INSIDE OF INCOME INEQUALITIES AND WORKER'S POWERLESSNESS IN SELECTED OECD COUNTRIES

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Abstract: The aim of paper is to indicate the effects of “elitization” on income inequality in the affluent countries over the last two decades. By applying a robust regression model on a sample of 21 OECD countries, it was observed that a high concentration of wealth by the richest one percent of the population results in reducing the impact of trade unions, through political institutions, on income redistribution. Insufficient redistribution can be interpreted not only by elites’ control over the resources that influence public policy and opinion, but also by affecting the evolutionary path of the economy. Moreover, this influence reduces the importance of traditional institutions and serves as an inspiration to reconsider the established social consensus regarding the welfare state.

Keywords: Inequality, redistribution, trade unions, elites.

JEL: D63, H23

Introduction

The growing interest surrounding the problem of rising income inequality in affluent countries has resulted in different explanations of the causes and consequences of high income concentration. Along with the reaffirmation of traditional concepts, there have emerged new views on the nature of distributive conflict. Treatment of inequality as a redistributive problem derived from insufficient government intervention inevitably leads the analysis to the asymmetric power relations between unions and elites in terms of pro (unions) and anti (elites) distributional coalitions. Rapid technological change and globalization are directly linked with the trend of declining union power and the increasing power of professional elites; moreover, this trend accentuates the fundamental role of existing political institutions in income redistribution.

In order to shed more light on the relation between the weakened trade unions and rising inequalities, the paper is structured in the fifth parts. The inquiry begins with a brief overview of the literature based on the Post-Keynesian approach to income inequality which influences this research. The second part is devoted to the theoretical framework whose empirical validity, in terms of hypothesis testing and robustness of the findings, is checked in the third part. Interpretation and discussion of the obtained

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results are contained in the fourth part. The fifth part concludes with key messages of the inquiry.

1. Literature reivew

This analysis is primarily based on the post-Keynesian approach to income inequality. Capitalism is the best economic and social system, but strong government intervention is needed (Bernardo et al. 2014). Rising inequality and wealth concentration can be interpreted as a consequence of abandoning and weakening the state's redistributive functions.

Considering the causes of increases in inequality in the United States, Peterson (2001) argues that government policies—both in they "have done and what they have not done" contributed to the increase in income inequality", in addition to changes in labour markets and concentration of asset ownership and investment income. A decent society requires a government policy of income distribution, since income distribution cannot be left to market mechanisms alone (Spithoven, 2013). Moreover, Pressman (2007, 2009) point out that the size of the middle class depends mainly on government tax and spending policies.

Since redistribution derives from control over the state, it becomes necessary to study the power relations between trade unions and elites in terms of opposing coalitions. According to Brown (2005), a theory of distribution should be indistinguishable from a theory of power, since power is a decisive factor in accounting for disparities in material rewards. Moreover, Josifidis and Lošonc (2014) claim that power serves as an integral component in explaining the international structure and context.

Analyzing the mechanisms of distributional change, Kalecki (1971) pointed out the role of trade union power. Illustrating the relationship between the trade union density and inequality, Davidson (2013) notes that low income inequality in the USA over the period ranging from the 1940s to the early 1970s was linked with the growth of labour union power, enshrined by government legislation, and entailed the sharing of monopoly rents and profits of corporations with their workers. Whereas the decline in trade union power and influence during 1990's was associated with a trend of rising income inequality.

The decline of the redistributive power of trade unions is another term for the growing power of the elites. The institutionalization of electoral democracy caused the elites to lose direct control over the state; however, the elites were successful in retaining control over ideology and a monopolization of public opinion. The force of the elites' inequality–legitimating doctrines appears sufficient to persuade a majority of voters that all is for the best (Wisman, 2013). Considering the crisis character of capitalism, Josifidis et al. (2010) question whether significant historical changes can be linked to a random appearance of new charismatic leaders, or are the changes a product of conscious action by certain social elite who manipulatively control events as well as national and global history.

The possibility of trade unions and the elite using the state to achieve their objectives regarding income distribution depends on the quality of institutions. Distribution is an instituted process (Brown, 2005). The institutional framework is characterized by firms and labour organizations which possess market power and big government whose monetary and fiscal measures affect profits and price–employment outcomes (Ferri and Minsky, 1984). As a result, inequality stems not from natural market forces, but instead from the way in which particular markets are instituted (Clark and Kavanaugh, 1996). Some authors, like Keizer and Spithoven (2009) go further and point out the importance of the cultural aspect of human behavior in seeking to understand income distribution.

2. Theoretical Framework

Considering the dynamics between economic and political power and between market and redistributive inequality it seems possible that rising income inequality in the affluent economies resulted from greater influence of the elites (whose income is increasing) and declining influence of workers (whose income is stagnating) in shaping the political institutions that affect income distribution. Why is workers' influence on the process of income distribution weakening whereas the elites' influence is increasing? The central thesis of this inquiry is that the processes driving the evolutionary direction of the economy ("forthcoming economy") have shifted economic power towards sectors in which the influence of trade unions and the possibility of state regulations are limited. Consequently, social conventions are changing towards the gradual institutionalization of a new social consensus. According to the emerging consensus, the growth in income inequality is not justified, but it seems to be accepted as inevitable.

It is possible to distinguish four key characteristics of "forthcoming economy" which explain the rising market and distributional inequality experienced by affluent countries:

Idea–intensive sectors. Profits and income grow faster in new idea–intensive sectors in comparison with traditional, labour and capital–intensive sectors. However, idea–intensive sectors are characterized by low share in total employment as well as by a high concentration in the richest cities and regions. As a result, wage increases for a relatively small number of workers, while the largest number of workers is faced with stagnation or decline in income[3].

[3] According to the McKinsey Global Institute report (September, 2015), in 1999, idea-intensive sectors accounted for 17% of profits generated by Western companies, whereas in 2015 this share was 31%.

Digital Taylorism. The new version of Taylorism is based on the its original principles (division of complex operations at the least constituent parts, the measurement of everything that can be measured and ranking workers according to their productivity), but is supported by information technology and applied to a wider range of workers, including workers in the service sector, highly skilled workers and managers. By dividing a growing number of jobs into the smallest possible pieces and increased outsourcing of opportunity across the world, workers became an easily substitutive factor of production. In this environment, the success of the company is identified with top management, whereas the contribution of workers is reduced to expected, standardized effects.

Regulations and new business concepts. Many companies in idea-intensive sectors are private companies operating in the digital economy; these companies are not listed on stock exchanges and do not rely upon concentred capital to do business globally. Since they define new business concepts, their businesses are less regulated compared with corporations in labour and capital-intensive sectors. Managers in traditional public companies, faced with increasing regulation as the state's response to the crisis caused by speculative activities, are more focused on the achievement of quarterly results (on which depends the value of shares on the stock exchange), than on long–term investments (which ensures the growth of the company). As a reaction to profit slowdown, the traditional sectors redefine the wage policy and reduce the number of workers.

Shifting the focus of the industry from production to data processing. By adding sensors and using wireless connections, a growing number of conventional industrial products, from machinery to packaging of consumer goods, became the smart products. Previously, such features mainly characterised the new products in the field of high technologies. Smart industrial products generate a large amount of information whose processing often becomes more profitable than production. The increasing role of the service sector in economy further reduces the importance of trade unions. In the industrial sector, workers are more connected with each other and production depends more on workers than it is the case in the fast–growing service sector.

The result of these processes is a new income division between a small number of highly educated, well-positioned and networked professional elite and a large number of less specialized, less flexible, and, in every sense of the word, less networked workers.

3. Empirical Framework

From the given theoretical framework, we derived the hypothesis according to which de facto dominance of the elite over trade unions reduces the impact of the quality of political institutions on income redistribution and leads to increased income inequality. In order to test the hypothesis, we defined the model in which the dependent variable is a measure of relative income redistribution, while the explanatory variables were divided into three groups: 1) institutional variables: quality of economic, legal and political institutions; 2) class variables: the elites and trade unions; 3) control variables: globalization and human capital. The model is based on balanced annual panel data for 21 the most developed OECD countries[4], in the period from 1990 to 2011. The variable description, data sources and descriptive statistics are presented in Table 1.

The baseline model has the following form:

$$Redistribution_i = \beta_0 + \beta_1 * institionalquality_i + \beta_3 * elite_i + \beta_4 * tradeunion_i + \beta_5 * globalization_i + \beta_6 * humancapital + \varepsilon_i$$

The coefficient β1 in the case of political and legal institutions should be positive, because the quality of institutions in the field of law and politics is associated with greater redistribution of income. However, the expected relationship between the quality of economic institutions and redistribution is negative since economic freedom, which primarily determines the quality of economic institutions, and redistribution of income is in an inverse relationship. It is expected that the coefficients β3 and β6 should be negative and β4 and β5 positive. An increase in the share of the richest population in income distribution is followed by a decrease in income redistribution. In addition, a higher level of human capital reduces the need for redistribution due to the decline in market inequality. Trade unions and globalization have opposite effects on the redistribution. A higher level of unionisation allows unions to fight on behalf of their members for greater redistribution of income, while globalization, causing the growth of social problems, increases the need for redistribution.

The three specifications of the baseline model are estimated. The specifications differ depending on whether the impact of quality of political institutions on income redistribution is conditioned by the influence of the elites or trade unions (the first two specifications), or what effect the simultaneous processes of elitization of society and de-unionisation of economy have on income redistribution (the third specification). In technical terms, it is the marginal effects calculated on the basis of variables describing the interaction between the variables of interest: the elite, trade unions and the quality of political institutions.

The regressions are based on data averaged over ten years. The averages of explanatory variables are calculated using the first ten years (1990-2000), whereas the averages of dependent variables use the last ten years (2001-2011). The averages eliminate the time component of the panel data, transforming it into cross-section data. There are two reasons to look at the averages instead of the panel data. First, the relative income

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[4] Sweden, Denmark, Finland, Norway, the Netherlands, Belgium, Germany, France, Austria, Australia, Canada, Japan, New Zeeland, Switzerland, United Kingdom, Ireland, USA, Greece, Spain, Portugal and Italy.

redistribution, quality of institutions, the degree elitization of society and unionisation of workers do not change rapidly over time. The second reason is to eliminate the endogeneity problem inherent with income inequality research[5].

Table 2 contains the results of the model estimation. As we can see, in most cases the variables describing the direct impact on redistribution (the quality of legal and economic institutions, globalization and human capital in all specifications, the trade unions in the first specification, the elites in the second specification, and the quality of legal institutions in the third specification) are statistically significant with the expected signs.

Insert Table 2

In contrast to the direct effects, the conditioned effects, expressed by interaction terms, could not be calculated on the basis of data from Table 2. Namely, the conditioned effects show the impact of the particular variable on redistribution, provided that the other component of the interaction term is zero. Since it is not realistic to expect that the elites or trade unions have a neutral impact on redistribution, it is necessary to calculate the marginal effects.

Insert Figures 1, 2 and 3

The first two figures show the marginal effects of changes in the quality of political institutions on income redistribution depending on the degree of elitization of society and unionisation of workers, while the third figure illustrates the influence of trade unions on income redistribution depending on the degree of elitization of society. As we can see, in the first and third cases the trend of income redistribution is negative whereas in the second case it is positive.

The robustness of the findings was tested using several tests. First, we analyzed what happens with the coefficient estimates when we change the time interval by which the averages for the dependent and explanatory variables are calculated. In the baseline model, the dependent variable is expressed by the average of the period 2001–2011, and the explanatory variables by the average of the period 1990–2000. In order to test the robustness of the obtained results, two additional models are calculated in which the dependent variable is based on the average of period 2006-2011 while the explanatory variables are based on 1990-2005 (Table 3, 3a) and 1995-2005 averages (Table 4, 4a). The second robustness test is based on the change of model specifications by adding or removing regressors. The variables are divided into the two groups. The first group contains the core variables (the quality of institutions) and the second one contains the

[5] A similar econometric strategy in analysing the impact of institutional quality on capital flows is applied by Shell (2014).

non-core variables (the all remaining variables). The core variables are included in all regressions with all possible combinations of the non-core variables. If obtained coefficients are robust, it could be interpreted as evidence of the model's structural validity (Table 5). Finally, as a confirmation of the robustness, we estimated the model using absolute instead of relative measures for the same institutional variables (Table 6, 6a). The results of all three tests indicate the robustness of the estimates and that the model is properly specified.

4. Discussion

The obtained results provide evidence in support of the theoretical framework of the paper. In the last two decades, the affluent OECD countries have been faced with a trend of increasing elitization of society (expressed through concentration of the 1% of the richest population in the distribution of total income), while at the same time trade union density has decreased. Detailed analysis of marginal effects indicates that that income concentration by 1% of the richest population reduces to a greater extent than the trade union density boosts the positive impact of the quality of political institutions on income redistribution. In addition, the marginal effects suggest that the effect of trade unions on income redistribution declines when the interactive variable, describing the dependence of the trade unions on the elites, is included in the model. Why is the influence of the elites on income redistribution more pronounced than the influence of the trade unions?

The elitization of society, according to the assumption of Cambridge Post-Keynesians' theory of distribution (Kaldor, 1956; Pasinetti, 1962) can be explained by differences in the propensity to save between social classes. Since capitalists have a higher propensity to save than workers, there is disproportionate accumulation of wealth in the hands of capitalists. According to Heise (2008), there is a strong correlation between being materially better off and being part of the elite, so it is possible to conclude that economic polarization is followed by elitization of society.

Ongoing elitization of society, as a result of changes in the "forthcoming economy", is accompanied by changes in the composition of elites. Unlike earlier periods when the wealthiest class consisted of capital owners, it is now comprised of top managers and entrepreneurial innovators (professional elites). Stagnation in comparison to income earned by professional elites is visible not only when we take into account workers (wages), but also capital owners (dividends). The dispersion of ownership and the increase in the share of internal funds in the total company funds enabled the CEOs to put the interests of the company above the interest of shareholders. Increasing participation of the professional elite in income distribution indicates the need to shift the focus of the debate from functional to personal distribution income, i.e. from class conflict to meritocratic deliberations[6].

The feature of the professional elite in which it differs from the traditional rentier and political elite is its global orientation, in that its sources of power and influence are not limited to national borders. Today's super rich might be more knowledgeable and hardworking than their earlier counterparts, but they are also less connected to the countries that provided them with opportunities for advancement. When introducing new business concepts, the professional elites could bypass state regulation. Consequently, the possibility of institutional control of professional elites by the trade unions is less in comparison with the rentier and political elites.

Elitization based on meritocratic values may not necessarily be harmful to society. However, human capital as a factor of social mobility and rewarding employees is becoming more and more hereditary. This causes meritocracy to gradually lose its dynamic features and transform into professional aristocracy. The mutual closeness of professional elites and their economic and social alienation from the majority population causes the appearance of a special culture of professional elitism.

Simultaneously with the culture of "the professional elites", it is possible to recognize the culture of "the average workers". People with average ability adjust their ambitions and views of the world according to realistic estimates of their limited life opportunities, creating a vicious circle of inequality. The culture of "the average workers" and "the professional elites" are the environment from which are derived social conventions according to which inequalities are not justified, but it seems to be accepted as inevitable in the global economy of a world with rapid technological change. The consequences for the welfare state could be observed in its shifting focus from reproduction of the middle–class to the preservation of jobs and the fight against absolute poverty. As a result, it seems that rising income inequality became a chronic feature of modern capitalism.

Conclusion

In order to explain the increase in income inequality in affluent countries by the redistributive conflict between weakening trade unions and strengthening elites, in the theoretical framework we suggest that, in addition to the traditional explanation of

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[6] The growing importance of engineers to the industrial system and the related lack of importance of investment bankers and other capitalists had been pointed out by Veblen in his *The Engineers and the Price System* (1921). Veblen looked at the engineers as a more probable source of revolution than trade unions, but he failed to notice that engineers are more concerned about achieving professional and social status than about reorganizing society (Knoedler and Mayhew, 1999). Distancing themselves from the workers, managers and engineers form specific professional elite.

(mis)using institutions by the wealthiest for their private benefits, it is necessary to take into consideration the changes in the "forthcoming economy". Idea–intensive sectors, digital Taylorism, limitations in regulating new business concepts and shifting the focus of industrial companies from production to data processing, relativize the importance of existing, first of all political, institutions as a source of bargaining power for workers. The empirical analysis on the sample of the 21 most developed OECD countries, over the last two decades, has shown that the elites have a stronger impact reducing than the trade unions increase income redistribution. Additionally, the elitization of society is associated with a reduction of the redistributive potential of trade unions to equalise incomes.

Recognizing the importance of the professional elite in income distribution, the discussion of the obtained results is shifted from class conflict to meritocratic deliberations. In addition to the global orientation and limited possibility of regulation by the state, the professional elites are characterized by growing hereditary character, giving the meritocracy a static feature. The cultures of "the professional elites" and "the average workers", which are intensified by the rigidity of traditional institutions to the redistributive challenges of the globalized economy with rapid technological change, represent an environment in which the authors recognize the formation of new social conventions regarding income redistribution. It seems that reproduction of the middle class is becoming replaced by job preservation and the fight against absolute poverty as a goal of the contemporary welfare state.

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TABLES AND FIGURES

Table 1 Variable description

Name	Source	Description	Obs	Mean	Std. Dev.	Min	Max
Relative redistribution	Standardizing the World Income Inequality Database–SWIID. Version 2014.	The percentage by which market income inequality is reduced	462	29.94	9.94	8.48	45.93
Legal institutions	Institutional Quality Dataset (Kunčič 2013)	Legal Insitutional Quality, Relative	462	1.35	0.27	0.57	1.63
Economic institutions	Institutional Quality Dataset (Kunčič 2013)	Economic Insitutional Quality, Relative	462	1.09	0.36	0.76	1.62
Political institutions	Institutional Quality Dataset (Kunčič 2013)	Political Insitutional Quality, Relative	462	1.47	0.21	0.99	1.72
Elites	Standardizing the World Income Inequality Database–SWIID. Version 2014.	The participation of the 1% of the richest population in the distribution of total income	462	8.16	2.15	5.10	14.03
Trade unions	Comparative Political Data Set I, 1960-2012 (Jelle Vissera 2013)	Net union membership as a proportion wage and salary earners in employment	462	38.29	20.37	8.93	83.53
Globalization	Comparative Political Data Set I, 1960-2012 (Armingeon et al. 2014)	Index for the degree of openness in capital account transactions	462	1.98	0.55	0.13	2.44
Human capital	Penn World Table. Version 8.1. 2015.	Human capital index	462	2.89	0.28	2.32	3.49

Table 2 Estimation of the baseline model

VARIABLES (2001-2011) (1990-2000)	(1)	(2)	(3)
	Relative income redistribution		
Legal institutions	4.090*	-3.144	-3.247
	(2.403)	(2.454)	(2.443)
Economic institutions	-18.71***	-18.07***	-16.52***
	(1.458)	(1.475)	(1.549)
Political institutions	97.70***	38.70***	54.67***
	(10.07)	(4.498)	(3.407)
Elites	9.525***	0.222	1.124***
	(1.951)	(0.155)	(0.257)
Trade unions	0.0506***	-0.645***	0.307***
	(0.0180)	(0.163)	(0.0517)
Globalization	2.236***	1.905**	0.337
	(0.805)	(0.797)	(0.820)
Human capital	-20.76***	-19.81***	-21.53***
	(1.116)	(1.141)	(1.128)
Elites*Political institutions	-6.097***		
	(1.267)		
Trade unions*Political institutions		0.460***	
		(0.103)	
Elites*Trade unions			-0.0376***
			(0.00806)
Constant	-50.49***	46.43***	23.23***
	(16.23)	(5.534)	(3.198)
Observations	462	462	462
R-squared	0.736	0.735	0.736

Standard errors in parentheses

***p<0.01, **p<0.05, *p<0.1

Source: Authors' calculation in Stata 14

Figure 1. The influence of the quality of political institutions on income redistribution depending on the degree of elitization of society

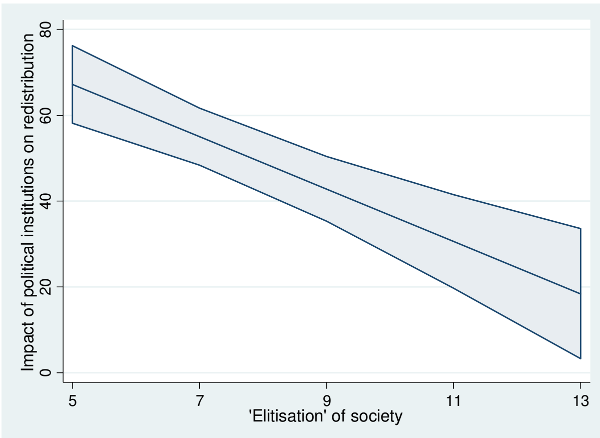


Figure 2. The influence of the quality of political institutions on income redistribution depending on the union density

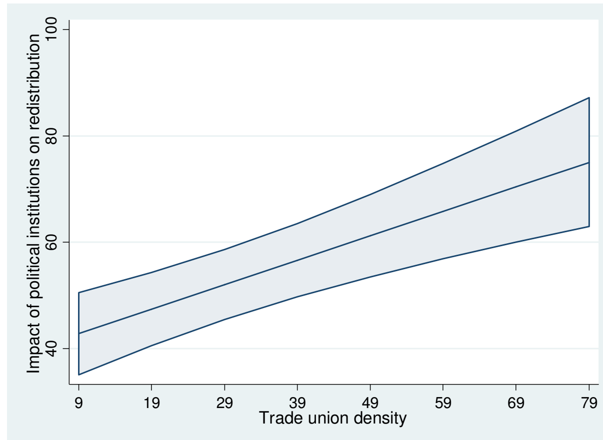
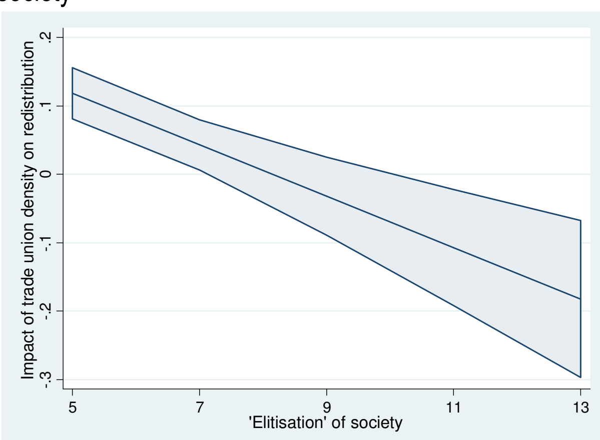


Figure 3. The influence of trade unions on income redistribution depending on the degree of elitization of society



Source: Authors' calculation in Stata 14

Table 3 Robusness check – Different time periods (2006-2011 and 1995-2005)

	(1)	(2)	(3)
VARIABLES (2006-2011) (1995-2005)	**Relative income redistribution**		
Legal institutions	21.24***	12.96***	17.98***
	(3.272)	(3.669)	(3.536)
Economic institutions	-19.64***	-15.19***	-17.05***
	(1.253)	(1.342)	(1.300)
Political institutions	57.68***	-1.035	3.769
	(8.079)	(4.737)	(4.822)
Elites	9.836***	0.119	0.176
	(1.219)	(0.126)	(0.221)
Trade unions	0.148***	-0.311**	0.226***
	(0.0180)	(0.128)	(0.0452)
Globalization	6.303***	5.127***	5.461***
	(0.978)	(1.027)	(1.044)
Human capital	-11.86***	-11.52***	-11.87***
	(1.097)	(1.154)	(1.186)
Elites*Political institutions	-6.296***		
	(0.782)		
Trade unions*Political institutions		0.309***	
		(0.0764)	
Elites*Trade unions			-0.00398
			(0.00645)
Constant	-51.10***	47.29***	34.34***
	(11.46)	(5.338)	(4.556)
Observations	462	462	462
R-squared	0.723	0.694	0.683

Standard errors in parentheses

***p<0.01, **p<0.05, *p<0.1

Source: Authors' calculation in Stata 14

Table 3a Marginal effects – Different time periods (2006-2011 and 1995-2005)

Elitization of society	The influence of the quality of political institutions on income redistribution		Trade union density	The influence of the quality of political institutions on income redistribution		Elitization of society	The influence of trade unions on income redistribution	
	Marginal effects	p-value		Marginal effects	p-value		Marginal effects	p-value
5	26.201	0.000	8	1.438	0.757	5	0.206	0.000
6	19.906	0.000	15	3.601	0.436	6	0.202	0.000
7	13.610	0.003	22	5.765	0.217	7	0.199	0.000
8	7.314	0.099	29	7.928	0.097	8	0.195	0.000
9	1.019	0.817	36	10.091	0.041	9	0.191	0.000
10	-5.277	0.243	43	12.255	0.017	10	0.187	0.000
11	-11.572	0.015	50	14.418	0.008	11	0.183	0.000
12	-17.868	0.000	57	16.582	0.004	12	0.179	0.000
13	-24.164	0.000	64	18.745	0.002	13	0.175	0.000
14	-30.459	0.000	71	20.908	0.001	14	0.171	0.001
15	-36.755	0.000	78	23.072	0.001	15	0.167	0.004

Source: Authors' calculation in Stata 14

Table 4 Robusness check – Different time periods (2006-2011 and 1990-2005)

VARIABLES (2006-2011) (1990-2005)	**(1)**	**(2)**	**(3)**
	Relative income redistribution		
Legal institutions	1.100	-4.838	-3.803
	(3.173)	(3.325)	(3.365)
Economic institutions	-22.28***	-20.52***	-21.47***
	(1.527)	(1.602)	(1.571)
Political institutions	74.27***	31.97***	42.48***
	(8.753)	(4.999)	(4.784)
Elites	7.205***	0.418***	0.846***
	(1.470)	(0.141)	(0.248)
Trade unions	0.119***	-0.333**	0.250***
	(0.0179)	(0.142)	(0.0479)
Globalization	4.109***	3.634***	2.891***
	(0.957)	(0.961)	(1.018)
Human capital	-14.71***	-14.27***	-15.28***
	(1.103)	(1.123)	(1.150)
Elites*Political institutions	-4.416***		
	(0.947)		
Trade unions*Political institutions		0.298***	
		(0.0871)	
Elites*Trade unions			-0.0168**
			(0.00734)
Constant	-32.20**	38.54***	23.80***
	(12.86)	(5.083)	(3.545)

Observations	462	462	462
R-squared	0.712	0.705	0.701

Standard errors in parentheses
***p<0.01, **p<0.05, *p<0.1
Source: Authors' calculation in Stata 14

Table 4a Marginal effects – Different time periods (2006-2011 and 1990-2005)

Elitization of society	The influence of the quality of political institutions on income redistribution		Trade union density	The influence of the quality of political institutions on income redistribution		Elitization of society	The influence of trade unions on income redistribution	
	Marginal effects	p-value		Marginal effects	p-value		Marginal effects	p-value
5	52.187	0.000	8	34.359	0.000	5	0.166	0.000
6	47.771	0.000	15	36.447	0.000	6	0.150	0.000
7	43.355	0.000	22	38.536	0.000	7	0.133	0.000
8	38.939	0.000	29	40.624	0.000	8	0.116	0.000
9	34.524	0.000	36	42.712	0.000	9	0.099	0.000
10	30.108	0.000	43	44.800	0.000	10	0.082	0.014
11	25.692	0.000	50	46.889	0.000	11	0.066	0.100
12	21.276	0.000	57	48.977	0.000	12	0.049	0.294
13	16.860	0.010	64	51.065	0.000	13	0.032	0.548
14	12.444	0.087	71	53.154	0.000	14	0.015	0.800
15	8.028	0.319	78	55.242	0.000	15	-0.001	0.983

Source: Authors' calculation in Stata 14

Table 5 Robusness check – Adding and removing refressors

Core variable	PercSigni 5	Perc +	Perc -	Obs
Legal institutions	90	48	52	128
Economic institutions	100	0	100	128
Political institutions	99	100	0	128
Non-core variable	PercSigni 5	Perc +	Perc -	Obs
Elites	70	69	31	64
Trade unions	83	47	53	64
Globalizacija	66	100	0	64
Human capital	100	0	100	64
Elites*Political institutions	72	19	81	64
Trade unions*Political institutions	64	44	56	64
Elites*Trade unions	97	98	2	64

Source: Author's calculations using STATA 14 software. The Robustness test is performed using the Stata "checkrob" command written by Mikkel Barslund.

Table 6 Robusness check – Absolute institutional quality

VARIABLES (2001-2011) (1990-2000)	(1)	(2)	(3)
	Relative income redistribution		
Legal institutions	19.65*	2.275	-5.043
	(10.64)	(11.28)	(11.08)
Economic institutions	-43.38***	-44.71***	-33.42***
	(6.293)	(6.221)	(6.691)
Political institutions	257.2***	114.1***	161.4***
	(35.74)	(16.58)	(12.61)
Elites	-2.514***	0.156	1.330***
	(0.820)	(0.168)	(0.292)
Trade unions	0.0660***	0.281***	0.359***
	(0.0194)	(0.0661)	(0.0572)
Globalization	1.017	1.257	-1.213
	(1.093)	(1.096)	(1.166)
Human capital	-20.23***	-19.40***	-21.74***
	(1.274)	(1.286)	(1.299)
Elites*Political institutions	-14.35***		
	(4.394)		
Trade unions*Political institutions		1.185***	
		(0.380)	
Elites*Trade unions			-0.0456***
			(0.00898)
Constant	120.2***	87.70***	103.5***
	(9.823)	(7.340)	(6.750)
Observations	462	462	462
R-squared	0.688	0.687	0.698

Standard errors in parentheses
***p<0.01, **p<0.05, *p<0.1

Table 6a Marginal effects – Absolute institutional quality

Elitization of society	The influence of the quality of political institutions on income redistribution		Trade union density	The influence of the quality of political institutions on income redistribution		Elitization of society	The influence of trade unions on income redistribution	
	Marginal effects	p-value		Marginal effects	p-value		Marginal effects	p-value
5	185.473	0.000	8	124.750	0.000	5	0.131	0.000
6	171.123	0.000	15	133.042	0.000	6	0.085	0.000
7	156.773	0.000	22	141.334	0.000	7	0.040	0.050
8	142.424	0.000	29	149.626	0.000	8	-0.006	0.817
9	128.074	0.000	36	157.918	0.000	9	-0.051	0.111
10	113.724	0.000	43	166.210	0.000	10	-0.097	0.015
11	99.374	0.000	50	174.502	0.000	11	-0.143	0.003
12	85.024	0.000	57	182.794	0.000	12	-0.188	0.001
13	70.674	0.008	64	191.086	0.000	13	-0.234	0.000
14	56.324	0.067	71	199.378	0.000	14	-0.280	0.000
15	41.974	0.227	78	207.670	0.000	15	-0.325	0.000

Source: Authors' calculation in Stata 14