

# Shaping Stances in Post-Industrial Societies: Two Decades of Change in Attitudes Towards Unequal Income Distribution

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## 1 Introduction

Recent decades are characterized by growing levels of economic and physical precariousness where a large share of population is experiencing declining or stagnating real wages, growing job insecurity, and widening wealth disparities (CRS 2019, Costa and Machin 2017, UN 2020). Income and wealth inequality has grown in most developed countries (Piketty 2014, Nolan et. al. 2014, Milanovic 2016). This trend, paired with the stagnation and the retrenchment of the welfare state and the weakening of the labour unions, has left the position of vulnerable groups in the society particularly exposed to socio-economic uncertainties. In post-industrial countries these changes have resulted in generations who find it increasingly hard to achieve economic stability when transitioning into adulthood (Breen and Buchman 2002, Brinton 2010, Chauvel and Schröder 2014). Diminishing social mobility and reduced life chances due to increasing socio-economic inequalities (Dao and Prakash 2010, Morsey 2012) might lead one to assume that people would demand more socio-economic equality and wider redistribution by applying pressure on the relevant policy making processes. However, this has not been the case. Conversely, research on attitudes toward unequal conditions and redistribution measures has shown that citizens' opinions on the ideal socio-economic conditions do not necessarily reflect actual levels of inequality (Kenworthy and McCall 2008, Dallinger 2010, Larsen 2016, Breznau and Hommerich 2019). Instead, in par with the growing liberalization and marketization of societies and the political discourse since the 1980s, individuals have become more willing to accept a variety of socio-economic inequalities in their respective societies (Kenworthy and McCall 2008,

Dallinger 2010, Breznau and Hommerich 2019).

In this paper I will address the question of how individuals' age and self-interest as a motivator contributes to their attitudes toward the unequal distribution of income. I will explore if this relationship has changed over the 20-year period from 1989 until 2009 in 10 post-industrial countries.

When studying attitudes on inequality, earlier cross-national studies have been predominantly informed by cross-sectional data that allows only limited, insights into processes of value change (e.g. Suhrcke 2001, Lübker 2004, Lübker 2007). However, less attention has been given to changes happening over time. Current research overcomes the previous lack of longitudinal focus by employing repeated cross-sectional survey data to analyse change over time (Rafferty 2015). An improved understanding of the individual-level factors influential to peoples' willingness to accept and approve certain levels of inequality provides a practical framework for further research. It is useful not only for retrospective assessments of historical changes but also for assessing tools and measures that societies will have to create and implement to successfully react to the current socio-economic crisis.

By shedding light on the role of age and self-interest on individuals' attitudes toward unequal income distribution, I inevitably touch upon the issue of inequality between social generations. Intergenerational inequality contributes to diminishing life chances, downward social mobility, and a steady crumbling of the existing system of social stratification (Kochhar 2015). Downward mobility and the precarious position of the young is a serious social issue in any society, but this is especially acute in ageing societies struggling with demographic problems, such as decreased birth rates and workforce deficits at the time of continued low economic growth (McKinsey Global Institute 2016). The latest example of such negative impacts was observable during and after the global recession in 2008 and is already visible in ongoing COVID19 pandemic-induced recessions and medical crises across the world (Ingelsrud and Mamelund 2020). Certain precarious employment groups are especially vulnerable and exposed to these uncertainties. For example, in service sectors where many women, "gig workers," and "platform workers" are employed (Stabile et al. 2020). Economists have already started to warn about pandemic-induced, long-term scarring of vulnerable groups (Kozłowski et al. 2020), the effects of which, paired with generational scarring (Chauvel

and Schröder 2014), are bound to become evident.

There is little doubt that inequality, and socio-economic inequality in particular, is a highly normative issue that resonates in the varying opinions among populations on the extend to which inequality and inequality-producing conditions are considered to be acceptable, just, and fair. The Nobel Prize-winning economist Amartya Sen has argued that people's judgements about actual income distribution are both a function of their ideas about what is morally right and just, and of the reality against which they compare these norms (Sen 2000: 60). Clark and D'Ambrosio (2015) follow the same intuition when they distinguish attitudes to income inequality according to either a "normative" or a "comparative" focus — each highlighting a varying aspect of the value formation.

In addition, attitudes on income inequality are also closely interrelated to public opinion on redistribution. Attitudes on socio-economic inequalities and redistribution both represent the varying reactions to different outcomes of the plurality of historical and institutional contexts where socio-economic inequalities are created, maintained, and reproduced. In turn, historical and institutional context prescribes the level of government intervention to individual liberties and responsibilities. This means that individuals' attitudes can also be interpreted as a proxy for attitudes for the current levels of redistribution policies in the society.

The remainder of this paper proceeds as follows. The next, literature review section is informed by the interdisciplinary scholarship and summarizes the recent studies operationalizing the self-interest argument and age in the egalitarian attitude formation. This is followed by the introduction of the data, variables, analytical strategy, and the description of the results. Finally, the findings are summarized and contextualized.

## 2 Public Attitudes Toward Unequal Income Distribution

To explore the factors behind individuals' motivations to either accept or reject socio-economic inequalities I will draw evidence from a comprehensive range of recent interdisciplinary studies. I will uncover how previous studies have succeeded in establishing a connection between an individual's self-interest, age, and their opinions

on the ideal income distribution in society, and relate these findings to theoretical interpretations.

Socio-economic conditions in industrialised countries have worsened over the last few decades (World Economic Forum 2014, World Inequality Report 2018). Therefore, it would be logical to assume that rising inequality would have also resulted in increasing demands for more equality. This has been a common assumption and a starting point of many studies over the last two decades (e.g. Cusack et al. 2006, Iversen and Soskice 2006, Kelly and Enns 2010, Lupu and Pontusson 2011). The popular Meltzer-Richard median-voter model of the politics of redistribution offers one possible conceptual framework to apply an argument based on ideas of self-interest (Meltzer and Richard 1981). This model claims that the preferred level of redistribution depends on the level of inequality in the society. The higher the economic inequality, the greater should be the median voter's demand for redistribution. In other words, according to this model, inequality and demand for redistribution are claimed to be positively linked.

Individuals' positions on the labour market and their income level are one of the factors that can provide information about the explanatory power of self-interest on attitude formation. An insecure position in the labour market makes respondents more likely to be either dependent or become dependent on some form of redistribution mechanism. Individuals with higher incomes are more likely to interpret both their income, and the position derived from that income, as fairly earned. In turn, they would have more to lose from the expansion of institutionalised redistribution mechanisms. Therefore, taking self-interest as an explanatory factor, compared to the full-time employed respondents, *self-employed respondents, and those inactive on the job market (the unemployed, students, housewives, and seniors), are more likely to favour more equal income distribution (H1).*

*Furthermore, compared to the higher and middle income earners, respondents who belong to the lower income group are expected to be more in favour of more equal income distribution (H2).*

A number of follow-up studies (e.g. Moene and Wallerstein 2001, Moene and Wallerstein 2003, Bradley et al. 2003, Iversen and Soskice 2006) refute the self-interest explanation and give evidence that in the case of post-industrial developed countries, institutional factors such as differences in political and welfare systems are actually

more important than the existing unequal distribution of resources and opportunities. Research by Schmidt-Catran (2016) does find a positive within-country effect of inequality on the demand for more redistribution. However they find no such relationship between countries. They conclude that such results point to an unobserved variable at the country level that cannot solely be explained by welfare regime typologies. This uncaptured variable in the data is speculated to be either individual justice beliefs or distributional ethics. An alternative justification for these inconclusive results also points to the established fact that developed post-industrial countries have become increasingly similar to one another (Milanovic 2016).

The relationship between the growing socio-economic inequalities and the demand for more equal conditions has often been taken for granted (e.g. Cusack et al. 2006, Iversen and Soskice 2006, Kelly and Enns 2010, Lupu and Pontusson 2011). However, empirical research instrumentalizing the welfare state that is informed solely by cross-national or cross-sectional data fails to provide robust evidence for this explanation. To explain values that are against individuals' socio-economic self-interests alternative explanations should also be considered. Some studies (e.g. Béland 2007, Hacker and Pierson 2010, Lupu and Pontussen 2011, Hommerich and Breznau 2019) have pointed toward historical and institutional contexts as one of the venues where cross-national differences emerge. Others highlight the role of culturally shared beliefs about individual liberties. At least one study (Savani and Rattan 2012) has pointed to a connection between certain culturally pervasive ideas and the maintenance and reinforcement of unequal income distribution. They argue that thinking in the terms of choice ignores societal factors behind inequality. The so-called "choice mindset" activates the belief that life outcomes stem from personal agency and leads people to justify wealth inequality. In other words, inequality in life outcomes results from differences in individuals' life choices and therefore makes the inequalities both justified and reasonable. Savani et al. (2011) has also suggested that the concept of choice decreases support for all types of societally beneficial policies and in turn, increases support for policies furthering individual rights.

It is already a widely recognised fact that upper- and middle-income earners are drifting further away from one another, while the incomes of middle-income earners have over time moved closer to those of lower-income earners (Piketty 2014, Milanovic

2016). In such a context, Clery (2012) studied attitudes on welfare measures in the UK after the double-tipped recession in 2008, and found that the increase of negative attitudes on redistribution during the past decade has been affecting certain groups more than others. They identified a growing criticism among advantaged groups toward redistributive measures, compared to the groups who are most likely to rely on such measures — people with low incomes and a high risk of unemployment. Another recent study by Roex et al. (2019) using data from 39 countries found that individuals with higher social positions are more tolerant of existing income inequalities compared to individuals with lower positions in the social strata.

Results from Clery (2012) and Roex et al. (2019) seem to be partly in line with the self-interest explanation. However, Roex et al. also point out that there are alternative explanations for rejecting egalitarianism rooted in the individual-level overestimation of the potential for upward mobility. This line of argumentation is supported by a number of studies (e.g. Iversen and Soskice 2006, Kelly and Enns 2010, Lupu and Pontusson 2011) suggesting that when individuals are confronted with increasing inequality, individuals belonging to the middle of the income distribution tend to align their interests with upper-income earners instead of lower-income earners. Clark and D'Ambrosio (2015) claim that if an individual aspires to be a part of the group in question, then comparisons with respect to richer individuals in this group may give rise to positive feelings, as the individual anticipates becoming the member of the higher-income group. Therefore, based on previous research, *respondents belonging to the middle of the income distribution are expected to align their attitudes with higher-income earners (H3)*.

Evidence for positive subjective well-being stemming from others' income is also found in the research of Linos and West (2003), Senik (2009), Clark et al. (2009), and Kingdon and Knight (2007). These examples of different versions of the comparative reference group in action can be explained by the so called "Hirschman's tunnel effect" — a theoretical explanation coined by Hirschman and Rothschild (1973). The "tunnel effect" describes how disadvantaged members of the society at first tolerate increasing inequality while only a select few members benefit from uneven economic growth. They accept and approve of the increasing income and wealth of the others because they eventually expect to catch up with them. But Hirschman and Rothschild also warn that

if the catching up does not happen it can result in social disorder (Flechtner 2013).

The following section will look at how individual's age can implicate their egalitarian attitude formation while taking into consideration both the period-effect and the cohort-effect arguments in the preceding theory and research. Karl Mannheim (1928/1952) described individuals in a generation as sharing a common set of social circumstances, and a predisposition for certain modes of thinking and experience. Young people now, in particular share such socio-cultural context — for decades they have witnessed their parents' social mobility, and have been promised the same experience. However, the reality has been the opposite and after graduating into adulthood they face growing unemployment and unachievable home ownership. While highlighting slightly varying nuances, concepts of “culture as toolkit” (Swidler 1986) and “social generation” (Mannheim 1928/1952) both offer additional interpretations of this situation. According to the concept of “culture as toolkit” (Swidler 1986), individuals not only live within a culture but the culture also informs their behaviour and decision-making. The second concept, “social generation” is defined as specific groups of cohorts exposed to a common pattern of social change (Mannheim 1928/1952, Chauvel 2010). When equipped with these “toolkits” cohorts are indoctrinated with certain expectations regarding their life chances to position themselves on the income distribution. The natural aspiration to do better than their parents' generation is another common expectation. Younger individuals aspire to reach higher socio-economic status and are more likely to trust the prevalent discourse of meritocratic ideology. However, older individuals, who are more likely to already have secured some socio-economic security, feel less pressure to compete for economic resources and therefore “can afford” to hold an egalitarian attitude. Thus, I expect to *observe a non-linear relationship between age and the support for more equal income distribution (H4)*.

However, as Hirschman and Rothschild (1973) tapped into, those unfilled promises are highly problematic. If catching up does not happen, initial tolerance could over time be replaced with disappointment and resentment. Cross-national comparative research on longitudinal data (Chauvel and Schröder 2014) has proven that shared negative experiences can durably mark or even collectively “scar” a whole generation. It is especially probable when opportunity structures change dramatically and the cultural

tools and strategies a particular generation was equipped with suddenly become outdated and useless. Therefore, scholars have hypothesized about systematic cycles of “lucky” and “unlucky” generations (Myles 2002: 138). This in turn motivates one to question whether these shared negative experiences could also desensitize disappointed individuals to inequalities experienced by other people. Some support for this explanation is found from research in psychology where attitudes of young people have been found to express two trends. First, when self-identifying their social position, young people are more likely to rate themselves as above average (Konrath et al. 2011) and second, young people show less empathy towards other peoples’ life chances (Twenge 2013).

Inglehart (2018) claims that over time, value-based cleavages have become much stronger than once-powerful cleavages based on income, education, occupation, or social class. He argues that people’s values and behaviours are shaped by their sense of security. Applying the theory of intergenerational value change, he tracks the shift in values from “materialist” to “post-materialist,” and claims that the growth of insecurity has only intensified the cultural backlash between those two ways of thinking. Informed by historical longitudinal data, Inglehart (2018) concludes that every subsequent generation tends to be more post-materialist than the previous one. Therefore, *I expect to observe an overall increase in the support for more equal income distribution between the years 1989 and 2009 (H5).*

### 3 Data, Variables and Analytic Strategy

The data used in the empirical analysis is the “Integrated Values Survey 1981-2014” (EVS 2015, WVS 2015) — the merged form of the four waves of the “European Value Survey 1981-2008” (EVS 2015) and the six waves of the “World Value Survey 1981-2014” (WVS 2015). The full version of the “Integrated Values Survey 1981-2014” covers surveys conducted in 113 countries/regions of the 6 waves: 1981-1984, 1989-1993, 1994-1998, 1999-2004, 2005-2009, and 2010-2014. The original dataset consists of 1,427 variables and 506,268 cases. The countries and measurement waves under examination were limited by the data available in the “Integrated Values Survey 1981-2014” dataset. Therefore, in this analysis only a subset of the full “Integrated Values Survey 1981-2014” was utilized.



This subset was compiled from waves 2 and 5 (corresponding to the years 1989-1993 and 2005-2009) from 10 OECD countries. These countries were Canada, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Spain, and the United States. The countries were chosen to represent as wide a range as possible of post-industrial societies while accommodating the availability of variables in different waves. The effective sample size in 1989-1993 was 17,040 individuals and 21,877 individuals in 2005-2009. Country samples vary between 588 and 4,147 individuals in 1989-1993 (mean country  $N = 1,802$ ), and between 1096 and 4,139 individuals in 2005-2009 (mean country  $N = 2,324$ ).

### 3 - 1 Dependent Variable

The dependent variable — *AII* measures attitudes towards income inequality by using a question about respondents' ideal distribution of incomes in their country. The dependent variable allows one to test normative views to income inequality among the respondents. The original version of this variable asks respondents to choose a statement they agree with most on a 10-point Likert scale, where 1 means "Incomes should be made more equal" and 10 means "We need larger income differences as incentives." To offer a more intuitive interpretation of the numerical values of the variable, the original variable was reordered so that 1 indicates least support for equal income distribution and 10 means maximum support for equal income distribution. The mean value of *AII* in the 1989-1993 dataset is 4.96 with the standard deviation 2.77, and in the 2005-2009 dataset the mean value is 5.73 with the standard deviation 2.57. The distribution of the dependent variable *AII* and the independent and control variables across the two waves is presented in Table 1.

### 3 - 2 Independent Variables

From the perspective of the central research question, one of the main explanatory variables in the analysis is an individual's age. The age variable was measured in years, with the youngest respondents 18 years old and the oldest respondents 80 years old. The mean age in 1989-1993 dataset was 42.9 and 47.2 in 2005-2009. Previous research and preliminary model testing indicated that the relationship between the age variable and the dependent variable might not be linear (e.g. Dion and Birchfield

2010, Finseraas 2009). To account for the possible curvilinear relationship between the dependent variable *AII* and explanatory variable, age was included into the model also in its quadratic polynomial version.

According to theory and previous research, another central concept behind individuals' attitudes toward income distribution could be self-interest. The theoretical concept of self-interest was operationalized by the variables measuring subjective position on the income scale and employment status. The first, the employment status variable, is a categorical variable with 4 levels; "employed full time", "employed part-time", "self-employed" and "not employed." The utilized employment status variable is a shortened version of the original employment variable from which the levels "students", "retired", "housewife", and "unemployed" were recoded into "not employed."

The second variable measuring individual's self-interest in the analysis is the subjective income scale variable. Use of subjective positioning on the income scale variable compared to using an objective individual or household income scale variable offers several advantages. First of all, the use of subjective position on the income scale highlights both the comparative and subjective nature of socio-economic well-being. In addition, it will help to overcome the between-country differences in income levels and costs of living. In the original version of this "scale of incomes" variable respondents were asked to position themselves on a 11-step income scale by answering to the following question: "On this card is an income scale which 1 indicates the lowest income group and 11 the highest income group in your country. We would like to know what group your household is. Please specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in." To increase the explanatory power of the income variable, the original long version was recoded into three-level variable by dividing it into terciles, which in turn were coded as "low income", "middle income", and "high income."

As income inequality and inequality in general is a highly normative issue and the stances on political ideologies are growing more divided than ever, it is also important to include political scale into the model as a control variable. Political scale is a continuous variable signifying self-positioning on the political scale and is measured on 10-point scale — 1 meaning "left" and 10 meaning "right." This scale is interpreted as

Table 1. Summary Descriptive Statistics

	<b>1989-1993 (N=18028)</b>	<b>2005-2009 (N=23248)</b>
<b>All</b>		
Mean (SD)	4.96 (2.77)	5.73 (2.57)
Median [Min, Max]	5.00 [1.00, 10.0]	6.00 [1.00, 10.0]
Missing	719 (4.0%)	590 (2.5%)
<b>Country</b>		
Canada	1730 (9.6%)	2164 (9.3%)
Finland	588 (3.3%)	2148 (9.2%)
France	1002 (5.6%)	2502 (10.8%)
Germany	3437 (19.1%)	4139 (17.8%)
Italy	2018 (11.2%)	2531 (10.9%)
Japan	1011 (5.6%)	1096 (4.7%)
Netherlands	1017 (5.6%)	2604 (11.2%)
Norway	1239 (6.9%)	2115 (9.1%)
Spain	4147 (23.0%)	2700 (11.6%)
United States	1839 (10.2%)	1249 (5.4%)
<b>Age (years)</b>		
Mean (SD)	42.9 (16.4)	47.2 (16.4)
Median [Min, Max]	41.0 [18.0, 80.0]	47.0 [18.0, 80.0]
Missing	270 (1.5%)	837 (3.6%)
<b>Gender</b>		
Female	9382 (52.0%)	12336 (53.1%)
Male	8606 (47.7%)	10900 (46.9%)
Missing	40 (0.2%)	12 (0.1%)
<b>Employment Status</b>		
Full time	8122 (45.1%)	8922 (38.4%)
Not employed	1890 (10.5%)	2484 (10.7%)
Part time	1212 (6.7%)	2007 (8.6%)
Self employed	974 (5.4%)	1582 (6.8%)
Missing	5830 (32.3%)	8253 (35.5%)
<b>Income Scale</b>		
High	4054 (22.5%)	2584 (11.1%)
Low	7652 (42.4%)	5712 (24.6%)
Medium	3702 (20.5%)	2857 (12.3%)
Missing	2620 (14.5%)	12095 (52.0%)
<b>Political Scale</b>		
Mean (SD)	5.23 (1.97)	5.20 (2.03)
Median [Min, Max]	5.00 [1.00, 10.0]	5.00 [1.00, 10.0]
Missing	3427 (19.0%)	3163 (13.6%)

Data: Integrated Values Survey 1989-2009

“left” being extremely liberal and “right” as having conservative political views. The mean political scale in 1989-1993 was 5.23 with the standard deviation 1.97 and mean political scale in 2005-2009 was 5.20 with the standard deviation 2.03.

Previous studies (e.g. Cusack et. al. 2006, Iversen and Soskice 2001, Linos and West 2003) have found evidence that gender is an important factor contributing to the individuals' attitude formation. Thus, gender was included into the model as a control variable. In 1989-1993 the 52% of the respondents were female and 48% were male, in 2005-2009 the gender distribution was respectively 53% and 47%.

### 3 - 3 Analytical Strategy

To see if respondents' age, gender, employment status and income significantly predict attitudes on unequal distribution of income in society, and explore the change over a 20-year period, I conducted a multiple regression with country-fixed effects for both waves (Table 2), and fixed effects models with country and time fixed effects (Table 3). Using country-fixed effects allowed me to examine changes within countries while controlling for unobserved country-level heterogeneity. Therefore, estimators of fixed-effects models are not contaminated with spurious effects of stable, unmeasured country characteristics (Verbeek 2012, Kragten and Rözer 2017). To account for the heteroskedasticity in the data, Eicker–Huber–White standard errors, also known as the robust standard errors, were applied to the models. The assumptions for linear regression were tested and an analysis of standard residuals was carried out, showing that the data contained no outliers. The variance inflation factor (VIF) did not exceed 2 for any of the control variables (excl. age and age<sup>2</sup> where they are highly correlated by nature). The scatterplot of standardized residuals showed that the data met the assumptions of homogeneity of variance and linearity. Only complete cases were included into the models.

Analysis was carried out in the statistical programming language R and RStudio. The statistical packages Stargazer (Hlavac 2018), sjPlot (Lüdtke 2020), ggplot2 (Wickham 2016), table1 (Rich 2020) were used to plot the summary tables for the descriptive statistics, fixed effects models, and figures with model based predicted values.

## 4 Results

The central research question of this paper is focused on how individual's age and self-interest contributes to their attitudes toward unequal income distribution, and explores if and how this relationship has changed from 1989 until 2009 in selected post-industrial countries. In the full model for wave 1989-1993 (Model 2 in Table 2) the predictors explained almost 14% of the variance ( $R^2_{Adjusted} = .137$ ). In the full model

Table 2. Fixed Effects Models with Country Fixed Effects

	<i>Dependent variable:</i>			
	AII			
	M1 (1989-1993)	M2 (1989-1993)	M3 (2005-2009)	M4 (2005-2009)
Age	-0.011 (0.007)	0.013 (0.012)	-0.021*** (0.006)	0.008 (0.013)
Age2	0.0002** (0.0001)	-0.0001 (0.0001)	0.0002*** (0.0001)	-0.0001 (0.0001)
Male	-0.363*** (0.041)	-0.329*** (0.057)	-0.221*** (0.034)	0.021 (0.059)
Not employed		0.793*** (0.070)		0.780*** (0.074)
Part-time employed		0.342*** (0.072)		0.372*** (0.078)
Self-employed		0.034 (0.097)		0.083 (0.100)
Medium income		0.072 (0.097)		0.042 (0.096)
High income		-0.385*** (0.107)		-0.328*** (0.095)
Political scale (1-10)		-0.303*** (0.014)		-0.285*** (0.015)
Constant	4.505*** (0.171)	5.447*** (0.276)	5.844*** (0.147)	6.307*** (0.307)
Observations	17,040	8,854	21,877	6,274
Adjusted R <sup>2</sup>	0.067	0.137	0.065	0.137
Residual Std. Error	2.674	2.506	2.480	2.250

Note:

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

Table 3. Fixed Effects Models with Country and Time Fixed Effects

	<i>Dependent variable:</i>	
	M1	M2
2005-2009		0.690*** (0.042)
Age	0.009 (0.007)	0.017* (0.009)
Age2	-0.00002 (0.0001)	-0.0002* (0.0001)
Male	-0.222*** (0.041)	-0.168*** (0.042)
Not employed	0.683** (0.289)	0.742*** (0.051)
Part-time employed	0.442*** (0.012)	0.376*** (0.054)
Self-employed	0.133*** (0.0001)	0.211*** (0.071)
Medium income	0.216*** (0.058)	0.162** (0.070)
High income	-0.173 (0.156)	-0.322*** (0.074)
Political scale (1-10)	-0.320** (0.156)	-0.304*** (0.011)
Constant	6.211*** (0.171)	5.409*** (0.209)
Observations	29,674	15,128
Adjusted R <sup>2</sup>	0.092	0.118
Residual Std. Error	2.454	2.454

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

for wave 2005-2009 (Model 4 in Table 2) the predictors explained also almost 14% of the variance ( $R^2_{Adjusted} = .137$ ).

To test the hypothesis 5, predicting an overall increase in the support for more equal income distribution between the years 1989 and 2009, I carried out fixed effects models

with both country and time fixed effects (Table 3). When time was not controlled in the model (Model 1, Table 3) predictors explained about 9% of the variance. However, when wave variable was included (Model 2, Table 3) predictors explained approximately 12% of the variance, and support for more *AII* in 2005-2009 proved to be significantly higher compared to 1989-1993. Thus, results providing supporting evidence for the hypothesis 5.

#### The impact of self-interest on *AII*

The central idea behind hypotheses 1, 2, and 3 was to identify the relationship between the normative attitudes on the ideal income distribution in society and to explore the role of individual level self-interest. To achieve this, I observed the impact of an individual's subjective position on the income scale and their employment status. The effect of the subjective position on the income scale on individuals' attitudes proved to be statistically significant both in 1989-1993 (Model 2, Table 2) and 2005-2009 (Model 4, Table 2). In order to offer some interpretation of the main effects in the model I visualized model predictions by the so called "predictor effect display" (Fox and Weisberg 2018). From Figure 1 we can observe that in line with hypothesis 2, lower-income earners are indeed more supportive of more equal income distribution. However, in contrast with hypothesis 3, even though middle-income earners' support for more equal distribution is lower than for the low income earners', they are still more supportive of more equality in the income distribution than high-income earners. When comparing 1989-1993 and 2005-2009 we see that even though the overall support in all income groups has increased, the distribution of the support across income groups stayed the same for both 1989-1993 and 2005-2009.



Figure 1. Predicted Support for Larger Income Equality by Income

Hypothesis 1 predicted that self-employed respondents, and the ones inactive on the job market (the unemployed, students, housewives, and seniors) are, compared to the full-time employed respondents, more likely to favour more equal income distribution. The effect of the employment status on *AII* proved to be statistically significant. Results however, do not offer support for hypothesis 1 because as we can observe from the Figure 2, both in 1989-1993 and 2005-2009 self-employed people were less supportive of more equality in the income distribution compared to the other employment groups. Similar to the effect of subjective income scale, we can observe an increase in the overall support for more equal income distribution between 1989-1993 and 2005-2009.





Figure 2. Predicted Support for Larger Income Equality by Employment Status

#### The impact of age on *AII*

Hypothesis 4 predicted a non-linear relationship between age and the support for more equal income distribution between the years 1989 and 2009. When included in the models without the self-interest variables, age had a non-linear and statistically significant effect on *AII* both in 1989-1993 and 2005-2009 (Model 1 and Model 3, Table 2). However, when self-interest variables were controlled for, the explanatory power of the models doubled from 7% to 14% (Model 2 and Model 4, Table 2). In other words, both in 1989-1993 and 2005-2009 self-interest variables explain *AII* better than individual's age. Thus, the results do not confirm hypothesis 4.

#### The impact of control variables on *AII*

In the analysis the effect of gender was also controlled for and from the models (Table 2) we can observe that when it comes to attitude formation, gender is important. The effect of gender on individuals' attitudes proved to be statistically significant in 1989-1993, when men, compared to women were less supportive of more equal income distribution. This effect stayed significant both when demographic variables were

added into the model (Model 1, Table 2), but also when self-interest variables were included into the full model (Model 2, Table 2). In other words, women were more inclined to support equal income distribution compared to men in 1989-1993. By 2005-2009 the attitudes on income inequality for men and women had become more similar. More precisely, when only the demographic variables were modelled (Model 3, Table 2), compared to men, women were more supportive of more equal income distribution. However, when self-interest variables were included, the effect of gender became statistically insignificant, indicating that by 2005-2009 the effect of self-interest on *AII* had become more important than the effect of gender on *AII*.

The effect of political support on the left-right scale, represented by the political scale, was also controlled in the analysis, and proved to be statistically significant with a negative slope both in 1989-1993 and 2005-2009. In other words, the respondents who identified themselves as politically right, were less supportive of equal income distribution both in 1989-1993 and 2005-2009.

## 5 Discussion and Summary

The aim of this study was to explore how individual-level attributes of age and self-interest (measured through employment status and subjective position on the income scale) contribute to attitudes toward unequal distribution of income, and how these attitudes have changed over a 20-year period. I applied country-fixed effects models and country and time fixed effects models to analyze the data from 10 developed post-industrial countries covering two time periods — 1989-1993 and 2005-2009. The variable of interest in the analysis — support for more equal income distribution — measured a normative ideal type of income distribution.

The demand for socio-economic equality and wider redistribution has not increased in par with growing socio-economic inequalities (Kenworthy and McCall 2008, Dallinger 2010, Larsen 2016, Breznau and Hommerich 2019). However, the current research findings on the preferred nature of the income distribution show that between the years 1989 and 2009 support for more equal income distribution increased significantly. This is in line with Ronald Inglehart (1990, 2018) who provided a popular but rather general interpretation when tracing a shift in values from “materialist” to

“postmaterialist” and claimed that the growth of insecurity has only intensified the cultural backlash between these two conflicting ways of thinking. The current findings showed that, as predicted, self-interest proved to be a good explanatory factor behind peoples’ normative attitudes on the ideal income distribution in society. High-income earners were least supportive, low-income earners were most supportive, and the middle-income earners were positioned in between the two. Curiously, with regard to employment status, the full-time, part-time and unemployed were equally supportive of more equality in income distribution, while the self-employed were least supportive. Described trends in the role of self-interest were similar both in 1989-1993 and 2005-2009. Contrary to expectations, age was a statistically significant explanatory factor only when self-interest variables were not considered in the model. In other words, when all possible variables were included, peoples’ self-interests explained normative attitudes on income distribution better than their age. These findings are in line with previous research where self-interest has been found to be a relevant motivator behind support for wider redistribution (e.g. Andreß, and Heien 2001).

At first sight, the increase in support seems to be in contrast with the body of research claiming that there has not been a significant increase in support for more equal conditions and redistribution. However, the data used for the current analysis did not allow me to directly test the common assumption that this increase of support for more equal distribution is necessarily a result of the rise in objective and subjective inequalities. Nonetheless, self-interest can offer timely interpretations on how individual characteristics can inform attitudes towards preferred distribution of income. Self-employed individuals’ rejection of more equal conditions in particular deserves further scrutiny. This group is a growing part of the workforce, and even though the data used in the analysis is from approximately 10 and 20 years back, by now the share of self-employed individuals on the labour market is larger than ever before and is predicted to keep growing (ILO 2016). This form of employment is increasingly popular among young workers who engage in some form of “gig work” or “platform work.” However, in most countries these new forms of employment are still highly unregulated, lacking laws and obligations regarding social protections. In places where such laws are under consideration, policy makers have been heavily pressured by industry lobbyists. Therefore, I would speculate that the rejection of equal income

distribution by the self-employed is notably different from, for example, full-time employed individuals and their normative attitudes on income distribution, as they are motivated by a combination of self-interest, age, and institutional insecurities (in the form of tightened competition and decreasing social protections).

There is little doubt that value formation including egalitarian value formation is affected by age (Inglehart 1990, 2019). However, the relationship between age and the acceptance or rejection of unequal income distribution has not attracted as much attention in social science research. When this relationship has been studied, the findings have proven to be either inconclusive or contradictory. Researchers have concluded either a positive relationship between age and support for redistribution, (e.g. Dion and Birchfield, 2010) or have found a negative relationship between age and tolerance for inequality (Roex et. al., 2019). When using squared age variable, a positive relationship among younger ages and a negative relationship among older ages has also been detected (Finseraas 2009). Therefore, the findings in the current paper on the effect of age highlight the need to consider the role of additional factors when trying to explain the possible relationship between age and support for more equal income distribution.

This is particularly relevant in the light of increasing intergenerational inequalities and decreasing chances for upward mobility (Kochhar 2015, McKinsey Global Institute 2016). While the chances for upward mobility for the young people have been in decline, economists have warned about the increasing role of hereditary wealth and social position (Milanovic 2016). Persistent growth in income- and wealth-based cleavages between classes have come with cleavages in egalitarian values and attitudes (Inglehart 2018). These established trends, paired with the undeniably significant role of self-interest, give reason to speculate that, together with hereditary socio-economic resources, disparities in values on socio-economic inequalities have become similarly hereditary.

The findings of this study, in par with other confirmed socio-economic factors, give reason to speculate about the role of self-interest even further. Self-interest could at least partly explain why the demands for more equality and wider redistribution to compensate for existing inequalities in the society have been insufficient to translate into real politics and action. Researchers have speculated that as public knowledge on

issues relating to both inequalities and redistribution is still very limited, perhaps informing people more on those issues would translate into changes in attitudes (e.g. Orton and Rowlingston 2007). When it comes to informing public on economic inequalities, in developed countries the headlines on the super-rich or the so-called 1% have been the most visible. However, such media discourses might translate into additional complications. Orton and Rowlingston (2007) concluded that when individuals express criticism against inequalities in income distribution, they tend to be more concerned about high incomes. People appear to think that higher-income earners are excessively overpaid, rather than that those who are receiving low pay are underpaid. This tendency highlights the underlying values and ideologies that people draw on and deserves further empirical scrutinisation, which is however beyond the scope of the current paper.

Inglehart (2018) concluded that a culture is a set of learned behaviours that constitute a society's survival strategy. The norms governing this strategy usually change very slowly, often persisting for decades. However, under certain conditions the change can happen rapidly. The increase in socio-economic inequalities was already an indisputable issue and an urgent problem before the beginning of the current pandemic. The ongoing pandemic and global crisis have exposed and exacerbated existing divisions of class and inequalities and have rendered research on inequalities more important than ever before. The periods when societies experience extreme crises and suffer from long-lasting societal and economic consequences are simultaneously the times when major changes (including the ones previously considered unfeasible) become possible. If that is true, then could this be one of those moments where the rapid change suggested by Inglehart (2018) becomes possible?

This study has several limitations, all of which are related to the utilized dataset. Both the World Value Survey and the European Values Study were designed to gather information from a representative random sample of the adult population within each country. Unfortunately, the exact method of gathering the data was not standardized and therefore, the samples have not always been random and representative (EVS 2015, WVS 2015, Kragten and Rözer 2017). In addition, as only data on a limited number of countries was used, the findings did not allow any drawing of robust conclusions about the similarities or differences between the countries. And lastly, despite the fact

that an individual's education level is known to be useful in explaining both socio-economic status and values, the variable measuring respondents' educational level was not available for the analysed waves and thus was not included in the models.

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Forum.

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