0.20)	(0.19)	(0.79)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 106. Coefficients of contemporary Gini-gross for child-unselfish

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.044***	0.007	0.005	0.004	0.004	0.003
	(3.30)	(0.47)	(0.29)	(0.21)	(0.24)	(0.12)
B + Macro	0.017+	0.010	0.005	0.004	0.004	-0.006
	(1.84)	(0.53)	(0.24)	(0.18)	(0.18)	(-0.31)
B + M + Year FE	0.015	0.011	0.006	0.002	0.001	0.011
	(1.28)	(0.69)	(0.35)	(0.11)	(0.05)	(0.45)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Historical inequality levels do not show any clear association with *child-unselfish*. For both ten-year lags and twenty-year lags the algebraic sign often switches and coefficients are mostly insignificant.

Table 107. Coefficients of ten-year-lags Gini-net for child-unselfish

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.001	0.010	0.010	0.009	0.009	0.011
	(-0.08)	(0.62)	(0.55)	(0.51)	(0.50)	(0.57)
B + Macro	-0.038	0.021	0.021	0.021	0.020	0.016
	(-1.58)	(1.24)	(1.13)	(1.04)	(0.98)	(0.29)
B + M + Year FE	-0.035	0.021	0.004	0.005	0.005	-0.069+
	(-1.13)	(0.97)	(0.19)	(0.22)	(0.22)	(-1.68)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 108. Coefficients of ten-year-lags of Gini-gross for child-unselfish

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.000	-0.002	-0.003	-0.002	-0.002	-0.003
	(0.01)	(-0.13)	(-0.16)	(-0.15)	(-0.14)	(-0.22)
B + Macro	-0.022	0.016	0.017	0.017	0.017	0.007
	(-1.04)	(1.61)	(1.48)	(1.41)	(1.39)	(0.28)
B + M + Year FE	-0.019	0.033*	0.029+	0.032+	0.032+	0.008
	(-0.71)	(2.12)	(1.69)	(1.74)	(1.74)	(0.25)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 109. Coefficients of twenty-year-lags of Gini-net for child-unselfish

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.073*	-0.057	-0.059	-0.064	-0.064	-0.027
	(-2.57)	(-1.40)	(-1.37)	(-1.45)	(-1.42)	(-0.45)
B + Macro	-0.018	-0.002	0.000	0.006	0.006	0.017
	(-1.09)	(-0.12)	(0.00)	(0.32)	(0.32)	(0.47)
B + M + Year FE	0.000	0.049	0.048	0.048	0.047	0.065+
	(0.01)	(1.40)	(1.41)	(1.37)	(1.37)	(1.78)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 110. Coefficients of twenty-year-lags Gini-gross for child-unselfish

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.060**	-0.031	-0.033	-0.034	-0.034	-0.013
	(-2.64)	(-0.92)	(-0.88)	(-0.90)	(-0.88)	(-0.35)
B + Macro	-0.042*	-0.001	-0.001	0.001	0.000	-0.003
	(-2.01)	(-0.10)	(-0.04)	(0.04)	(0.04)	(-0.15)
B + M + Year FE	-0.042+	0.025	0.024	0.024	0.024	0.024
	(-1.85)	(1.39)	(1.35)	(1.38)	(1.38)	(1.49)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

The mean level of the Gini coefficient during youth shows a consistent negative relation with the current measure of altruism. However, all estimated coefficients are insignificant for both the Gini of net income and the Gini of gross income.

Table 111. Coefficients of Gini-net when aged 18-25 for child-unselfish

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.002	-0.006^{+}	-0.004	-0.005	-0.005	-0.005
	(-0.28)	(-1.72)	(-1.27)	(-1.39)	(-1.30)	(-1.24)
B + Macro	-0.008^{+}	-0.006	-0.005	-0.005	-0.005	-0.009
	(-1.70)	(-1.33)	(-1.04)	(-1.08)	(-1.02)	(-1.55)
B + M + Year FE	-0.006	-0.004	-0.003	-0.004	-0.003	-0.008
	(-1.33)	(-0.81)	(-0.60)	(-0.61)	(-0.56)	(-1.23)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 112. Coefficients of Gini-gross when aged 18-25 for child-unselfish

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	-0.002	-0.004	-0.003	-0.003	-0.003	-0.003
	(-0.25)	(-1.12)	(-0.76)	(-0.85)	(-0.72)	(-0.61)
B + Macro	-0.006	-0.004	-0.003	-0.004	-0.003	-0.006
	(-1.35)	(-1.00)	(-0.71)	(-0.75)	(-0.66)	(-1.16)
B + M + Year FE	-0.004	-0.002	-0.001	-0.002	-0.001	-0.005
	(-0.97)	(-0.44)	(-0.25)	(-0.27)	(-0.20)	(-0.79)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

IV-estimation results are shown in Table 113. In all estimations but one, the p-values of the Wald test of exogeneity (*p_exog*) indicate no problem of endogeneity. Only in the first regression, the one with the lowest number of controls, the Gini coefficient of net incomes seems to be affected by the altruism of respondents. Taking that endogeneity into account suggests that income inequality fosters altruism.

Table 113. IV Coefficients of Gini-net for child-unselfish

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	0.265*	0.512	0.488	0.279	0.280
	(2.09)	(0.38)	(0.39)	(0.52)	(0.53)
p_exog	0.103	0.755	0.744	0.620	0.617
B + Macro	0.268	0.414	0.391	0.320	0.329
	(0.68)	(0.35)	(0.33)	(0.39)	(0.39)
p_exog	0.551	0.754	0.764	0.707	0.707
B + M + Year FE	0.542	0.194	0.345	0.450	0.437
	(1.14)	(0.49)	(0.38)	(0.30)	(0.31)
p_exog	0.376	0.653	0.723	0.780	0.775

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

8.2. Conclusion on Inequality and Altruism

There is no robust effect of income inequality on individuals' propensity for altruism. Results are ambiguous and statistical relations are mostly insignificant.

9. Tolerance

As pointed out by Corneo and Jeanne (2009), tolerance can be usefully interpreted as a characteristic of an individual's value system, rather than the evaluation of a special class of actions (e.g. interacting with immigrants, homosexuals or other minorities). Tolerance implies respect for diversity. A person is tolerant if she attaches symbolic value not only to her own characteristics but also to those that others have. Conversely, an intolerant person is complacent and irrespectful of traits and lifestyles that are not like hers. Therefore, tolerance can be defined both for persons who are in the majority and for persons who belong to a minority group.

Tolerance is likely to promote peaceful coexistence between diverse groups and to favour the manifestation of individual proclivities. Both effects are likely to be beneficial for macroeconomic performance as tolerance with respect to, say, ethnic traits, facilitates cooperation in firms and markets and acceptance of individuality favors the development of individual talents and therefore the generation of innovations that eventually drive economic prosperity. However, tolerance may also contribute to the erosion of social norms that are good for the economy. Increased tolerance may namely imply that there is less social stigmatization of asocial or even criminal behavior, e.g. pretending of being sick so as to keep receiving a wage without having to work. In such cases, a more tolerant society encourages some of its members to engage in asocial behavior and thus harms the economy. Thus, the overall effect of tolerance on macroeconomic performance is a priori ambiguous.

9.1. Child-tolerance

The proxy used in this paper to capture the tolerance of respondents comes from the same survey question used to capture a respondent's work ethic. Tolerance is an element in a list of eleven qualities from which respondents can choose up to five. The survey question reads:

Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five.

Tolerance; 0 'Not mentioned' 1 'Important'.[20]

In Table 114 are depicted the fractions of respondents per country and survey wave which find tolerance is an important child quality. The country with the lowest level of tolerance is South Korea; the one with the highest level of tolerance is Sweden. There are 193,159 observations for *child-tolerance.*

20 This survey question has been used by Aghion et al. (2010) to construct a measure of civic education and by Tabellini (2007) to construct a measure of morality. See also Balan and Knack (2011), Dobler (2009), Gorodnichenko and Roland (2011), and Maystre et al. (2009).

Table 114. Mean of child-tolerance by country and wave

country	*1*	*2*	*3*	*4*	*5*	*6*	Mean
Australia	0.671	.	0.809	.	0.916	.	0.805
Austria	.	0.661	.	0.716	.	0.687	0.689
Belgium	0.453	0.675	.	0.846	.	0.822	0.715
Canada	0.530	0.802	.	0.816	0.837	.	0.768
Czech Rep	.	0.661	0.600	0.632	.	0.501	0.609
Denmark	0.584	0.809	.	0.873	.	0.867	0.785
Estonia	.	0.702	0.596	0.712	.	0.768	0.702
Finland	.	0.803	0.825	0.827	0.860	0.868	0.840
France	0.589	0.783	.	0.847	0.869	0.871	0.797
Germany	.	0.760	0.883	0.707	0.732	0.730	0.762
Greece	.	.	.	.	.	0.536	0.536
Hungary	0.307	0.617	0.635	0.665	.	0.708	0.572
Iceland	0.580	0.930	.	0.843	.	0.861	0.794
Ireland	0.560	0.764	.	0.765	.	0.742	0.698
Italy	0.433	0.670	.	0.750	0.739	0.711	0.667
Japan	0.410	0.595	0.583	0.712	0.745	.	0.611
Luxembourg	.	.	.	.	.	0.825	0.825
Mexico	.	0.643	0.573	0.718	0.781	.	0.667
Netherlands	0.594	0.885	.	0.916	0.859	0.855	0.816
New Zealand	.	.	0.779	.	0.825	.	0.799
Norway	0.317	0.637	0.659	.	0.914	0.905	0.682
Poland	.	0.765	0.815	0.791	0.843	0.739	0.788
Portugal	.	0.678	.	0.667	.	0.678	0.675
South-Korea	0.249	0.554	0.468	0.647	0.560	.	0.505
Slovakia	.	0.552	0.571	0.571	.	0.516	0.551
Slovenia	.	0.745	0.720	0.701	0.750	0.720	0.727
Spain	0.442	0.733	0.756	0.796	0.716	0.814	0.702
Sweden	0.711	0.908	0.904	0.923	0.936	0.916	0.891
Switzerland	.	0.774	0.786	.	0.907	0.856	0.830
Turkey	.	0.691	0.613	0.623	0.692	1.000	0.676
UK	0.619	0.796	0.861	0.830	0.854	0.794	0.790
USA	0.524	0.726	0.749	0.797	0.790	.	0.693
Mean	0.500	0.716	0.710	0.748	0.802	0.761	0.716

The sample size for each model varies, ranging from 174,877 to 70,494 cases. There is a consistent and often strongly significant negative association between the contemporary Gini levels of the income distribution and the probability that respondents find it important to teach their children tolerance. This is true for the Gini of gross and net income.

Table 115. Coefficients of contemporary Gini-net for child-tolerance

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	0.062*	-0.019	-0.023	-0.025	-0.024	-0.066*
	(2.12)	(-0.51)	(-0.58)	(-0.64)	(-0.59)	(-1.97)
B + Macro	0.023	-0.007	-0.010	-0.021	-0.019	-0.076*
	(0.72)	(-0.18)	(-0.23)	(-0.49)	(-0.45)	(-1.99)
B + M + Year FE	0.009	-0.058**	-0.079***	-0.068**	-0.068**	-0.029
	(0.33)	(-2.65)	(-3.69)	(-3.20)	(-3.13)	(-0.99)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 116. Coefficients of contemporary Gini-gross for child-tolerance

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.055**	-0.030+	-0.033+	-0.035*	-0.035+	-0.051**
	(2.91)	(-1.68)	(-1.79)	(-1.97)	(-1.92)	(-2.87)
B + Macro	0.023	-0.039*	-0.042*	-0.051*	-0.051*	-0.069***
	(1.04)	(-2.03)	(-2.18)	(-2.57)	(-2.55)	(-4.07)
B + M + Year FE	0.019	-0.039***	-0.044***	-0.036*	-0.036*	-0.019
	(1.28)	(-3.32)	(-3.70)	(-2.56)	(-2.55)	(-1.42)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

For the lagged levels of the Gini coefficient, results are ambiguous. Signs often switch and the estimated coefficients are mostly insignificant.

Table 117. Coefficients of ten-year-lags of Gini-net for child-tolerance

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.011	-0.006	-0.006	-0.006	-0.005	-0.007
	(0.59)	(-0.36)	(-0.33)	(-0.33)	(-0.27)	(-0.38)
B + Macro	-0.039	-0.001	0.004	-0.000	-0.000	0.012
	(-1.50)	(-0.06)	(0.18)	(-0.02)	(-0.01)	(0.27)
B + M + Year FE	-0.026	0.028	0.034+	0.032	0.031	0.003
	(-1.02)	(1.48)	(1.66)	(1.62)	(1.57)	(0.13)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 118. Coefficients of ten-year-lags of Gini-gross for child-tolerance

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	0.013	-0.001	-0.002	-0.001	-0.001	-0.002
	(0.94)	(-0.06)	(-0.14)	(-0.09)	(-0.06)	(-0.13)
B + Macro	-0.015	0.005	0.007	0.006	0.006	0.017
	(-0.78)	(0.37)	(0.38)	(0.33)	(0.33)	(0.59)
B + M + Year FE	-0.012	0.026	0.024	0.018	0.017	0.002
	(-0.67)	(1.19)	(0.95)	(0.75)	(0.69)	(0.09)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 119. Coefficients of twenty-year-lags of Gini-net for child-tolerance

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.083***	-0.055+	-0.061+	-0.069+	-0.067+	-0.071
	(-3.67)	(-1.69)	(-1.85)	(-1.92)	(-1.77)	(-1.27)
B + Macro	-0.039	-0.023	-0.027	-0.015	-0.013	-0.033
	(-1.52)	(-0.68)	(-0.75)	(-0.36)	(-0.29)	(-0.62)
B + M + Year FE	-0.040	0.021	0.020	0.006	0.006	0.031
	(-1.47)	(0.66)	(0.61)	(0.21)	(0.21)	(1.38)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 120. Coefficients of twenty-year-lags of Gini-gross for child-tolerance

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.030*	-0.024	-0.028	-0.030	-0.027	-0.024
	(-2.28)	(-0.77)	(-0.81)	(-0.84)	(-0.72)	(-0.59)
B + Macro	-0.007	-0.002	-0.003	-0.003	-0.001	-0.011
	(-0.71)	(-0.07)	(-0.08)	(-0.10)	(-0.03)	(-0.24)
B + M + Year FE	-0.008	0.005	0.007	0.005	0.005	0.012

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

The experience of income inequality when young shows a consistently negative relation with *child-tolerance*. The estimated coefficients are all negative and mostly significant.

Table 121. Coefficients of Gini-net when aged 18-25 for child-tolerance

	(1)	(2)	(3)	(4)	(5)	*(6)*
Basic	-0.005	-0.010*	-0.010*	-0.010+	-0.009+	-0.006
	(-0.57)	(-2.21)	(-2.13)	(-1.85)	(-1.70)	(-0.92)
B + Macro	-0.013**	-0.008+	-0.009+	-0.009+	-0.008	-0.008
	(-2.97)	(-1.67)	(-1.78)	(-1.72)	(-1.46)	(-0.85)
B + M + Year FE	-0.011**	-0.007	-0.008	-0.008	-0.007	-0.003
	(-2.69)	(-1.43)	(-1.52)	(-1.53)	(-1.32)	(-0.51)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 122. Coefficients of Gini-gross when aged 18-25 for child-tolerance

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Basic	-0.007	-0.010*	-0.011**	-0.011*	-0.010*	-0.007
	(-0.80)	(-2.47)	(-2.58)	(-2.35)	(-2.17)	(-1.16)
B + Macro	-0.013**	-0.009+	-0.011*	-0.011*	-0.010+	-0.009
	(-3.11)	(-1.87)	(-2.18)	(-2.20)	(-1.92)	(-1.14)
B + M + Year FE	-0.012**	-0.007	-0.009+	-0.009*	-0.008+	-0.004
	(-3.04)	(-1.56)	(-1.84)	(-2.06)	(-1.82)	(-0.76)

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

IV-estimation results are shown in Table 123. In all estimations but one, the p-values of the Wald test of exogeneity (*p_exog*) indicate no problem of endogeneity. Only in the first regression, the one with the lowest number of controls, the Gini coefficient of net incomes seems to be affected by the tolerance of respondents. Taking that endogeneity into account suggests that income inequality fosters tolerance.

Table 123. IV Coefficients of Gini-net for child-tolerance

	(1)	*(2)*	*(3)*	*(4)*	(5)
Basic	0.265***	0.635	0.630	0.424	0.436
	(3.71)	(0.50)	(0.51)	(0.64)	(0.64)
p_exog	0.004	0.712	0.702	0.555	0.561
B + Macro	0.254	0.782	0.798	0.753	0.762
	(1.51)	(0.75)	(0.77)	(0.72)	(0.73)
p_exog	0.187	0.659	0.665	0.622	0.624
B + M + Year FE	0.330	-0.092	-0.111	-0.056	-0.048
	(1.43)	(-0.29)	(-0.23)	(-0.10)	(-0.11)
p_exog	0.199	0.861	0.895	0.979	0.989

*t statistics in parentheses; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

9.2. Conclusion on Inequality and Tolerance

Higher levels of income inequality seem to reduce tolerance. The findings for lagged data are ambiguous, but there are strong and significant results for contemporary levels and inequality experienced when young. However, results from IV-estimations tend to contradict those from regressions that use contemporary measures of inequality.

10. Conclusion

We have exploited attitudinal data from the WVS to explore the effect of income inequality on the dynamics of value systems. Six dimensions of values have been investigated: work ethic, civism, obedience, honesty, altruism, and tolerance. Results from running a large number of regressions do not indicate that income inequality as measured by the Gini coefficient is an important determinant of how values evolve. However, while inequality of gross incomes virtually lacks any empirical association with value change, inequality of net incomes seems to have some effect on values in some cases.

Specifically, estimation results about *civism* substantially vary with the proxy that one uses to measure attachment to civic virtues. No systematic regularity could be detected in the relationship between *altruism* and inequality. The same applies to *honesty*. There is some weak evidence that the taste for *obedience* tends to increase with increasing inequality of net incomes, but this only applies to one of two employed proxies. I find more reliable evidence of possible effects of inequality of net incomes on work ethic and on tolerance. An increase of income disparities tends to be associated with a stronger *work ethic*, and this holds true for all three proxies employed in this investigation. Interestingly, I also find that a decrease of inequality twenty years ago is associated with a weaker work ethic today. So, the current increase of inequality might raise the work ethic of both the current and the future population. Growing income disparities seem also to decrease the *tolerance* of the population. Interestingly, individuals who experienced more inequality when young are found to have a less tolerant attitude. However, results about tolerance are weaker than those about work ethic, which also are not particularly strong.

If income inequality effectively strengthens the work ethic of the population and fosters intolerance, it may well indirectly affect macroeconomic performance. At first glance, a stronger work ethic may benefit the economy while a stronger intolerance may harm it. However, even the effect of each of them taken alone may actually be ambiguous if one realizes the many different channels through which work ethic and tolerance can affect economic outcomes. Therefore, no conclusions can be drawn at this stage on the effect of inequality on macroeconomic performance that is mediated by value change.

Several qualifications are in order. First, and most importantly, the measures of values employed in this paper are far from optimal. It could be that the failure to detect a stable pattern is not due to the lack of systematic effects from inequality on values but to the imprecision with which those values are measured. Second, there are well-known problems of comparability of inequality measures over time and across countries. Third, it would be interesting to repeat this analysis with different measures of income distribution. Not the level but the profile of

income inequality might be decisive, e.g. inequality at the top or at the bottom of the distribution. This is left to future research.

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DATA:

SWIID: Frederick Solt, 2008-09, "The Standardized World Income Inequality Database", http://hdl.handle.net/1902.1/11992 V3 [Version]

WVS:

EVS:

OECD 2011:

WDI 2011 WORLDBANK:

Appendix A: Control variables

Due to different coding, the EVS 2008 wave had to be harmonized with the already harmonized 1980-2005 WVS data. The descriptive statistics of all control variables is summarized in Table A1.

The dummy *female* indicates a female respondent. Age is directly taken from in the harmonized WVS data, but is calculated with the help of the birth year for the EVS 2008. In the WVS data, income is coded in ten categories with different category boundaries for each country. In contrast, the EVS 2008 provides twelve income categories with the same categories for all countries. Income is harmonized by approximating income quintiles in each data set. The third quintile is used as reference category. The legal status is coded in four dummies, indicating single, married, divorced or widowed, with single being the reference category. To control for labor market status, eight dummies are used, which capture full and part time employment, self-employment, being retired, student, house-wife, unemployed or other. Here, full employment is used as a reference. Religiosity is captured by dummies for the frequency of attendance to religious services. The townsize-dummies capture community size, with less than 2000 inhabitants, being the reference category.

In unreported regressions, robustness checks were conducted using additional control variables. Specifically, they included a variable for the number of children present in the household, one for the political attitude of the respondent, where individuals where asked to group themselves into the political spectrum from left to right with ten categories, and a variable indicating whether the respondent is citizen of the country or alternatively born in the country the survey is conducted in.

Table A1. Summary statistics of micro control variables

Variable	*Obs*	*Mean*	*Std. Dev.*	*Min*	*Max*
female	196296	0.529	0.499	0	1
age	192281	44.379	17.321	14	108
age_sqr	192281	2269.536	1674.580	196	11664
edu_no	131700	0.061	0.240	0	1
edu_prime	131700	0.242	0.428	0	1
edu_somesec	131700	0.230	0.421	0	1
edu_sec	131700	0.303	0.459	0	1
edu_uni	131700	0.161	0.368	0	1
inc_quint1	170456	0.186	0.389	0	1
inc_quint2	170456	0.272	0.445	0	1
inc_quint3	170456	0.229	0.420	0	1
inc_quint4	170456	0.168	0.374	0	1
inc_quint5	170456	0.145	0.352	0	1
stat_single	194392	0.232	0.422	0	1
stat_married	194392	0.623	0.485	0	1
stat_divorced	194392	0.068	0.252	0	1
stat_widowed	194392	0.076	0.264	0	1
jobstat_full	190515	0.413	0.492	0	1
jobstat_part	190515	0.076	0.265	0	1
jobstat_self	190515	0.067	0.250	0	1
jobstat_retired	190515	0.186	0.389	0	1
jobstat_wife	190515	0.124	0.330	0	1
jobstat_student	190515	0.059	0.236	0	1
jobstat_unemp	190515	0.056	0.230	0	1
jobstat_other	190515	0.019	0.136	0	1
religion_none	188182	0.403	0.491	0	1
religion_some	188182	0.271	0.444	0	1
religion_reg	188182	0.326	0.469	0	1
townsize_1	137667	0.176	0.381	0	1
townsize_2	137667	0.098	0.297	0	1
townsize_3	137667	0.090	0.286	0	1
townsize_4	137667	0.101	0.302	0	1
townsize_5	137667	0.131	0.337	0	1
townsize_6	137667	0.099	0.298	0	1
townsize_7	137667	0.157	0.364	0	1
townsize_8	137667	0.143	0.350	0	1

Macroeconomic control variables stem from both the OECD and the World Bank datasets, as displayed in Table A2.

Table A2. Summary statistics of macro control variables

Variable	*Obs*	*Mean*	*Std. Dev.*	*Min*	*Max*
ln_pcgdp_oecd	190259	9.90	0.44	8.52	11.08
ln_pcgdp_wdi	195360	10.00	0.45	8.72	11.20
unemp_oecd	180103	7.39	3.88	0.46	22.96
unemp_wdi	163559	7.46	3.78	0.60	22.70
gdp_growth_oecd	176361	2.48	3.16	-11.61	10.65
gdp_growth_wdi	193454	1.82	3.95	-14.57	10.65

Appendix B: Country Regressions

In this part of the Appendix, results from separated regressions for each country are presented. For brevity, only countries that belong to the EU are considered. Only two dimensions of value systems are considered: work ethic and tolerance. These are the only values that seem to be correlated with income inequality according to the cross-country analysis in this paper. Work ethic is only proxied by the dummy variable *child-hardwork* in order to have sufficient time variation to obtain reliable estimates of the effect from income inequality. The latter is measured by the contemporary Gini coefficient of net income. Only results pertaining to model (2) in the main text are reported (specifications *Basic* and *B + Macro*). Results from the other models are similar.

Table B1. Logit regressions for ***Austria***

	Work ethic		Tolerance	
Income Inequality	0.806***	0.806***	-0.674***	-0.674***
	(3.62)	(3.62)	(-4.51)	(-4.51)
Age	-0.037*	-0.037*	0.023+	0.023+
	(-2.01)	(-2.01)	(1.77)	(1.77)
Age squared	0.000*	0.000*	-0.000*	-0.000*
	(2.53)	(2.53)	(-2.03)	(-2.03)
Female	-0.482***	-0.482***	0.364***	0.364***
	(-4.01)	(-4.01)	(4.45)	(4.45)
Primary Education	-0.936***	-0.936***	0.506*	0.506*
	(-3.36)	(-3.36)	(2.31)	(2.31)
Some Secondary Education	-0.987***	-0.987***	0.853***	0.853***
	(-3.34)	(-3.34)	(3.72)	(3.72)
Secondary Education	-1.172***	-1.172***	1.130***	1.130***
	(-3.76)	(-3.76)	(4.71)	(4.71)
Tertiary Education	-1.690***	-1.690***	1.671***	1.671***
	(-4.49)	(-4.49)	(6.16)	(6.16)
Log GDP per capita		0.000		0.000
		(.)		(.)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-21.429***	-21.429***	17.051***	17.051***
	(-3.69)	(-3.69)	(4.38)	(4.38)
N	2984	2984	3013	3013

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B2. Logit regressions for **Belgium**

	Work ethic		Tolerance	
Income Inequality	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)
Age	-0.053***	-0.053***	0.058**	0.058**
	(-3.60)	(-3.60)	(3.19)	(3.19)
Age squared	0.001***	0.001***	-0.001***	-0.001***
	(4.18)	(4.18)	(-3.33)	(-3.33)
Female	-0.103	-0.103	0.342**	0.342**
	(-1.07)	(-1.07)	(2.63)	(2.63)
Primary Education	-0.329	-0.329	-0.059	-0.059
	(-0.95)	(-0.95)	(-0.14)	(-0.14)
Some Secondary Education	-0.739*	-0.739*	0.043	0.043
	(-2.15)	(-2.15)	(0.10)	(0.10)
Secondary Education	-0.753*	-0.753*	0.538	0.538
	(-2.19)	(-2.19)	(1.27)	(1.27)
Tertiary Education	-0.766*	-0.766*	0.670	0.670
	(-2.12)	(-2.12)	(1.46)	(1.46)
Log GDP per capita		0.000		0.000
		(.)		(.)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	1.352**	1.352**	0.062	0.062
	(2.82)	(2.82)	(0.11)	(0.11)
N	1874	1874	1874	1874

t statistics in parentheses
$_{+}p < 0.10$, $_{*}p < 0.05$, $_{**}p < 0.01$, $_{***}p < 0.001$

Table B3. Logit regressions for ***Czech***

	Work ethic		Tolerance	
Income Inequality	3.123*	3.424*	-4.536***	-1.840
	(2.17)	(2.25)	(-3.66)	(-1.41)
Age	0.067***	0.066***	0.012	0.005
	(6.17)	(6.10)	(1.20)	(0.49)
Age squared	-0.000***	-0.000***	-0.000	-0.000
	(-4.28)	(-4.20)	(-1.55)	(-0.75)
Female	-0.035	-0.036	0.415***	0.410***
	(-0.50)	(-0.52)	(6.92)	(6.79)
Primary Education	-0.020	-0.015	0.476+	0.515*
	(-0.06)	(-0.05)	(1.91)	(2.05)
Some Secondary Education	0.032	0.043	0.576*	0.688**
	(0.10)	(0.13)	(2.30)	(2.73)
Secondary Education	-0.231	-0.194	0.328	0.729**
	(-0.71)	(-0.58)	(1.34)	(2.88)
Tertiary Education	-0.342	-0.322	0.745**	0.972***
	(-1.02)	(-0.95)	(2.90)	(3.73)
Log GDP per capita		-0.153		-1.628***
		(-0.63)		(-7.55)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
		68		
Constant	-79.535*	-85.678*	114.085***	61.680+
	(-2.18)	(-2.26)	(3.64)	(1.89)
N	4773	4773	4752	4752

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B4. Logit regressions for ***Denmark***

	Work ethic		Tolerance	
Income Inequality	0.458**	0.458**	-0.098	-0.098
	(2.70)	(2.70)	(-1.32)	(-1.32)
Age	-0.083**	-0.083**	0.049**	0.049**
	(-2.61)	(-2.61)	(2.70)	(2.70)
Age squared	0.001*	0.001*	-0.001***	-0.001***
	(2.28)	(2.28)	(-3.58)	(-3.58)
Female	-0.816***	-0.816***	0.466***	0.466***
	(-3.43)	(-3.43)	(3.75)	(3.75)
Primary Education	10.297	10.297	-11.329	-11.329
	(0.02)	(0.02)	(-0.02)	(-0.02)
Some Secondary Education	10.139	10.139	-11.260	-11.260
	(0.02)	(0.02)	(-0.02)	(-0.02)
Secondary Education	9.525	9.525	-10.889	-10.889
	(0.02)	(0.02)	(-0.02)	(-0.02)
Tertiary Education	9.533	9.533	-10.619	-10.619
	(0.02)	(0.02)	(-0.02)	(-0.02)
Log GDP per capita		0.000		0.000
		(.)		(.)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-21.766	-21.766	14.320	14.320
	(-0.04)	(-0.04)	(0.03)	(0.03)
N	2437	2437	2437	2437

t statistics in parentheses
$^{+}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Table B5. Logit regressions for ***Finland***

	Work ethic		Tolerance	
Income Inequality	-0.017	-0.981**	0.063+	-0.295
	(-0.50)	(-2.66)	(1.96)	(-0.88)
Age	-0.023	-0.021	0.029+	0.031+
	(-1.33)	(-1.19)	(1.81)	(1.87)
Age squared	0.000+	0.000+	-0.000*	-0.000*
	(1.92)	(1.71)	(-2.48)	(-2.56)
Female	-0.557***	-0.554***	0.663***	0.665***
	(-5.11)	(-5.09)	(6.43)	(6.45)
Primary Education	0.659	0.807	-0.599	-0.536
	(1.35)	(1.64)	(-1.41)	(-1.25)
Some Secondary Education	0.613	0.707	-0.231	-0.189
	(1.24)	(1.43)	(-0.53)	(-0.44)
Secondary Education	0.418	0.476	-0.348	-0.320
	(0.81)	(0.92)	(-0.77)	(-0.71)
Tertiary Education	0.758	0.810	0.094	0.120
	(1.49)	(1.60)	(0.20)	(0.26)
Log GDP per capita		12.124**		4.541
		(2.63)		(1.07)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-1.534	-101.264**	-0.168	-37.594
	(-1.45)	(-2.67)	(-0.17)	(-1.08)
N	2972	2972	2972	2972

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

*Table B6. Logit regressions for **France***

	Work ethic		Tolerance	
Income Inequality	0.232***	3.975***	0.062	1.730
	(4.04)	(4.77)	(0.78)	(1.45)
Age	-0.004	-0.003	0.027*	0.028*
	(-0.39)	(-0.27)	(2.05)	(2.08)
Age squared	0.000	0.000	-0.000*	-0.000*
	(1.55)	(1.59)	(-2.00)	(-1.98)
Female	-0.299***	-0.294***	0.352***	0.355***
	(-4.65)	(-4.56)	(3.87)	(3.90)
Primary Education	-0.265*	-0.244*	0.003	0.015
	(-2.36)	(-2.16)	(0.02)	(0.10)
Some Secondary Education	-0.512***	-0.443**	-0.151	-0.118
	(-3.65)	(-3.13)	(-0.83)	(-0.64)
Secondary Education	-0.645***	-0.494***	0.283+	0.355*
	(-5.49)	(-4.04)	(1.76)	(2.10)
Tertiary Education	-1.049***	-0.906***	0.442*	0.511**
	(-8.32)	(-6.97)	(2.48)	(2.76)
Log GDP per capita		-45.242***		-20.204
		(-4.51)		(-1.40)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-5.807***	351.110***	-0.821	158.665
	(-3.68)	(4.43)	(-0.37)	(1.39)
N	4105	4105	4105	4105

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

*Table B7. Logit regressions for **Germany***

	Work ethic		Tolerance	
Income Inequality	0.151***	-1.003***	-0.202***	0.775***
	(6.52)	(-8.65)	(-9.60)	(7.34)
Age	0.015	0.017+	0.016+	0.014
	(1.54)	(1.65)	(1.79)	(1.61)
Age squared	0.000	0.000	-0.000+	-0.000
	(0.55)	(0.40)	(-1.86)	(-1.50)
Female	-0.565***	-0.570***	0.308***	0.321***
	(-9.56)	(-9.59)	(5.73)	(5.93)
Primary Education	-0.293*	-0.261*	0.203+	0.387**
	(-2.37)	(-2.04)	(1.71)	(3.15)
Some Secondary Education	-0.516***	-0.403**	0.592***	0.723***
	(-4.05)	(-3.06)	(4.88)	(5.75)
Secondary Education	-1.060***	-0.729***	0.888***	1.056***
	(-7.93)	(-4.92)	(7.13)	(7.60)
Tertiary Education	-1.044***	-0.784***	1.319***	1.408***
	(-7.65)	(-5.43)	(9.89)	(9.93)
Log GDP per capita		25.528***		-20.927***
		(10.03)		(-8.93)
Unemployment rate		-0.049		0.273***
		(-1.60)		(9.56)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-5.668***	-233.185***	5.681***	188.922***
	(-8.34)	(-10.26)	(9.30)	(9.02)
N	8078	8078	8078	8078

statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B8. Logit regressions for **Hungary**

	Work ethic		Tolerance	
Income Inequality	-0.650***	2.777***	-0.008	0.427*
	(-9.93)	(12.37)	(-0.12)	(1.97)
Age	0.051***	0.051***	0.006	0.005
	(4.20)	(3.99)	(0.50)	(0.46)
Age squared	-0.000**	-0.000*	-0.000	-0.000
	(-2.74)	(-2.52)	(-0.54)	(-0.50)
Female	-0.071	-0.062	0.238**	0.240**
	(-0.91)	(-0.76)	(3.06)	(3.09)
Primary Education	-0.001	0.096	-0.110	-0.098
	(-0.01)	(0.40)	(-0.51)	(-0.45)
Some Secondary Education	-0.598*	-0.052	0.258	0.323
	(-2.41)	(-0.19)	(1.08)	(1.34)
Secondary Education	-0.289	-0.309	0.325	0.329
	(-1.22)	(-1.24)	(1.43)	(1.45)
Tertiary Education	-0.677**	-0.405	0.553*	0.593*
	(-2.68)	(-1.50)	(2.23)	(2.38)
Log GDP per capita		15.173***		1.921*
		(15.92)		(2.12)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	18.014***	-223.487***	0.524	-30.069*
	(9.37)	(-14.64)	(0.27)	(-2.06)
N	3127	3127	3127	3127

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B9. Logit regressions for ***Ireland***

	Work ethic		Tolerance	
Income Inequality	-0.691***	-0.691***	0.248**	0.248**
	(-8.80)	(-8.80)	(2.82)	(2.82)
Age	0.006	0.006	0.043*	0.043*
	(0.39)	(0.39)	(2.42)	(2.42)
Age squared	0.000	0.000	-0.000*	-0.000*
	(0.03)	(0.03)	(-2.52)	(-2.52)
Female	-0.294**	-0.294**	0.020	0.020
	(-2.87)	(-2.87)	(0.17)	(0.17)
Primary Education	-0.308+	-0.308+	0.289	0.289
	(-1.73)	(-1.73)	(1.51)	(1.51)
Some Secondary Education	-0.228	-0.228	0.374+	0.374+
	(-1.25)	(-1.25)	(1.88)	(1.88)
Secondary Education	-0.342+	-0.342+	0.675**	0.675**
	(-1.74)	(-1.74)	(3.07)	(3.07)
Tertiary Education	0.064	0.064	0.910***	0.910***
	(0.27)	(0.27)	(3.43)	(3.43)
Log GDP per capita		0.000		0.000
		(.)		(.)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	21.700***	21.700***	-8.013**	-8.013**
	(8.43)	(8.43)	(-2.78)	(-2.78)
N	1686	1686	1744	1744

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B10. Logit regressions for ***Italy***

	Work ethic		Tolerance	
Income Inequality	0.748*	0.748*	-0.409	-0.409
	(2.50)	(2.50)	(-1.24)	(-1.24)
Age	0.005	0.005	0.017	0.017
	(0.31)	(0.31)	(1.05)	(1.05)
Age squared	0.000	0.000	-0.000	-0.000
	(0.72)	(0.72)	(-1.11)	(-1.11)
Female	-0.185*	-0.185*	0.377***	0.377***
	(-2.37)	(-2.37)	(4.40)	(4.40)
Primary Education	-0.511**	-0.511**	0.401*	0.401*
	(-2.79)	(-2.79)	(2.14)	(2.14)
Some Secondary Education	-0.769***	-0.769***	0.873***	0.873***
	(-3.53)	(-3.53)	(3.74)	(3.74)
Secondary Education	-0.947***	-0.947***	0.871***	0.871***
	(-4.87)	(-4.87)	(4.30)	(4.30)
Tertiary Education	-0.974***	-0.974***	0.875***	0.875***
	(-4.65)	(-4.65)	(3.98)	(3.98)
Log GDP per capita		0.000		0.000
		(.)		(.)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-25.464*	-25.464*	13.768	13.768
	(-2.52)	(-2.52)	(1.24)	(1.24)
N	2991	2991	2991	2991

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B11. Logit regressions for ***Luxembourg***

	Work ethic		Tolerance	
Income Inequality	-0.021	-0.021	0.057	0.057
	(-0.50)	(-0.50)	(1.13)	(1.13)
Age	0.005	0.005	0.020	0.020
	(0.37)	(0.37)	(1.37)	(1.37)
Age squared	0.000	0.000	-0.000	-0.000
	(0.77)	(0.77)	(-1.49)	(-1.49)
Female	-0.257**	-0.257**	0.407***	0.407***
	(-3.25)	(-3.25)	(4.14)	(4.14)
Primary Education	0.126	0.126	0.501*	0.501*
	(0.52)	(0.52)	(2.02)	(2.02)
Some Secondary Education	-0.115	-0.115	0.717**	0.717**
	(-0.47)	(-0.47)	(2.86)	(2.86)
Secondary Education	-0.425+	-0.425+	0.847***	0.847***
	(-1.76)	(-1.76)	(3.39)	(3.39)
Tertiary Education	-0.732**	-0.732**	1.377***	1.377***
	(-2.90)	(-2.90)	(4.98)	(4.98)
Log GDP per capita		0.000		0.000
		(.)		(.)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	0.741	0.741	-1.491	-1.491
	(0.63)	(0.63)	(-1.04)	(-1.04)
N	2739	2739	2738	2738

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B12. Logit regressions for Luxembourg

	Work ethic		Tolerance	
Income Inequality	-0.021	-0.021	0.057	0.057
	(-0.50)	(-0.50)	(1.13)	(1.13)
Age	0.005	0.005	0.020	0.020
	(0.37)	(0.37)	(1.37)	(1.37)
Age squared	0.000	0.000	-0.000	-0.000
	(0.77)	(0.77)	(-1.49)	(-1.49)
Female	-0.257**	-0.257**	0.407***	0.407***
	(-3.25)	(-3.25)	(4.14)	(4.14)
Primary Education	0.126	0.126	0.501*	0.501*
	(0.52)	(0.52)	(2.02)	(2.02)
Some Secondary Education	-0.115	-0.115	0.717**	0.717**
	(-0.47)	(-0.47)	(2.86)	(2.86)
Secondary Education	-0.425+	-0.425+	0.847***	0.847***
	(-1.76)	(-1.76)	(3.39)	(3.39)
Tertiary Education	-0.732**	-0.732**	1.377***	1.377***
	(-2.90)	(-2.90)	(4.98)	(4.98)
Log GDP per capita		0.000		0.000
		(.)		(.)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	0.741	0.741	-1.491	-1.491
	(0.63)	(0.63)	(-1.04)	(-1.04)
N	2739	2739	2738	2738

t statistics in parentheses
*+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$*

Table B13. Logit regressions for ***Netherlands***

	Work ethic		Tolerance	
Income Inequality	0.164***	0.442***	-0.149***	0.029
	(6.97)	(4.95)	(-5.13)	(0.26)
Age	-0.033**	-0.031*	0.008	0.009
	(-2.70)	(-2.53)	(0.51)	(0.59)
Age squared	0.000**	0.000**	-0.000	-0.000
	(2.98)	(3.04)	(-0.62)	(-0.59)
Female	-0.336***	-0.318***	0.657***	0.669***
	(-4.00)	(-3.78)	(6.34)	(6.43)
Primary Education	0.018	0.107	0.077	0.136
	(0.08)	(0.49)	(0.30)	(0.52)
Some Secondary Education	-0.557**	-0.392+	0.534*	0.641*
	(-2.64)	(-1.80)	(2.09)	(2.43)
Secondary Education	-0.829***	-0.629**	0.678*	0.810**
	(-3.75)	(-2.74)	(2.55)	(2.91)
Tertiary Education	-0.876***	-0.608*	0.569*	0.740*
	(-3.87)	(-2.52)	(2.11)	(2.56)
Log GDP per capita		-9.404**		-5.971+
		(-3.22)		(-1.65)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-4.312***	85.421**	5.008***	61.945+
	(-5.99)	(3.07)	(5.60)	(1.79)
N	3563	3563	3569	3569

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B14. Logit regressions for Norway

	Work ethic		Tolerance	
Income Inequality	0.333	0.333	2.523***	2.523***
	(1.61)	(1.61)	(14.44)	(14.44)
Age	-0.045*	-0.045*	0.022	0.022
	(-2.29)	(-2.29)	(1.25)	(1.25)
Age squared	0.000*	0.000*	-0.000	-0.000
	(2.25)	(2.25)	(-1.62)	(-1.62)
Female	-0.658***	-0.658***	0.600***	0.600***
	(-5.67)	(-5.67)	(5.86)	(5.86)
Primary Education	-0.241	-0.241	-0.036	-0.036
	(-0.47)	(-0.47)	(-0.09)	(-0.09)
Some Secondary Education	-0.472	-0.472	0.473	0.473
	(-0.93)	(-0.93)	(1.13)	(1.13)
Secondary Education	-0.821	-0.821	0.742+	0.742+
	(-1.61)	(-1.61)	(1.77)	(1.77)
Tertiary Education	-0.490	-0.490	1.166**	1.166**
	(-0.96)	(-0.96)	(2.73)	(2.73)
Log GDP per capita		0.000		0.000
		(.)		(.)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-8.236+	-8.236+	-59.647***	-59.647***
	(-1.67)	(-1.67)	(-14.35)	(-14.35)
N	3155	3155	3155	3155

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B15. Logit regressions for ***Poland***

	Work ethic		Tolerance	
Income Inequality	-1.683***	-1.683***	0.180***	0.132**
	(-33.83)	(-32.02)	(4.26)	(2.82)
Age	-0.003	0.009	0.002	-0.002
	(-0.24)	(0.73)	(0.13)	(-0.16)
Age squared	0.000	-0.000	-0.000	-0.000
	(0.74)	(-0.35)	(-0.65)	(-0.27)
Female	-0.198**	-0.151+	0.397***	0.385***
	(-2.60)	(-1.89)	(5.33)	(5.14)
Primary Education	-0.389+	-0.546*	0.712***	0.700***
	(-1.93)	(-2.56)	(4.11)	(4.01)
Some Secondary Education	-0.720**	-1.020***	1.271***	1.299***
	(-3.19)	(-4.29)	(6.11)	(6.19)
Secondary Education	-0.023	-0.852***	0.823***	1.164***
	(-0.11)	(-3.72)	(4.57)	(6.11)
Tertiary Education	-0.124	-0.876***	1.068***	1.393***
	(-0.54)	(-3.48)	(5.06)	(6.33)
Log GDP per capita		3.738***		-0.911***
		(14.87)		(-3.76)
Unemployment rate		0.034**		0.050***
		(2.82)		(4.14)
Growth rate		0.000		0.000
		(.)		(.)
Constant	51.194***	15.989***	-4.972***	4.332+
	(32.96)	(6.11)	(-3.76)	(1.70)
N	4695	4695	4622	4622

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B16. Logit regressions for ***Portugal***

	Work ethic		Tolerance	
Income Inequality	0.110	0.110	0.197	0.197
	(0.57)	(0.57)	(1.03)	(1.03)
Age	0.007	0.007	-0.008	-0.008
	(0.50)	(0.50)	(-0.60)	(-0.60)
Age squared	-0.000	-0.000	0.000	0.000
	(-0.07)	(-0.07)	(0.62)	(0.62)
Female	-0.113	-0.113	0.092	0.092
	(-1.25)	(-1.25)	(1.03)	(1.03)
Primary Education	-0.236	-0.236	0.560***	0.560***
	(-1.40)	(-1.40)	(3.86)	(3.86)
Some Secondary Education	-0.528**	-0.528**	0.698***	0.698***
	(-2.59)	(-2.59)	(3.72)	(3.72)
Secondary Education	-0.738***	-0.738***	0.842***	0.842***
	(-3.53)	(-3.53)	(4.25)	(4.25)
Tertiary Education	-0.912***	-0.912***	0.518*	0.518*
	(-4.05)	(-4.05)	(2.42)	(2.42)
Log GDP per capita		0.000		0.000
		(.)		(.)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-2.984	-2.984	-6.715	-6.715
	(-0.43)	(-0.43)	(-0.99)	(-0.99)
N	2518	2518	2527	2527

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B17. Logit regressions for ***Slovakia***

	Work ethic		Tolerance	
Income Inequality	-0.951***	-6.047**	0.542***	1.236
	(-6.46)	(-2.97)	(4.55)	(0.68)
Age	0.040**	0.042**	-0.007	-0.007
	(3.11)	(3.27)	(-0.65)	(-0.67)
Age squared	-0.000+	-0.000+	0.000	0.000
	(-1.68)	(-1.84)	(0.29)	(0.31)
Female	0.062	0.058	0.222***	0.223***
	(0.78)	(0.73)	(3.34)	(3.35)
Primary Education	0.653**	0.557*	0.253	0.266
	(2.73)	(2.30)	(1.16)	(1.21)
Some Secondary Education	0.576*	0.487*	0.554*	0.566**
	(2.44)	(2.04)	(2.57)	(2.60)
Secondary Education	0.480+	0.353	0.737**	0.753**
	(1.94)	(1.40)	(3.27)	(3.29)
Tertiary Education	0.389	0.310	0.910***	0.922***
	(1.51)	(1.19)	(3.85)	(3.86)
Log GDP per capita		-7.726*		1.052
		(-2.51)		(0.38)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	21.776***	214.571**	-12.971***	-39.231
	(6.14)	(2.79)	(-4.50)	(-0.57)
N	3868	3868	3812	3812

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B18. Logit regressions for ***Spain***

	Work ethic		Tolerance	
Income Inequality	0.210***	7.958***	0.021	-1.398***
	(11.99)	(25.75)	(1.00)	(-4.18)
Age	-0.017*	-0.012	0.032***	0.031***
	(-2.13)	(-1.34)	(3.50)	(3.30)
Age squared	0.000*	0.000*	-0.000***	-0.000***
	(2.34)	(2.00)	(-3.78)	(-3.67)
Female	-0.149**	-0.115*	0.186**	0.174**
	(-2.85)	(-2.00)	(3.02)	(2.81)
Primary Education	0.257**	-0.129	0.100	0.193*
	(3.27)	(-1.48)	(1.13)	(2.15)
Some Secondary Education	-0.305**	-0.239*	0.328**	0.315**
	(-3.17)	(-2.24)	(2.93)	(2.79)
Secondary Education	-0.457***	-0.287**	0.603***	0.552***
	(-4.77)	(-2.72)	(5.28)	(4.80)
Tertiary Education	-0.218*	-0.222+	0.565***	0.551***
	(-2.07)	(-1.92)	(4.41)	(4.29)
Log GDP per capita		-34.417***		16.926***
		(-9.55)		(4.34)
Unemployment rate		-2.978***		0.779***
		(-27.10)		(6.60)
Growth rate		-3.069***		0.736***
		(-26.38)		(5.87)
Constant	-6.599***	133.720***	-0.419	-136.014**
	(-10.45)	(3.39)	(-0.57)	(-3.18)
N	6267	6267	6267	6267

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table B19. Logit regressions for ***Sweden***

	Work ethic		Tolerance	
Income Inequality	0.054	-0.606***	0.162*	0.162
	(0.59)	(-3.74)	(2.04)	(1.22)
Age	-0.072**	-0.064**	0.045*	0.045*
	(-3.15)	(-2.79)	(2.16)	(2.15)
Age squared	0.001***	0.001**	-0.001*	-0.001*
	(3.52)	(3.08)	(-2.35)	(-2.34)
Female	-0.951***	-0.944***	0.688***	0.688***
	(-6.64)	(-6.57)	(5.53)	(5.53)
Primary Education	0.810	1.046	0.066	0.066
	(0.78)	(1.01)	(0.12)	(0.12)
Some Secondary Education	1.051	1.277	0.308	0.308
	(1.01)	(1.23)	(0.55)	(0.55)
Secondary Education	0.893	1.104	0.820	0.820
	(0.86)	(1.06)	(1.45)	(1.45)
Tertiary Education	1.579	1.404	1.147+	1.147+
	(1.52)	(1.35)	(1.93)	(1.93)
Log GDP per capita		5.073***		-0.000
		(5.05)		(-0.00)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-3.300	-40.306***	-2.860	-2.860
	(-1.37)	(-5.31)	(-1.46)	(-0.37)
N	4029	4029	4029	4029

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

*Table B20. Logit regressions for **United Kingdom***

	Work ethic		Tolerance	
Income Inequality	0.312^{+}	-0.146	-0.380^{+}	-0.903*
	(1.91)	(-0.44)	(-1.67)	(-1.96)
Age	-0.005	-0.004	0.045**	0.046**
	(-0.42)	(-0.35)	(3.05)	(3.12)
Age squared	0.000	0.000	-0.000*	-0.000**
	(0.26)	(0.19)	(-2.53)	(-2.60)
Female	-0.553***	-0.551***	0.396***	0.400***
	(-7.10)	(-7.08)	(3.71)	(3.74)
Primary Education	0.066	0.137	0.276	0.359^{+}
	(0.46)	(0.92)	(1.50)	(1.84)
Some Secondary Education	0.188	0.221	0.444*	0.486*
	(1.27)	(1.48)	(2.28)	(2.46)
Secondary Education	0.021	0.068	0.680**	0.742***
	(0.13)	(0.43)	(3.19)	(3.38)
Tertiary Education	0.026	0.034	0.757**	0.771**
	(0.13)	(0.18)	(2.82)	(2.86)
Log GDP per capita		1.675		1.900
		(1.59)		(1.32)
Unemployment rate		0.000		0.000
		(.)		(.)
Growth rate		0.000		0.000
		(.)		(.)
Constant	-10.878^{+}	-12.119*	13.193^{+}	11.920
	(-1.94)	(-2.15)	(1.69)	(1.49)
N	2872	2872	2872	2872

t statistics in parentheses
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Appendix C: Cross-country regressions without country fixed effects

Table C1 below reports the estimated coefficients for the effect of income inequality on symbolic values obtained in logit regressions where country dummies have been excluded. Apart from that, the estimated models are equivalent to those pertaining to the basic configuration with macro controls and time fixed effects presented in the main text. The employed inequality measure is the contemporary Gini coefficient of net income. All available OECD countries are included in the regressions.

Table C1. Coefficients for Gini-net in regressions without country dummies

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	(6)
Child-hardwork	0.011	-0.006	-0.008	-0.009	-0.010	0.006
	(0.34)	(-0.19)	(-0.25)	(-0.24)	(-0.27)	(0.15)
Money-work	0.026^{+}	0.026^{+}	0.027^{+}	0.030*	0.024^{+}	0.032*
	(1.84)	(1.89)	(1.95)	(2.18)	(1.79)	(2.39)
Work-duty	0.015	0.011	0.009	0.012	0.003	0.009
	(1.27)	(1.00)	(0.81)	(1.07)	(0.26)	(0.76)
Justify-govbenefit	-0.017	-0.018	-0.020	-0.021	-0.023	-0.031^{+}
	(-0.97)	-(1.14)	-(1.26)	-(1.32)	(-1.43)	(-1.74)
Justify-nofare	-0.001	0.010	0.011	0.010	0.005	0.002
	(-0.12)	(0.92)	(0.97)	(0.96)	(0.50)	(0.19)
Justify-taxcheat	0.011	0.002	0.002	0.003	-0.003	0.006
	(0.70)	(0.17)	(0.21)	(0.27)	(-0.25)	(0.68)
Justify-bribe	0.028^{+}	0.026^{+}	0.026^{+}	0.026^{+}	0.021	0.026^{+}
	(1.71)	(1.94)	(1.77)	(1.86)	(1.53)	(1.90)
Child-obedience	0.049***	0.046***	0.046***	0.048***	0.040***	0.043***
	(4.21)	(3.99)	(3.91)	(3.91)	(3.42)	(4.18)
Instructions-follow	0.019	0.013	0.015	0.013	0.010	0.009
	(1.23)	(0.95)	(1.09)	(0.94)	(0.77)	(0.51)
Justify-lying	0.010	0.032^{+}	0.028	0.029	0.019	0.032^{+}
	(0.46)	(1.95)	(1.62)	(1.62)	(1.10)	(1.84)
Child-unselfish	0.035*	0.027^{+}	0.027^{+}	0.025	0.026	0.017
	(2.18)	(1.69)	(1.65)	(1.57)	(1.62)	(0.97)
Child-tolerance	0.012	0.011	0.011	0.010	0.010	-0.001
	(0.72)	(0.65)	(0.57)	(0.53)	(0.57)	(-0.07)

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Information on the GINI project

Aims

The core objective of GINI is to deliver important new answers to questions of great interest to European societies: What are the social, cultural and political impacts that increasing inequalities in income, wealth and education may have? For the answers, GINI combines an interdisciplinary analysis that draws on economics, sociology, political science and health studies, with improved methodologies, uniform measurement, wide country coverage, a clear policy dimension and broad dissemination.

Methodologically, GINI aims to:

- exploit differences between and within 29 countries in inequality levels and trends for understanding the impacts and teasing out implications for policy and institutions,
- elaborate on the effects of both individual distributional positions and aggregate inequalities, and
- allow for feedback from impacts to inequality in a two-way causality approach.

The project operates in a framework of policy-oriented debate and international comparisons across all EU countries (except Cyprus and Malta), the USA, Japan, Canada and Australia.

Inequality Impacts and Analysis

Social impacts of inequality include educational access and achievement, individual employment opportunities and labour market behaviour, household joblessness, living standards and deprivation, family and household formation/breakdown, housing and intergenerational social mobility, individual health and life expectancy, and social cohesion versus polarisation. Underlying long-term trends, the economic cycle and the current financial and economic crisis will be incorporated. Politico-cultural impacts investigated are: Do increasing income/educational inequalities widen cultural and political 'distances', alienating people from politics, globalisation and European integration? Do they affect individuals' participation and general social trust? Is acceptance of inequality and policies of redistribution affected by inequality itself? What effects do political systems (coalitions/winner-takes-all) have? Finally, it focuses on costs and benefi ts of policies limiting income inequality and its effi ciency for mitigating other inequalities (health, housing, education and opportunity), and addresses the question what contributions policy making itself may have made to the growth of inequalities.

Support and Activities

The project receives EU research support to the amount of Euro 2.7 million. The work will result in four main reports and a final report, some 70 discussion papers and 29 country reports. The start of the project is 1 February 2010 for a three-year period. Detailed information can be found on the website.

www.gini-research.org

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Project funded under the Socio-Economic sciences and Humanities theme.