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Political decentralization, redistribution, and government quality

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Abstract

We consider how government quality mediates the relationship between political decentralization and income redistribution. Our main hypothesis argues that the potential of political decentralization to mitigate inequities arising from economic activity depends on government quality. Our empirical evidence based on a panel of 45 countries over the period 1996-2016 provides strong support for this hypothesis.

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1. Introduction

Income distribution has become one of the most relevant topics in current economic literature. This is important because the increase in inequality could be a substantial obstacle to achieving a stable path of economic growth through several economic and political channels.[1]

One of the main differences in the decrease of income inequality across countries could be attributed to the asymmetries in the design of different political systems (Acemoglu et al. 2015). In this article, we analyze the mediating role of government quality in the relationship between political decentralization and income redistribution.

Based on a panel of 45 countries over the period 1996-2016, we obtain empirical evidence that political decentralization promotes income redistribution in high governance contexts; but it leads to greater economic inequalities in countries with poor governance.

2. Decentralization, redistribution, and government quality

The more recent literature on federalism emphasizes the positive effects of decentralization on redistribution (Goerl and Seiferling 2014; Neyapti 2006). Specifically, the "second generation" of federalism argues that decentralization would be associated with greater competition forcing sub-national governments (SNGs) to better represent the interests of their citizens and preserve their markets. This competence may lead to reduce income inequities at the national level (Blöchliger and Pinero-Campos 2011). However, scholars have also suggested that these kinds of advantages could disappear in low-quality governance contexts. Tanzi and Davoodi (1998) claim that governments may be much weaker in developing countries, which are expressed mainly through: high levels of corruption and poor-quality bureaucracies. In this context, decentralization can cause coordination problems, and, especially, poor quality of public policies. Moreover, even in developed economies, the existence of selfish public officials could undermine the redistributive benefits of decentralization (Oates 2005).

Despite the potentially crucial impact of government quality on the relationship between political decentralization and redistribution, this impact has not been explored directly in macroeconomic empirical work. This is our objective in this study. We examine the extent to which cross-country differences in government quality mediate the relationship between political decentralization and income redistribution.

3. Key variables

We have constructed a panel of 45 countries over the period 1996-2016, basing the selection of countries and periods on the availability, frequency, and quality of data.[2]

Our main variable of interest is relative redistribution, obtained from *The Standardized World Income Inequality Database* developed by Solt (2020). This variable is

[1] See Halter et al. (2014).

[2] Table A.1 in Appendix has the definition and source of all variables, and Table A.2 details the list of 45 countries included.

calculated as the difference between the Gini market index (before cash transfers and direct taxes) and the Gini net index (after cash transfers and direct taxes), divided by the Gini market index, and it is a measure that allows to also capture the redistributive effort.[3]

To control for the possible importance that political decentralization (PD) may have on the relationship between government quality and income redistribution, we include the variable "federalism" from Gerring and Thacker (2004), which is a time-invariant variable that ranges from 1 (unitary) to 5 (fully federal states) and that covers all the countries included in the analysis. In a fully federal state, territorial units have constitutional recognition of subnational authority, independently elected territorial legislature, specific policy purviews reserved to them, and revenue-raising authority. Based on Section 2, we would expect that countries with having federal political system (i.e., high PD) report less income redistribution; because reduce available resources to central government and redistribution is principally a national level policy (Oates 1999 and 2005), and; because the decentralized political power is more corrupt (Gerring and Thacker 2004).

To control for the possible importance that government quality may have on the relationship between political decentralization and income redistribution, we have included a variable of "government quality" which relies on the *World Bank's Worldwide Governance Indicators (WGI)* data source.[4] This variable has been widely used in those works exploring the causes and consequences of institutional quality (see, for example, Mauro 1995; La Porta et al. 1999; Adserà et al. 2003; Ederveen et al. 2006; Bähr 2008).

Scholars have argued that inefficient institutions may be closely linked to increases in socio-economic inequality (Allen and Gale 2007; Dolls et al. 2011). In our analysis, we consider a high-quality government as one without regard to the personal preferences or relationships of those wielding authority (Kaufman et al. 2011). It manifests itself in the absence of corruption, a meritocratically selected and autonomous civil service, and equality before the law (Dahlström et al. 2012). We construct the government quality variable considering the average of four dimensions: *control of corruption*: perceptions of the extent to which public power is exercised for private or political gain; *rule of law*: the extent to which agents have confidence in the rules of society; *regulatory quality*: perceptions of the ability of the government to formulate and implement sound policies and; *government effectiveness*: perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures. Lower ratings (-2.5) are given to countries with poor government quality and higher ratings (2.5) for countries with high quality. We aggregate these four dimensions for two reasons. First, the causal channels identified, through which government quality might affect redistribution (see section 2), are likely to manifest themselves across the different government quality dimensions. Thus, ignoring economies of scale, organizational benefits and spillover effects may affect perceptions about the ability of governments to formulate and implement policies (regulatory quality) as well as perceptions concerning the quality of public services and public administration more generally (government effectiveness). Rent-seeking, including corruption, by interest groups to obtain public resources will certainly have an impact on perceptions about the control of corruption

[3] This measure is extensively used (see Huber and Stephens 2014).

[4] See Kaufmann et al. (2011).

and the prevalence of the rule of law, but it is also likely to have an incidence on perceived efficiency of government and public administration. This makes it very difficult to disentangle the influence of the different causal channels by way of the different government dimensions. Second, following Langbein and Knack (2010), aggregation is also recommended because these government dimensions are strongly correlated as illustrated by the simple correlation statistics that range between 0.86 (government effectiveness and regulatory quality) and 0.95 (control of corruption and the rule of law). Higher values of the government quality indicator reflect better quality of government.

4. Control variables

The choice of control variables is guided by the need to account for factors that may affect relative redistribution.

We account for a range of factors that might explain relative redistribution differences across countries and over time. In this sense, we account for an "elderly people" indicator; specifically, we have included the population aged 65 and over, to account for the pressure of the pension system on redistributive outcomes. Additionally, we consider the “unemployment rate”, since it affects redistribution via the number of government resources through unemployment subsidies (Huber and Stephens 2014). We expect, for both variables, a positive correlation with redistribution (see, for example, Mahler and Jesuit 2006).

We also control for ethnic heterogeneity since it has been argued that it may make an agreement over tax and public spending decisions more difficult because people may not be willing to transfer resources to people of “other” ethnicities (Alesina et al. 1999; Alesina and Glaeser 2004; Houle 2017). More specifically, Gründler and Köllner (2020) examine how cultural and ethnic inequality influences government redistribution. We also attempt to account for the possibility that when faced with demands for redistribution by social majorities; wealthy elites employ their economic and political influence to undermine redistributive action by the state (Gupta et al. 2002; Rodriguez 2004; Acemoglu et al. 2015). In this sense, we turn to educational inequalities from Castelló-Climent and Doménech (2014), under the assumption that unequal distribution in education may be indicative of elite influence.

5. Empirical model

We estimate the following dynamic empirical model:

$$RED_{it} = \beta_1 RED_{it-1} + \beta_2 PD_{it} + \beta_3 GQ_{it} + \beta_4 (PD_{it} * GQ_{it}) + \beta_5 X_{it} + d_r + \delta_t + \varepsilon_{it} \quad (1)$$

where i refers to countries, t to years, δ_t is fixed year-effects, d_r is regional fixed effects, PD is our measure of political decentralization, GQ is our indicator of government quality, X_{it} is a vector of control variables, and ε_{it} is the error term. Given our discussion in Section 2, we expect that $\beta_4 > 0$.

We estimate the model with the System-GMM estimator in a two-step procedure, with clustered errors, and the Windmeijer (2005) finite sample adjustment (Roodman 2009).

In data panel analysis, it is common to account for cross-section fixed effects because it allows controlling for unobserved country-specific characteristics or for omitted time-invariant factors (e.g., culture and geography). However, if most of the variation in the key variables is between-countries rather than within-countries, that limits the potential for analysis of causal effects using panel estimations with cross-section fixed effects. One reason is that long-run confounding factors could subsume into the fixed effects, producing unreliable results (Fallah and Partridge 2007). In our case, this effect may be relevant since our key variables show highly between-countries variation compared to the within-country variation. For instance, the relative redistribution variable has a mean value of 28.86 and an overall standard deviation of 14.46, and while the between standard deviation is 14.81, the within standard deviation is only 0.87. Accordingly, we do not consider the inclusion of cross-section fixed effects, and we account for "geographical region" dummy variables,[5] which allow us to partially account for country-specific effects (Sepulveda and Martinez-Vazquez 2011), and several control variables to minimize omitted variables bias due to the influence of country-specific factors.

6. Results

We present the results of the baseline regressions in Table 1. To empirically test more clearly the arguments presented in Section 2, Table 1 presents three models. The first model (Column 1) considers only the key variable PD, the second model adds the additional variable GQ (Column 2), and finally, the third model (Column 3) adds the interaction term.

[5] The list of regions considered is Southern Europe, Eastern Europe, Western Europe, Northern Europe, Latin American countries, and Other Developed countries.

Table 1 – Decentralization, relative redistribution, and government quality

	(1)	(2)	(3)
Relative redistribution (t-1)	0.574*** (0.017)	0.582*** (0.021)	0.581*** (0.021)
GDP per capita (in logs)	0.665** (0.128)	0.605* (0.148)	0.414* (0.228)
Population (in logs)	0.206 (0.497)	0.748 (0.652)	-1.487*** (0.259)
Pop of 65 years and above (in logs)	0.038** (0.023)	0.065*** (0.027)	0.926*** (0.048)
Unemployment rate	0.108*** (0.014)	0.092*** (0.017)	0.737*** (0.058)
Education inequality	-3.967*** (1.230)	-5.695*** (1.686)	-3.078*** (2.552)
Ethnic tensions	0.045 (0.047)	0.008 (0.105)	-0.413*** (0.042)
Political decentralization (PD)	-0.313** (0.266)	-0.626** (0.370)	-1.170*** (0.055)
Government quality (GQ)	---	0.191*** (0.005)	0.910*** (0.154)
PD *GQ	---	---	0.629*** (0.039)
Period fixed effects	Yes	Yes	Yes
Regional fixed effects	Yes	Yes	Yes
Observations	***796***	***796***	***796***

A first noteworthy result is that redistribution is highly persistent over time as demonstrated by the significance, sign, and magnitude of the coefficient associated with the lagged dependent variable. Reassuringly, the parameters estimate of control variables on the redistribution equation is mostly in line with the a priori expected results. As we can expect, we find that GDP per capita has a positive and significant impact on redistribution and thus wealthier countries tend to enjoy a higher level of redistribution. We find that higher levels of redistribution are positively correlated with a redistributive profile, i.e., the population of 65 years and above and unemployment rate, which is consistent with the expectation that these needs-based measures will tend to reinforce the redistributive profile of the welfare state. Secondly, although we find no robust evidence that ethnic heterogeneity affects redistribution, we observe that educational inequalities negatively affect redistribution providing evidence that asset inequality affects levels of redistribution.

We now turn to the estimated impact of our key variables, namely, political decentralization (PD), government quality (GQ), and, especially, the interaction term of the two variables (PD*GQ). Column 1 to 3 of Table 1 shows a significant and negative impact of the level of PD in the form of federalism on redistribution. In other words, our results show that relative redistribution is negatively associated with having a federal political system (i.e., high political decentralization) as a proxy of PD. In turn, we find that this GQ indicator is positively related to redistribution (columns 2 and 3 of Table 1). The role of GQ becomes much clearer when interacting with the PD indicator

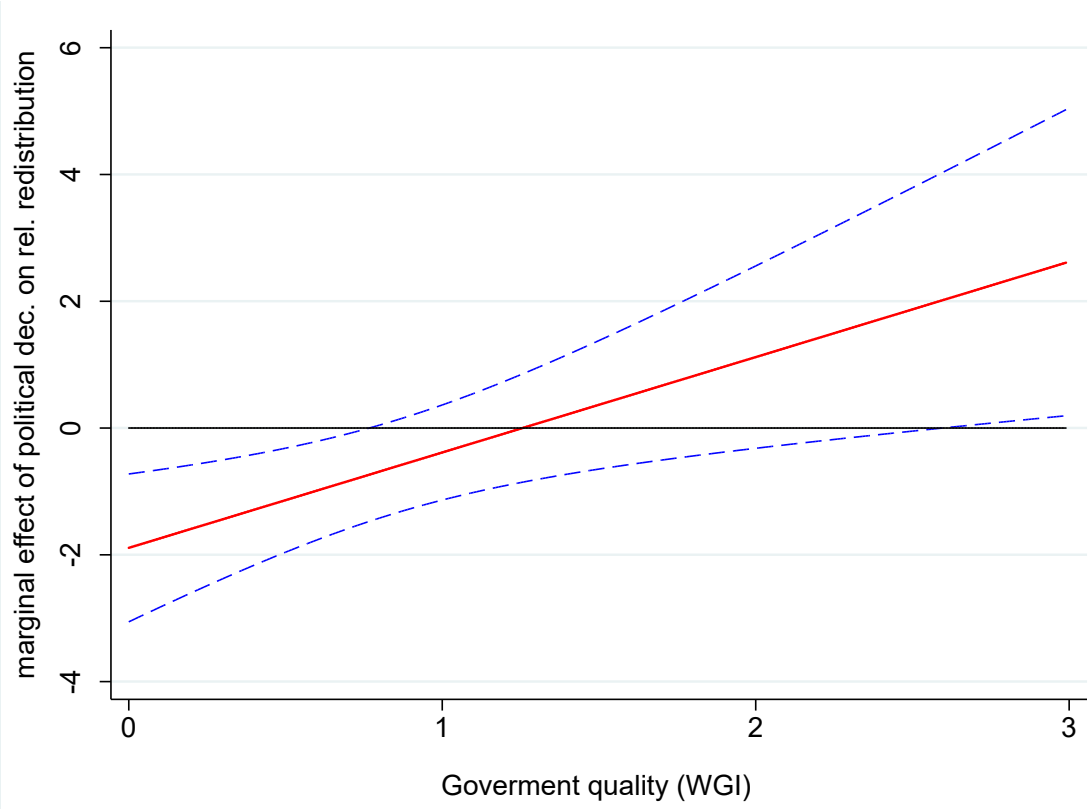
(Column 3). In this sense, we observe that the interaction term between PD and GQ is positive and significant. The economic intuition of this outcome is that countries with high PD are less redistributive efficient; because redistribution is principally a national-level policy, following an equalizing role through redistribution across citizens over the national (Oates 1999 and 2005), and; because the decentralized political power is more corrupt, e.g., local officials may be prone to local interests diminishing the redistribution (Gerring and Thacker 2004).

However, we want to determine the marginal effect of PD on RED. This can be calculated as:

$$\frac{\partial RED}{\partial PD} = \beta_2 + \beta_4 GQ \qquad (2)$$

Figure 1 plots the marginal effect of political decentralization on redistribution versus government quality (considering the relevant empirical interval of this government quality variable) by taking 95% confidence intervals (based on Column 3 of Table 1).

Figure 1 –Marginal effect of political decentralization on redistribution in the presence of government quality



Source: Own estimation.

As the WGI score moves above approximately the value 1.25 (Figure 1), the positive effect of the PD on redistribution increases at statistically significant levels. The marginal effect becomes significant and positive above these values, suggesting that the benefits of political decentralization on redistribution are more likely to emerge in high-government quality settings. The result highlights a direct relationship between the marginal effect of political decentralization on relative redistribution and the degree of institutional quality. Furthermore, such marginal effect is negative for low government quality and positive for high government quality. In our sample of 45 countries, and for those countries with a high degree of PD, this is the case of Australia, Germany, Switzerland, and the United States (see Column 2 of Table A.2 in the Appendix). However, in the case of Argentina, Brazil, México, and South Africa, which have a poor quality of government indicators (see Column 3 of Table A.2 in the Appendix); the results in terms of redistribution are negative.

7. Robustness

In our main specification (Equation 1), we control for the role that political PD may have on the relationship between government quality and redistribution using the variable of "federalism", but our aggregate indicator of PD may not capture all the different dimensions of PD (Schenider 2003). Consequently, we next check the sensitivity of our main findings using two alternative measures of PD. Firstly, the "regional authority index" (RAI) from Hooghe et al. (2016), that is a continuous variable, obtained as the sum of "self-rule" (five dimensions: institutional depth, policy scope, fiscal autonomy, borrowing autonomy, representation) and "shared-rule" (five dimensions: lawmaking, executive control, fiscal control, borrowing control and constitutional reform); and where the higher the SNG authority, the greater the RAI variable values (high PD). Secondly, we follow Schneider (2003) that indicates that the existence of elections at the state/provincial levels is an indicator of PD because they increase the probabilities that some political functions are decentralized, such as representation that empowers local voters. We consider the variables municipal and state governments locally elected from the Database of Political Institutions (DPI) by Cruz et al. (2018), to build the aggregate variable "electoral decentralization". Both variables take the value 0 if neither local executive nor local legislature is locally elected; 1 if the executive is appointed, but the legislature elected; and 2 if they are both locally elected. We consider the sum of both variables and thus our variable ranges from 0 to 4, where 4 indicates high PD (variable ED).

We consider these variables proxies of PD because they measure different decentralization characteristics. The correlation analysis indicates a positive and significant relationship between our four variables at the 5% level. For instance, the correlation between: "federalism" and "regional authority index" variables are about 0.75; "federalism" and "electoral decentralization" variables are about 0.61; "regional authority index" and "electoral decentralization" variables are about 0.58. Therefore, we obtained that the PD variables are correlated but not precisely similar (i.e., low correlation).

Table 2 – Robustness tests (1996 – 2016)

	RAI	**ED**
Relative redistribution (t-1)	0.574*** (0.017)	0.581*** (0.021)
GDP per capita (in logs)	-0.027 (0.285)	-0.298 (0.203)
Population (in logs)	-0.754*** (0.274)	-1.465*** (0.255)
Pop of 65 years and above (in logs)	1.055*** (0.086)	0.966*** (0.071)
Unemployment rate	0.743*** (0.073)	0.698*** (0.077)
Education inequality	-3.488*** (2.732)	-4.896*** (4.003)
Ethnic tensions	-0.044 (0.183)	-0.626*** (0.064)
Political decentralization (PD)	-0.305*** (0.022)	-0.154 (0.153)
Government quality (GQ)	0.882*** (0.319)	1.194*** (0.327)
PD*GQ	0.167*** (0.285)	0.469*** (0.099)
Period fixed effects	Yes	Yes
Regional fixed effects	Yes	Yes
Observations	***796***	***796***

The visual inspection of Table 2 allows us to conclude that the results obtained for our base model are preserved in all models.

8. Conclusions

Political decentralization promotes income redistribution in high-quality governance contexts, but worryingly, it leads to greater economic inequalities in countries with poor quality of government. Specifically, our analysis report robust empirical evidence that political decentralization, in the form of federalism, regional authority, and electoral decentralization, reduces relative redistribution, but its effect is diminished in the case of countries that enjoy greater government quality. This work is limited since it does not include all the policies that governments may use to redistribute beyond cash transfers and direct taxes at the central and sub-national levels.

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Appendix

Table A.1 - Data definitions and sources

Variable	Definition	Source
Relative redistribution	Market-income inequality minus net-income inequality, divided by market-income inequality.	Solt (2020)
GDP per capita	Gross Domestic Product (GDP) in terms of population (constant 2010 U$S).	Worldwide Governance Indicators – World Bank.
Government quality (WGI)	The average of the following indicators: control of corruption, rule of law, regulatory quality, and government effectiveness. Lower ratings (-2.5) are given to countries with poor government quality and higher ratings (2.5) for countries with high government quality.	Worldwide Governance Indicators – World Bank.
The population of 65 years and over	The population of 65 years and over.	Worldwide Governance Indicators – World Bank.
Unemployment rate	Unemployment, total (% of the total labor force) (modeled ILO estimate).	Worldwide Governance Indicators – World Bank.
Federalism	Federalism involves 5 categories: 1, non-federal; 2, semi-federal (elective regional legislatures/constitutional sovereignty at national level); 3, federal (elective regional legislatures and constitutional recognition of subnational authority); add 1 if weak bicameral; add 2 if strong bicameral. Total range = 1-5, with higher values indicating more federal.	Gerring and Thacker (2004).
Regional authority index	The sum of "self-rule" and "shared-rule". See the article for full details.	Regional Authority Index (Hooghe et al. 2016).
Electoral decentralization	Capture the existence of elections at the municipal or state/provincial governments. Both variables take the values of 0 if neither local executive nor local legislature are locally elected; 1 if the executive is appointed, but the legislature elected; 2 if they are both locally elected. We compute a scale between 0 and 4 with higher values representing more decentralization.	Database of Political Institutions
Education Inequality	Gini index of education.	Castelló-Climent and Doménech (2014)
Ethnic Tensions	Lower ratings (1) are given to countries where racial and nationality tensions are high because opposing groups are intolerant and unwilling to compromise. Higher ratings (6) are given to countries where tensions are minimal, even though such differences may still exist.	International Country Risk Guide (ICRG) as developed by the Political Risk Services Group
Population	Total population.	Worldwide Governance Indicators – World Bank.

Table A.2 – Panel data description

Country	*Relative redistribution (%)*	*Political decentralization ("Federalism" of Gerring and Thacker 2004)*	*Government quality (Worldwide Governance Indicators of the World Bank)*
	Mean		
	(1)	*(2)*	*(3)*
Argentina	1.2	4	-0.335
Australia	32.7	5	1.816
Austria	41.1	2	1.781
Belgium	46.6	2	1.498
Brazil	15.1	5	-0.116
Canada	33.2	3	1.857
Chile	10.1	3	1.310
Costa Rica	7.3	1	0.510
Czech Republic	43.4	2	0.747
Denmark	47.3	1	2.119
Dominican Republic	4.8	3	-0.611
El Salvador	4.5	1	-0.446
Estonia	30.6	1	0.994
Finland	47.1	1	2.120
France	40.4	2	1.444
Germany	44.5	5	1.722
Greece	31.9	1	0.484
Hungary	45.6	1	0.677
Iceland	31.7	1	1.964
Ireland	39.2	1	1.598
Israel	29.1	1	1.059
Italy	31.1	3	0.457
Japan	28.3	2	1.378
Kazakhstan	22.6	1	-0.773
Republic of Korea	8.0	1	0.804
Latvia	27.2	1	1.950
Lithuania	34.7	1	0.594
Luxembourg	39.5	1	1.861
Mexico	3.9	5	-1.223
the Netherlands	43.2	3	1.917
New Zealand	29.9	1	1.988
Norway	43.2	2	1.991
Peru	6.6	1	-0.400
Poland	37.8	2	0.590
Portugal	35.3	1	1.108
Slovak Republic	40.2	1	0.497
Slovenia	39.7	1	0.974
South Africa	12.6	5	0.313
Spain	32.0	3	1.183
Sweden	48.7	1	2.026
Switzerland	27.9	5	1.975
Turkey	6.9	1	0.038
United Kingdom	36.2	2	1.751
the United States	25.2	5	1.553
Uruguay	21.8	1	0.769