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Political equality and quality of government

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Abstract

This paper examines the relationship between political equality and quality of government. Our hypothesis is that political equality fosters access to inclusive education and ultimately promotes good governance. We empirically test this hypothesis using data for 145 countries with different levels of economic development. In order to overcome potential endogeneity problems, our identification strategy exploits the variation in political equality in geographically neighbouring countries by means of spatial econometric techniques. The results reveal a positive and statistically significant effect of political equality on the quality of government. This implies that countries where political power is more evenly distributed tend on average to have higher levels of institutional quality. In fact, this result is not affected by the inclusion in the analysis of a substantial number of controls that may be correlated with both political equality and quality of government, including the extent of democracy and the degree of economic inequality. In fact, the observed link between political equality and governance remains robust to alternative measures of quality of government, estimation techniques, and other sensitivity checks. Our estimates also show that education acts as a transmission channel linking political equality and quality of government.

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1 | INTRODUCTION

Over the last decades a vast literature has shown the relevance of the quality of government for economic growth and long-run development (e.g. North, 1981; Knack & Keefer, 1995; Hall & Jones, 1999; Acemoglu et al., 2001, 2002; Rodrik et al., 2004). The quality of government is important because it shapes the incentives of key economic actors in society; in particular, good governance has a positive impact on the investment in physical and human capital and technology, creates a stable structure of exchange, contributes to attracting FDI, promotes a more efficient division of labour, and facilitates the implementation of policies designed to reduce economic inequality and poverty (Acemoglu et al., 2005; Quibria, 2006; Bolen & Williamson, 2019). Indeed, from the 1990s onwards the quality of government of recipient countries has increasingly become an important objective for the international development aid (Dijkstra, 2018). Furthermore, the quality of life is higher in countries with better governance outcomes (Bjørnskov et al., 2010; Helliwell et al., 2018). Accordingly, it is crucial to investigate why some countries have better quality of government than others.

During the last years numerous scholars have examined the effects of different factors on the quality of government, including geographical and historical conditions, cultural characteristics, or economic variables such as the degree of trade openness, economic inequality, or the level of development itself (e.g. La Porta et al., 1999; Al-Marhubi, 2004; Treisman, 2007). Against this background, various contributions have considered the impact of democracy on the promotion of good governance (e.g. Fortunato & Panizza, 2015; Charron & Lapuente, 2018; Kotschy & Sunde, 2017), although there is limited evidence that, by itself, the extension of democratic liberties fosters improvements in government performance. However, as far as we are aware, this empirical literature has paid no attention so far to the possible effect of the degree of concentration of political power across income groups on the quality of government, thus ignoring the role played by political equality in this context. This omission is potentially important given that democracy and political equality, although related, are distinct concepts (Houle, 2018). In fact, our empirical analysis shows that there is a substantial cross-country variation in political equality, even conditional on the same level of democracy. At the same time, as we will see below, there are theoretical arguments to assume that the distribution of political power across income groups should affect the way in which authority is exercised by governments.

In order to fill this gap and extend the literature on the determinants of good governance, the present paper aims to examine the relationship between political equality and quality of government using data for 145 countries over the period 2005–2015. In particular, we are interested in finding out to what extent the distribution of political power across income groups contributes to shaping the quality of government. More precisely, our hypothesis is that low levels of political equality are detrimental to government performance. To shed light on the causal effect of political equality on governance, our identification strategy exploits the variation in political equality in geographically neighbouring countries by means of spatial econometric techniques.

Our results reveal a positive and statistically significant effect of political equality on the quality of government. This implies that countries where political power is more evenly distributed across income groups tend on average to have higher levels of institutional quality, which is consistent with our theoretical framework. In fact, this result is not affected by the inclusion in the analysis of a substantial number of controls that may be correlated with both political equality and quality of government, including the extent of democracy and the degree of economic inequality. In fact, the observed link between political equality and governance remains robust to alternative measures of quality of government, estimation techniques, and other sensitivity checks. Our estimates also show that education acts as a transmission channel linking political equality and quality of government. Overall, these results are consistent with the work of Acemoglu et al. (2007), who highlight the importance of political equality for long-run development.

The remainder of the paper is organized as follows. After this introduction, section 2 discusses from a theoretical perspective why political equality should affect the quality of government. Section 3 describes the measures used in the paper to quantify the level of political equality and quality of government in the various countries. Section 4

examines empirically the existence of a relationship between the degree of concentration of political power across income groups and governance outcomes. The potential endogeneity of political equality in this context is addressed in section 5. In order to complement our findings, section 6 explores the relevance of education as a transmission channel linking political equality and quality of government. The final section offers the main conclusions of the paper.

2 | POLITICAL EQUALITY, QUALITY OF GOVERNMENT AND EDUCATION: A THEORETICAL FRAMEWORK

As we have mentioned in the introduction, the extensive empirical literature on the determinants of the quality of government has paid no attention so far to the potential effect of political equality on governance. Nevertheless, there are reasons to assume the existence of a relationship between the degree of concentration of political power across income groups and government performance. In particular, in this paper we focus our attention on the role played by education as a potential transmission channel linking political equality and quality of government.

In countries with relatively low levels of political equality, the ruling elite has incentives to keep the *status quo* and may not be interested in a more educated population, despite the growth-enhancing potential effect of human capital (Savoia et al., 2010). On the contrary, in countries with relatively high levels of political equality, the middle and lower classes can use their political power to promote educational policies and reforms designed to increase the general education of the population, as a way to guarantee equality of opportunities for all citizens (Acemoglu & Robinson, 2019). These arguments suggest the existence of a positive relationship between political equality and education. In fact, this association is supported by abundant historical evidence that shows that political inequality may be detrimental to the emergence of efficient institutions and the development of a quality education system due to at least three main mechanisms. First, rent-seeking behaviour of political and economic elites might deter the evolving of quality institutions that are conducive to economic development (Acemoglu, 2008). Second, rich elites in low political equal countries have little incentives in the provision and democratization of public goods, and as the current paper suggests, this includes the provisioning of education and affecting the quality thereof. Third, political inequality is also generally correlated with the absence of political competition and accountability, two factors which ultimately drive to economic development and desirable institutional outcomes (Acemoglu et al., 2007).

Along the above lines, Engerman & Sokoloff (2000) point out that countries in Latin America and the Caribbean were historically characterized by high levels of economic inequality because of their geographical characteristics, which led to oligarchic politics and extractive institutions designed to maintain the political power of the elites and to preserve the existing inequality. This gave rise to low levels of political equality and a restricted access to education for the general population (Galor et al., 2009).¹ This contrasts with the situation in North America, where geographic conditions led to a more egalitarian distribution of political power and economic resources since the beginning of the colonial period, thus favouring the development of growth-promoting institutions. As a result, education levels in North America were considerably higher than in the rest of the continent, to the point that it is likely that the United States had the most literate population in the world by 1800 (Engerman & Sokoloff, 2000, p. 227). The historical examples on the relationship between political equality and education are not limited to the preindustrial period. Thus, the advances in the process of urbanization and the development of trade unions during the industrial revolution brought about the emergence in different countries of Western Europe of politically powerful middle classes who favoured educational policies and reforms that promoted the education of the masses (Huber et al., 1993; Bourguignon & Verdier, 2000).

Despite this historical evidence, to the best of our knowledge, none study has empirically examined so far the link between political equality and education. However, there are various contributions about the impact on human capital

¹This general picture is compatible with the existence of differences across countries (Coatsworth, 1998; Nugent & Robinson, 2002).

formation of land inequality, which can be interpreted as a reasonable proxy for the degree of concentration of political power. Nevertheless, the results of these works are not conclusive. For example, Erickson & Vollrath (2004) find in a sample of developing and developed countries that lower land inequality across agricultural populations is associated with higher public provision of education. Using historical data for the United States and several European countries, Galor et al. (2009) and Baten & Hippe (2018) show that inequality in land distribution is negatively correlated with the investment in education. These findings, however, contrast with those obtained by Gray & Clark (2014) and Goni (2016), who reject the effect of land inequality on human capital formation for England.

In turn, the level of education of the population may affect the quality of government (Marconi, 2018). According to the modernization theory popularized by Lipset (1959), education plays a key role in empowering citizens to engage with government institutions. As pointed out by Almond and Verba (1989 [1963], p. 316), “the uneducated man or the man with limited education is a different political actor from the man who has achieved a higher level of education.” At the same time, education is considered “the best proxy for both information and civic virtues” (Alesina & Giuliano, 2011, p. 8), and it can contribute to promoting good governance by both fostering social capital and reducing informational asymmetries. Indeed, citizens with high levels of education are more likely to select good politicians and detect corrupted public officials, thus improving the quality of government (Milligan et al., 2004; Ostrom, 2006). This is consistent with the results obtained by Glaeser et al. (2004), who show that schooling is a strong predictor of institutional improvement. In a similar vein, Fortunato & Panizza (2015) find that education has a positive impact on the quality of government, although only in consolidated democracies.

Taken together, the various arguments laid down above suggest the existence of a positive association between political equality and quality of government. In particular, according to the previous discussion, we can formulate the following hypotheses:

Hypothesis 1. The degree of political equality has a positive effect on the quality of government.

Hypothesis 2. Education acts as a transmission channel linking political equality and quality of government.

In the rest of the paper we aim to empirically test the validity of these hypotheses using data for a cross-section of countries with different levels of economic development.

3 | DATA AND PRELIMINARY EVIDENCE

Our research requires data on the degree of political equality in the various countries. To that end, we resort to a measure taken from the Varieties of Democracy (V-Dem) dataset, which captures the degree to which political power is distributed equally across income groups. This measure of political equality is constructed using the information provided by multiple country experts (typically scholars or professionals with deep knowledge of a country and its political institutions), who code one or several countries according to expertise.² Country experts must answer the following question (Coppedge, Gerring, Knutsen, Lindberg, Skaaning, Teorell, & Ziblatt, 2018, p. 186):

Question: Is political power distributed according to socioeconomic position?

Responses:

0: Wealthy people enjoy a virtual monopoly on political power. Average and poorer people have almost no influence.

²See the online Appendix for further details.

- 1: Wealthy people enjoy a dominant hold on political power. People of average income have little say. Poorer people have essentially no influence.
- 2: Wealthy people have a very strong hold on political power. People of average or poorer income have some degree of influence but only on issues that matter less for wealthy people.
- 3: Wealthy people have more political power than others. But people of average income have almost as much influence and poor people also have a significant degree of political power.
- 4: Wealthy people have no more political power than those whose economic status is average or poor. Political power is more or less equally distributed across economic groups.

The ratings provided by these country experts are aggregated using a measurement model based on Bayesian item response theory (IRT) modeling techniques, which take into account measurement error and a potential serious source of bias, known as differential item functioning (DIF), related to the possibility that experts could have different thresholds for their ratings. The measurement model produces a probability distribution over country-year scores on a standardized interval scale (Coppedge, Gerring, Knutsen, Lindberg, Skaaning, Teorell, Andersson, et al., 2018). As recommended by the authors of V-Dem project, we use as the measure of political equality in our study the point estimate coinciding with the median value of this distribution. This is a continuous variable, with higher values indicating greater political equality. For example, for the year 2010 it ranges from -2.44 (Ukraine) to 2.77 (Bolivia), with a mean value of 0.44 and a standard deviation of 1.00 .

Before continuing, it is important to examine to what extent political equality and democracy are distinct concepts, as “a key characteristic of democracy is the continued responsiveness of the government to the preferences of its citizens, considered as political equals” (Dahl, 1971, p. 1). In order to explore this issue, we investigate the link between the measure of political equality just described and polity2, a widely used democracy index drawn from the Polity IV project. Figure 1 shows the scatter plot for these two variables using data for 2010. As can be observed, there is a positive association between political equality and democracy, with a pairwise correlation coefficient of 0.52 (p -value = 0.000). Nevertheless, the relationship is far from perfect and there are numerous exceptions. Some autocratic regimes such as Belarus, Eritrea or Cuba, are characterized by a level of political equality above the

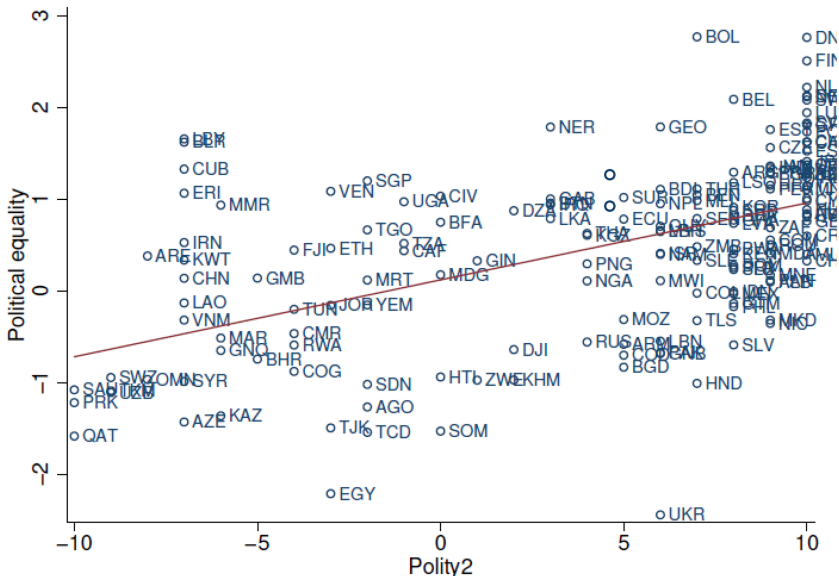


FIGURE 1 Polity2 and political equality [Colour figure can be viewed at wileyonlinelibrary.com]

median, which has to do with the absence in these countries of relatively important differences in the distribution of political power across socioeconomic positions. By contrast, the experiences of countries such as Chile, Nicaragua or Macedonia, highlight that democracy can also be compatible with the existence of relatively low levels of political equality. In these countries those citizens situated at the upper end of the income distribution tend to concentrate a relevant share of political power. At this point one may argue that the polity2 index is mainly a measure of *de jure* democracy, while the indicator of political equality may be acting as a proxy for *de facto* democracy. In view of this, we now repeat the previous analysis employing the Vanhanen's index of democracy, which can be used to reflect the importance of *de facto* political institutions (Foldvari, 2017). The results presented in Figure 2 are very similar to those obtained using polity2. In particular, the pairwise correlation coefficient between the measure of political equality and the Vanhanen's index is 0.55 (p -value = 0.000), confirming the existence of a positive association between both variables. At the same time, the magnitude of the correlation coefficient reveals that the two measures are capturing different concepts. This means that our measure of political equality is not simply a measure for *de facto* democracy. Overall, the information provided by Figures 1 and 2 shows that democracy and political equality, although related, are distinct concepts from an empirical perspective, confirming the evidence provided by Houle (2018).

Likewise, one may suspect that the measure of political equality is really reflecting the degree of economic inequality within the various countries. Indeed, as detailed in the online Appendix, the V-Dem project takes this concern into account and country experts are explicitly asked for focusing on political, not economic, inequality. Figure 3 provides a graphical illustration on the relationship between the measure of political equality and the income Gini index, based on net (post-tax, post-transfer) incomes from the Standardized World Income Inequality Database (SWIID). As shown, there is a negative association between political equality and economic inequality, with a pairwise correlation coefficient of -0.35 (p -value = 0.000). However, the scatter plot also reveals numerous exceptions. For example, there are countries such as Bolivia, Lesotho or Sri Lanka, with high economic inequality but a level of political equality above the median. At the same time, the cases of Ukraine, Kazakhstan or Kosovo illustrate that a relatively low level of economic inequality and a high degree of concentration of political power across income

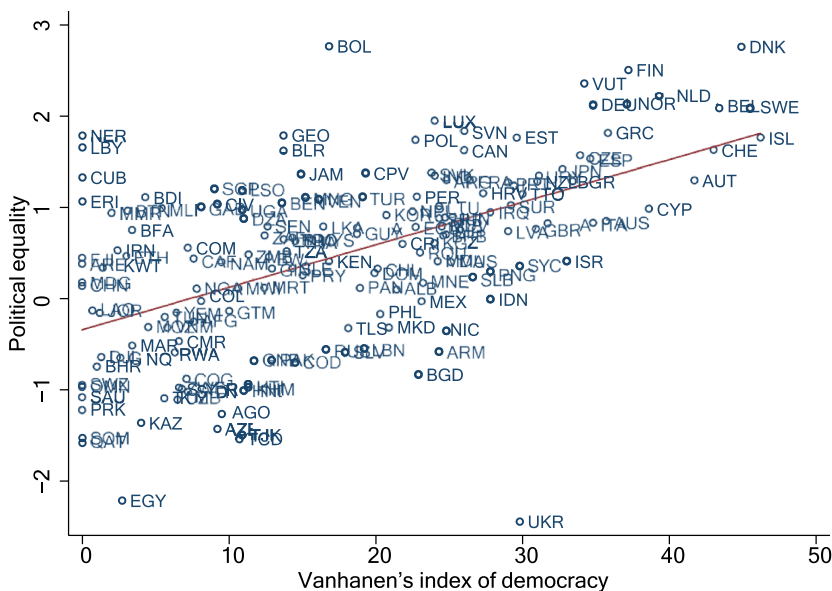


FIGURE 2 Vanhanen's index of democracy and political equality [Colour figure can be viewed at wileyonlinelibrary.com]

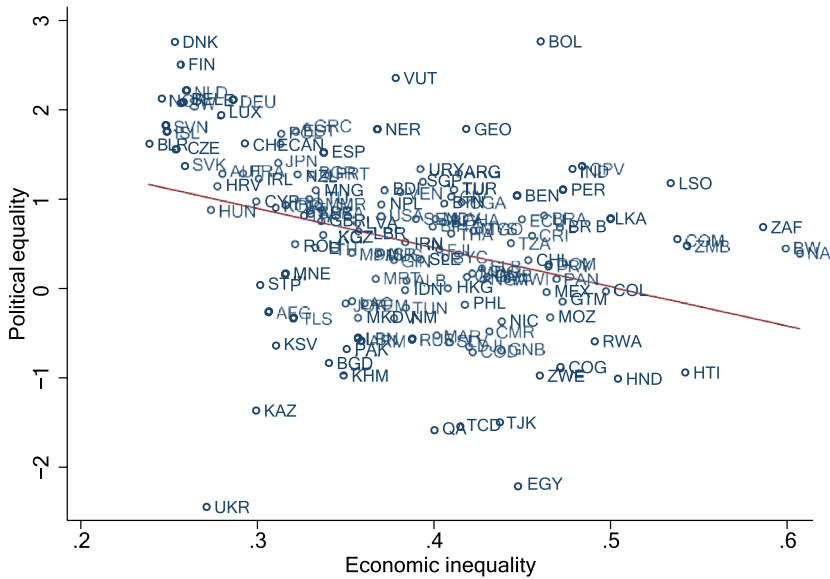


FIGURE 3 Economic inequality and political equality [Colour figure can be viewed at wileyonlinelibrary.com]

groups can also go hand in hand. These examples indicate that the measure of political equality is not simply capturing the economic differences across members of society.

In order to carry out our analysis, we also need information about the quality of government in the different countries. With this aim, we rely on the Worldwide Governance Indicators (WGI) constructed by Kaufmann et al. (1999). These indicators capture various aspects of governance, including “(1) the process by which governments are selected, monitored and replaced, (2) the capacity of the government to effectively formulate and implement sound policies, and (3) the respect of citizens and the state for the institutions that govern economic and social interactions among them” (Kaufmann et al., 1999, p. 1). Bearing in mind the nature of our study, we follow the strategy adopted among other by Bjørnskov et al. (2010) and Helliwell et al. (2018), and use as our main measure of quality of government the average of four out of the six indicators constructed by Kaufmann et al. (1999): government effectiveness, regulatory quality, rule of law, and control of corruption.³ These indicators are obtained using an unobserved components methodology that aggregates the information provided by numerous underlying variables taken from different data sources, including surveys of households and firms, commercial information providers, public sector organizations, and non-governmental organizations. The method employed to calculate these six indicators gives them a unit normal distribution ranging approximately from -2.5 to 2.5 , with higher values indicating better quality of government.⁴ The employment of an aggregate indicator based on the average of the four WGI measures mentioned above seems particularly appropriate in this context, as each individual index may suffer a degree of measurement error.

In this paper we are interested in examining the link between political equality and quality of government. As a first insight into this relationship, countries are divided into two and three groups according to their degree of political equality in 2010. The definitions of the various groups are based on the median (classification into two groups) and the first and third quartiles (classification into three groups) of the cross-country distribution of the measure of

³The definitions of these four indicators are included in the online Appendix. The main results of the paper remain unaltered if we consider the average of the six WGI measures, including additionally the indices of voice and accountability, and political stability and absence of violence. See section 4.3 for further details.

⁴See Kaufmann et al. (2010) for further technical details.

political equality. As can be seen in Figure 4, the countries with higher levels of political equality tend on average to have better quality of government. By contrast, those countries with worse governance outcomes are characterized as a whole by a greater concentration of political power across income groups. Indeed, the differences between the various groups are statistically significant at the 1% level, as shown by the corresponding F-tests.

When considering these findings, however, it is important to note that this analysis is merely descriptive, and the results just discussed may ultimately be sensitive to the specific number of groups used to perform the country classification. More importantly, it is very likely that the quality of government does not depend exclusively on the degree of political equality. Accordingly, the information provided by Figure 4 should be cautiously interpreted, because omitted variables may affect the apparent link between political equality and governance outcomes. In view of this, in the next sections we develop a more appropriate statistical analysis to investigate to what extent the degree of political equality affects the quality of government.

4 | IS THERE A LINK BETWEEN POLITICAL EQUALITY AND QUALITY OF GOVERNMENT?

4.1 | The model

In order to examine in greater detail the relationship between political equality and quality of government, we consider the following cross-sectional model:

$$QG_i = \alpha + \beta PE_i + \gamma DEM_i + \delta EI_i + \theta X_i + \lambda_r + \varepsilon_i \quad (1)$$

where QGi , PE_i , $DEMi$ and EI_i are respectively the values in country i of the measures of quality of government, political equality, democracy and economic inequality described in section 3; X_i is a set of variables controlling for

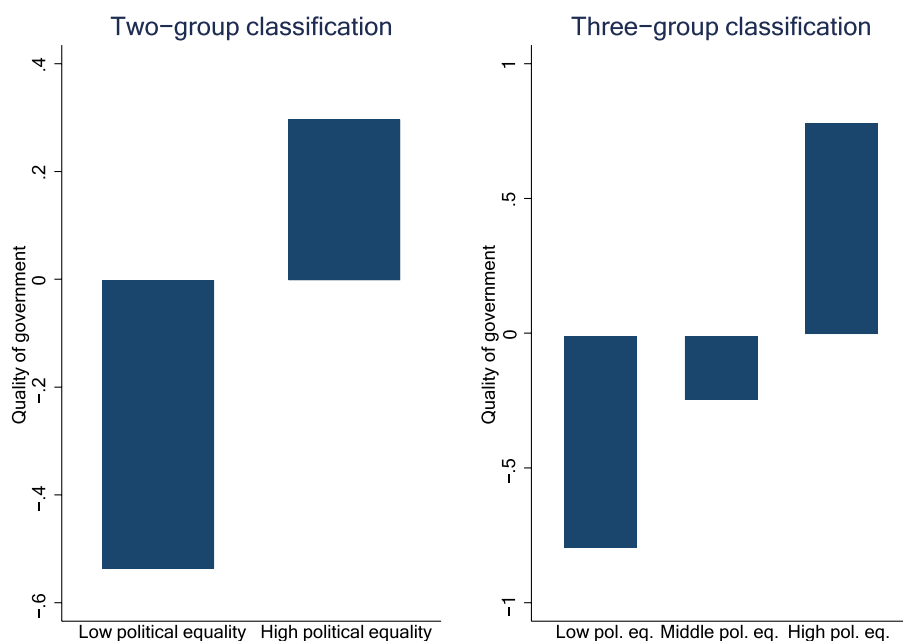


FIGURE 4 Political equality and quality of government: Preliminary evidence [Colour figure can be viewed at wileyonlinelibrary.com]

additional factors assumed to influence governance; λr are regional fixed effects based on the World Bank classification; and ϵ_i is an heteroskedastic error term. This type of cross-sectional model is widely used in the literature on the determinants of the quality of government (e.g. La Porta et al., 1999; Treisman, 2000, 2007; Al-Marhubi, 2004). The coefficient of interest throughout the paper is β , which captures the effect of political equality on the quality of government. We include in the list of regressors the measures of democracy and economic inequality because they are potential determinants of governance (e.g. Chong & Gradstein, 2007; Sunde et al., 2008; Fortunato & Panizza, 2015; Kotschy & Sunde, 2017), and, according to the previous discussion, they are also correlated with the degree of concentration of political power across income groups (Figures 1–3). Consequently, the inclusion of these variables in model (1) is particularly important in order to estimate the impact of political equality on the quality of government independently of the effect of these covariates.

The control variables in X_i have been selected on the basis of existing studies on the determinants of governance. Following the insights by La Porta et al. (1999, 2008), we begin by including legal origin dummies in order to account for any potential effect of legal codes on government performance using Scandinavian legal origins as the base level category.⁵ We also consider the possible influence of colonial legacies on contemporary political institutions. To that end, we use a dummy variable to identify former European colonies. Furthermore, according to cultural theories that emphasize the role played by religious traditions in determining cultural attitudes towards social hierarchy and authority, religion may be important in shaping governance (Putnam, 1993; Landes, 1998). Indeed, La Porta et al. (1999) provide some evidence that predominantly Protestant countries tend to have better government performance than either predominantly Catholic or Muslim countries. Therefore, we include in the list of controls the share of population in each country that is Protestant, Roman Catholic or Muslim.

We also regress our measure of quality of government on a number of geographical characteristics. Thus, we consider the impact of absolute latitude, as temperate zones tend to have warmer climates and more productive agriculture, which has historically enabled them to develop their economies and their institutional frameworks (La Porta et al., 1999). Likewise, the effectiveness of government policies may be related to country size or the existence of a topographically uneven territory (Alesina & Zhuravskaya, 2011; Olsson & Hansson, 2011). In fact, geography may have contributed throughout history to shaping the degree of concentration of political power (Engerman & Sokoloff, 2000; Ang et al., 2018). In view of this, we additionally control for a country's area, its elevation and a measure of terrain roughness. Moreover, numerous studies show that ethnolinguistic diversity can have a negative effect on the quality of government (e.g. La Porta et al., 1999; Alesina et al., 2003; De Soysa & Almås, 2019). Accordingly, we follow the standard approach in the literature and include in the list of regressors a traditional index of ethnolinguistic fractionalization, which measures the probability that two individuals, randomly selected from a country's population, will belong to different groups. Nevertheless, fractionalization indices do not capture other aspects of ethnolinguistic heterogeneity that may also be important for the quality of government. In particular, there are reasons to assume that the degree of polarization may be more relevant in this context than the level of fractionalization (Esteban & Ray, 2011; Desmet et al., 2012). Accordingly, we also control for an index of ethno-linguistic polarization. This index quantifies the extent to which the composition of a country's population resembles a perfectly polarized distribution, in which the national population is composed of two ethnolinguistic groups of equal size.

According to the economic theory of institutions, the advances in the process of development contribute to creating a demand for good government, increasing the premium for better governance (Kaufmann & Kraay, 2002; Al-Marhubi, 2004). As is usual in the literature, we employ the level of GDP per capita as a proxy for the level of economic development in the various countries.⁶ At the same time, in resource-rich countries politicians may have incentives to undermine the quality of government in order to be less constrained in the extraction of resource rents (Ades & Di Tella, 1999). Consequently, our model also incorporates the natural resources contribution to GDP. In turn, the opening of national borders to international markets may also be related to government performance

⁵The full definitions of all the control variables and their sources are presented in the online Appendix.

⁶The inclusion of GDP per capita in model (1) is, however, controversial, as this variable may be a proximate outcome of political equality (Acemoglu et al., 2007).

(Ezcurra, 2012). Moreover, in a globalized world contacts with ideas and practices of other societies tend to generate social and cultural patterns that may lead to improve governance (La Porta et al., 2008). In view of this, we include in the list of regressors in model (1) a measure of the degree of integration of each country with the rest of the world, which takes into account the economic, social and political aspects of globalization.

Table A1 in the online Appendix shows several summary statistics for the different controls just described. In the econometric analysis below we use the mean value of the measure of quality of government over the period 2011–2015 as our dependent variable, while all time-varying regressors (including the index of political equality) enter in the model as their respective means during the period 2005–2010 in order to minimize any potential simultaneity bias.⁷

4.2 | Baseline results

Table 1 presents the results obtained when various versions of model (1) are estimated by OLS with heteroskedasticity robust standard errors using data for 145 countries.⁸ The different specifications work reasonably well in accounting for the cross-country variation in governance, with relatively good values in terms of goodness-of-fit. Focusing on the main aim of the paper, our estimates show that the coefficient of the measure of political equality is in all cases positive and statistically significant at the 1% level. This reveals that higher political equality is associated with better quality of government, which is consistent with the first hypothesis formulated in section 2 and the preliminary evidence provided by Figure 4. In fact, this result is not affected by the inclusion in the analysis of the various controls described in subsection 4.1, confirming its robustness and indicating that the observed link between political equality and governance is not a spurious correlation resulting from the omission of these covariates. This is especially relevant given that, as discussed above, several regressors included in our baseline model may be correlated with both political equality and government performance (e.g. the quality of democracy or the degree of economic inequality).⁹ The information provided by Table 1 reveals that political equality contributes to explaining the cross-country differences in governance, and is not simply capturing the effect of these variables. Figure 5 illustrates the observed link between political equality and quality of government with a partial regression plot based on all covariates.

The regression coefficient from our preferred specification in Table 1 (column 5) reveals that raising the measure of political equality by one standard deviation is associated with an increase in the index of governance of around 0.11. To get a more accurate idea of the magnitude of the effect of political equality on government performance, we consider the case of Botswana. Botswana is a country characterized by an intermediate degree of political equality ($PE = 0.52$), while its governance score is above the sample median ($QG = 0.68$). Our estimates indicate that if Botswana had an index of political equality equal to that registered for example by New Zealand ($PE = 1.18$), its governance score would increase by around 12%. These figures suggest that political equality has a quantitatively relevant impact on the quality of government.

When interpreting the results in Table 1, it is important to note that the robustness of the coefficient estimates on the measure of political equality to the inclusion of additional controls provides a first piece of evidence that omitted variables alone are not driven the observed relationship between the degree of concentration of political power across income groups and quality of government. However, although model (1) incorporates a substantial set of controls, the possibility of some omitted variable bias remains. In order to investigate the relevance of this potential problem, we now use the method proposed by Oster (2017). Building on the earlier work of Altonji et al. (2005),

⁷See section 5 for further details on this issue.

⁸Table A2 in the online Appendix shows the full list of countries included in the analysis and their values of QG_i and PE_i .

⁹As is usual in the literature, in Table 1 the polity2 score is used to quantify the extent of democracy in the sample countries. Nevertheless, Table A3 shows that the observed association between political equality and government performance remains unaltered whether, alternatively, the Vanhanen's index of democracy is employed.

TABLE 1 Political equality and quality of government: OLS regressions

	(1)	(2)	(3)	(4)	(5)
Political equality	0.202*** (0.064)	0.132** (0.053)	0.188*** (0.066)	0.147*** (0.044)	0.111*** (0.041)
Democracy	0.023 (0.014)	0.038*** (0.011)	0.017 (0.015)	0.004 (0.008)	0.015* (0.008)
Economic inequality	0.869 (0.993)	0.274 (0.736)	0.488 (0.999)	1.041 (0.701)	0.352 (0.664)
English legal origin	−0.448 (0.405)	−0.269 (0.304)	−0.384 (0.402)	−0.243 (0.252)	−0.151 (0.233)
French legal origin	−0.772* (0.464)	−0.405 (0.343)	−0.704 (0.459)	−0.292 (0.294)	−0.170 (0.274)
German legal origin	−0.184 (0.361)	−0.088 (0.279)	−0.158 (0.355)	0.081 (0.208)	0.076 (0.205)
Socialist legal origin	−1.535*** (0.442)	−0.837*** (0.310)	−1.438*** (0.438)	−0.442 (0.281)	−0.287 (0.265)
Former colony	0.414** (0.177)	0.374** (0.173)	0.333* (0.189)	0.117 (0.148)	0.124 (0.160)
Protestant	−0.522 (0.556)	−0.090 (0.387)	−0.327 (0.562)	0.317 (0.333)	0.462 (0.323)
Catholic	0.169 (0.181)	−0.084 (0.180)	0.217 (0.181)	−0.081 (0.171)	−0.121 (0.171)
Muslim	−0.251 (0.191)	0.029 (0.164)	−0.210 (0.190)	0.001 (0.164)	0.121 (0.158)
Latitude	0.024*** (0.007)	0.015** (0.006)	0.021*** (0.007)	0.011** (0.005)	0.008 (0.005)
Surface (log)	−0.113*** (0.042)	−0.116*** (0.029)	−0.095** (0.044)	−0.109*** (0.026)	−0.098*** (0.023)
Elevation	0.093 (0.141)	0.281** (0.116)	0.080 (0.137)	0.144 (0.104)	0.232** (0.096)
Roughness	−0.863** (0.407)	−0.839** (0.323)	−0.822** (0.406)	−0.255 (0.320)	−0.396 (0.297)
Ethn. fractionalization	−0.229 (0.259)	−0.060 (0.216)	−0.201 (0.241)	−0.079 (0.182)	−0.003 (0.165)
Ethn. polarization	−0.166 (0.256)	−0.380* (0.198)	−0.138 (0.263)	−0.203 (0.179)	−0.300* (0.165)
GDP per capita (log)		0.396*** (0.070)			0.237*** (0.057)
Natural resources			−0.009* (0.005)		−0.007* (0.004)
Globalization				0.041*** (0.004)	0.029*** (0.005)
Constant	1.598** (0.756)	−2.279*** (0.785)	1.569** (0.727)	−1.775*** (0.535)	−3.087*** (0.669)
R-squared	0.761	0.836	0.769	0.878	0.893
Regional fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	145	145	145	145	145

Notes: The dependent variable is in all cases the measure of quality of government described in section 3. Scandinavian legal origins as base level category. Robust standard errors in parentheses.
*Significant at the 10% level,
**significant at the 5% level,
***significant at the 1% level.

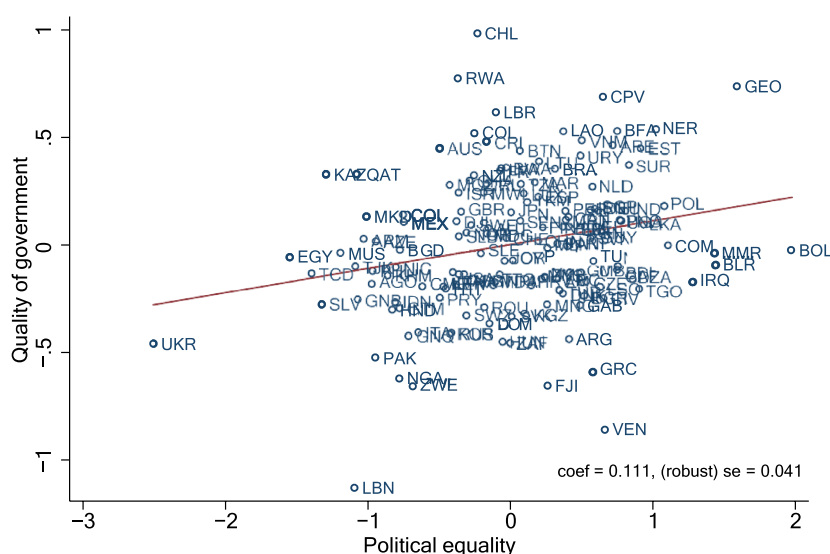


FIGURE 5 Political equality and quality of government: Partial regression plot [Colour figure can be viewed at wileyonlinelibrary.com]

this approach employs the selection on the observed explanatory variables as a guide on the degree of selection on unobserved variables. In particular, Oster (2017) uses coefficient stability and R-squared movements when the various controls are introduced in the model to assess whether the estimation results are robust to omitted variable bias. Following Oster (2017), we calculate how important the degree of selection on unobserved variables would have to be relative to observed variables in order to eliminate the observed effect of political equality on the quality of government, under the strictest assumption that if both observed and unobserved controls were included in the model the R-squared would be one. In our analysis we compare the model with the full set of controls (column 5 in Table 1) with a restricted version which only includes as controls the measures of political equality, democracy and economic inequality, as well as regional fixed effects. The results indicate that the degree of selection on unobservables relative to observables is 1.25. This implies that the unobservables would have to be more important than observables in order to explain away the effect of political equality. Given that our choice of controls is based on the findings of the literature on the determinants of governance (see subsection 4.1), this result increases our confidence that the observed relationship between political equality and quality of government is not driven by unobserved heterogeneity.¹⁰

¹⁰In order to complement the information provided by Table 1, we also examine whether the effect of the degree of concentration of political power across income groups on governance may be contingent on the quality of democracy. To do so, we classify the sample countries into three groups according to their average polity2 score over the study period. In particular, we distinguish between full democracies (polity2 = 10), democracies ($6 \leq \text{polity2} < 10$) and non-democracies (polity2 < 6). Columns 1–3 of Table A4 in the online Appendix present the results obtained when model (1) is estimated separately in each group of countries. As can be checked, the coefficient of the measure of political equality is positive in all cases, although it is not statistically significant at conventional levels. This indicates that the impact of political equality on government performance observed in Table 1 does not depend on the extent of democracy. Likewise, we also explore the potential effect of the level of economic development on our baseline results. Following a similar strategy that in the case of democracy, we split the sample countries into three groups defined according to their average GDP per capita between 2005 and 2010. Specifically, we use the first and third quartile of the GDP per capita distribution as cut-offs to differentiate between low-income countries, middle-income countries and high-income countries. We now estimate again model (1) in these subsamples. The results in columns 4–6 of Table A4 reveal that the coefficient of the measure of political equality is statistically significant only in the case of middle- and high-income countries. In fact, the magnitude of the coefficient estimates seems to suggest that the impact of the degree of concentration of political power on governance increases with the level of economic development. Nevertheless, these results should be treated with caution due to the reduced number of degrees of freedom in most of the regressions in Table A4.

With respect to the various controls included in model (1), the results are in general consistent with those obtained by other authors. Our estimates show that larger countries exhibit inferior government performance. At the same time, the information provided by Table 1 reveals that GDP per capita and the degree of integration with the rest of the world are positively associated with the quality of government. Moreover, there is some evidence that natural resources abundance exerts a negative effect on governance outcomes. Finally, our findings also point to the existence of a positive association between quality of government and democracy and mean elevation, while the impact of the degree of ethnolinguistic polarization would be negative. Nevertheless, these results should be treated with some caution because the coefficients of these covariates are not statistically significant consistently across the various specifications included in Table 1.

4.3 | Robustness checks

So far our analysis has revealed the existence of a positive and statistically significant relationship between political equality and quality of government. In this subsection we explore the robustness of this finding.

4.3.1 | Outliers and influential observations

As a first robustness test, we examine the potential impact of outliers and influential observations on our estimates. To do so, we begin by calculating each country's DF- BETA statistic for the index of political equality, which is a measure of the difference in the estimated coefficient for this variable (scaled by the estimated standard error of the coefficient) when the country in question is included and when it is excluded from the sample. According to the rule of thumb proposed by Belsley et al. (1980), we remove from \sqrt{n} the analysis all countries for which $|DFBETA| > 2/\sqrt{n}$, where n is the sample size.

When this cut-off is applied, 13 countries are influential in the specification of model (1) with the full set of controls (column 5 in Table 1). The first column in Table A5 in the online Appendix shows that the coefficient of the measure of political equality continues to be positive and statistically significant once these countries are dropped from the analysis. In order to confirm this finding, we also use robust regression as an alternative way to identify the possible influence of potential outliers (Berk, 1990). Column 2 of Table A5 reveals that the observed link between the degree of concentration of political power across income groups and quality of government still holds when this method is used to estimate model (1).

We now investigate the impact on the results of the countries with the lowest and highest levels of political equality and quality of government. To that end, we remove from the sample those countries whose measures of political equality and governance are below (above) the 10th (90th) percentile of the distribution of these variables. Columns 3–6 of Table A5 show that dropping these countries does not affect the observed association between political equality and government performance.

4.3.2 | Alternative measures of quality of government

The findings in Table 1 may also be sensitive to the choice of the measure employed to quantify the quality of government in the various countries. For this reason, we explore the effect on the results of employing an alternative aggregate measure of governance based on the average of the six WGI indices (Easterly & Levine, 2003; Ezcurra & Rodríguez-Pose, 2017). We also examine whether our results hold for each of the six WGI indices, which capture different aspects of institutional quality. Next, we employ an alternative indicator of quality of government equal to the average value of the International Country Risk Guide (ICRG) indices of corruption, law and order and bureaucratic

quality. We also use two measures of rule of law taken respectively from the V-Dem project and Freedom House, as well as a corruption perception index provided by Transparency International. Table A6 in the online Appendix shows the results obtained when model (1) is estimated again using these alternative measures of governance as dependent variable. With the only exception of the index of regulatory quality, in all cases there is a positive and statistically significant association between political equality and the various measures of quality of government, which reinforces the robustness of our results.

4.3.3 | Alternative estimation strategies

As is usual in the literature on the determinants of quality of government, our analysis is based on the estimation of a cross-sectional model (e.g. La Porta et al., 1999; Treisman, 2000, 2007; Al-Marhubi, 2004; Alesina & Zhuravskaya, 2011). This is reasonable since the levels of quality of government tend to be very persistent during the study period and many of the controls included in vector X are time-invariant. Nevertheless, one may exploit the panel dimension of the data in order to maximize the degrees of freedom, thus reducing the collinearity among the regressors and improving the efficiency of the estimates (Kelejian et al., 2013). For this reason, we now estimate model (1) using pooled OLS with annual data for the period 1996–2015.¹¹ As can be seen in Table A7 in the online Appendix, the coefficient of the measure of political equality continues to be positive and statistically significant when we use this alternative estimation strategy.

As pointed out in section 3, the Gini indices used to quantify the degree of economic inequality within the various countries were taken from the SWIID. According to Solt (2016), the SWIID allows one to maximize the comparability of available income inequality data for the greatest possible number of countries and years. Although this dataset is not free of criticisms, “those pursuing research on income inequality across many countries [...] will often find that the SWIID is their best choice of data source” (Solt, 2015, p. 690). In order to minimize the gaps in the database, the SWIID employs multiple imputation methods to recover missing values. Consequently, this dataset includes 100 Gini indices for each country-year. As is usual in the literature (e.g. Kotschy & Sunde, 2017), our previous analyses use the mean Gini index for each country-year. Nevertheless, Table A8 in the online Appendix shows the results obtained when model (1) is estimated taking the multiple imputation of the Gini indices into account. As can be seen, the relationship between political equality and quality of government still holds, confirming once again the robustness of our findings.

5 | ENDOGENEITY OF POLITICAL EQUALITY

When interpreting the earlier results, it is important to consider the possible endogeneity of political equality in this context. As discussed above, the existence of measurement error and omitted variable bias may affect our analysis. Moreover, political equality may exert an effect on governance outcomes and, in turn, be affected by them, giving rise to a reverse causality problem. In the previous analysis we have addressed this issue using lagged values of the measure of political equality to explain the variation in quality of government. However, this may not be enough due to the high degree of persistence of the measures of quality of government and political equality over the study period. In view of this, we now deal with the potential endogeneity of political equality by means of an instrumental

¹¹At this point, one may also consider the possibility of including country fixed effects. However, controlling for country fixed effects is not appropriate in our case, as most of the variation experienced by the key independent variable, the measure of political equality, is between countries rather than over time. In fact, the information provided by an ANOVA model reveals that in our sample 96% of the variation in the political equality data is due to variations across countries. As pointed out by Partridge (2005, pp. 371–372), in this type of situation fixed effects models leave what is most important in the data unexplained and may consequently produce inaccurate results.

Our IV strategy exploits the variation in political equality in geographically neighbouring countries. Specifically, we use as instrument the weighted mean of the level of political equality in geographically neighbouring countries. To calculate this mean, the values of the measure of political equality are weighted by a spatial weights matrix, W , which describes how the countries in the sample are spatially interconnected. In particular, W is defined as follows:

where d_{ij} is the great-circle distance between the capitals of countries i and j , which in itself is strictly exogenous. As can be checked in expression 2, W is row standardized, so that it is relative and not absolute distance which matters. The rationale for using this instrument is based on the idea that the gradual spreading of values and norms across countries influences on the citizens' attitudes towards the way in which authority is exercised by governments, thus shaping the demand for political equality (Klasing, 2013; Beugelsdijk & Klasing, 2016). These spatial spillovers are more likely between neighbouring countries, as they often share similar cultural and historical backgrounds, and have close informational ties (Persson & Tabellini, 2009; Aidt & Jensen, 2014; Grechyna, 2018). This suggests that the degree of political equality in a given country should be affected by the levels of political equality in neighbouring countries. Our identification strategy is similar to the approach adopted by several recent studies in which the strength of democracy in neighbouring countries is used as instrument for democracy (e.g. Madsen et al., 2015; Acemoglu et al., 2019; Krieger, 2019).

Figure 6 reveals the existence of a positive and strong link between domestic political equality and the average of neighbouring countries. In fact, the instrument alone explains around 22% of the cross-country variation in political equality. In order to confirm the relevance of the instrument, we estimate the standard first stage regressions. As can be observed in Table 2, the coefficient of the degree of political equality in neighbouring countries is in all cases



FIGURE 6 Political equality: Do neighbouring countries matter? [Colour figure can be viewed at wileyonlinelibrary.com]

TABLE 2 First stage regressions

	(1)	(2)	(3)	(4)	(5)
Political equality in neighbouring countries	1.248*** (0.303)	1.232*** (0.296)	1.187*** (0.327)	1.223*** (0.308)	1.095*** (0.328)
Democracy	0.057*** (0.017)	0.062*** (0.018)	0.054*** (0.018)	0.052*** (0.018)	0.061*** (0.018)
Economic inequality	-3.268** (1.495)	-3.438** (1.455)	-3.441** (1.509)	-3.192** (1.528)	-3.968** (1.575)
English legal origin	-0.769 (0.464)	-0.659 (0.444)	-0.728 (0.468)	-0.712 (0.444)	-0.555 (0.454)
French legal origin	-0.928* (0.500)	-0.723 (0.476)	-0.883* (0.504)	-0.808* (0.475)	-0.615 (0.486)
German legal origin	-0.962** (0.427)	-0.886** (0.407)	-0.937** (0.428)	-0.890** (0.411)	-0.845** (0.410)
Socialist legal origin	-1.449*** (0.489)	-1.064** (0.466)	-1.389*** (0.499)	-1.185** (0.480)	-0.947* (0.491)
Former colony	-0.331 (0.270)	-0.337 (0.243)	-0.371 (0.273)	-0.394 (0.282)	-0.395 (0.247)
Protestant	-0.418 (0.501)	-0.203 (0.472)	-0.307 (0.523)	-0.221 (0.500)	0.018 (0.507)
Catholic	-0.103 (0.347)	-0.226 (0.336)	-0.073 (0.346)	-0.157 (0.337)	-0.164 (0.334)
Muslim	-0.465 (0.376)	-0.316 (0.395)	-0.437 (0.375)	-0.401 (0.395)	-0.235 (0.387)
Latitude	-0.001 (0.008)	-0.006 (0.008)	-0.002 (0.008)	-0.004 (0.009)	-0.008 (0.008)
Surface (log)	-0.016 (0.049)	-0.017 (0.048)	-0.008 (0.051)	-0.015 (0.048)	0.002 (0.050)
Elevation	0.208 (0.193)	0.294 (0.196)	0.197 (0.198)	0.216 (0.193)	0.295 (0.204)
Roughness	0.260 (0.533)	0.269 (0.524)	0.266 (0.536)	0.392 (0.533)	0.201 (0.547)
Ethn. fractionalization	0.316 (0.324)	0.389 (0.323)	0.322 (0.326)	0.345 (0.321)	0.412 (0.331)
Ethn. polarization	0.055 (0.404)	-0.053 (0.416)	0.072 (0.403)	0.047 (0.400)	-0.046 (0.413)
GDP per capita (log)		0.192** (0.092)			0.264** (0.120)
Natural resources			-0.004 (0.007)		-0.011 (0.008)
Globalization				0.009 (0.008)	-0.006 (0.011)
Constant	1.803* (0.911)	-0.150 (1.147)	1.807** (0.910)	1.029 (1.048)	-0.369 (1.119)
Regional fixed effects	Yes	Yes	Yes	Yes	Yes
F-statistic excluded instrument	16.95***	17.37***	13.19***	15.76***	11.13***
R-squared	0.496	0.513	0.497	0.501	0.520
Observations	145	145	145	145	145

Notes: The dependent variable is in all cases the measure of political equality described in section 3. The estimation method is OLS. Scandinavian legal origins as base level category. Robust standard errors in parentheses.
*Significant at the 10% level,
**significant at the 5% level,
***significant at the 1% level.

positive and statistically significant at the 1% level, regardless of the controls considered. Indeed, the first stage F-statistics for the excluded instrument are in all regressions above the threshold of 10 suggested by Staiger & Stock (1997) when there is a single endogenous regressor, thus confirming the strength of the instrument.¹²

To be a valid instrument, however, political equality in neighbouring countries should not affect the quality of government in any given country, beyond its impact on the level of political equality in the country in question. This exclusion restriction cannot be formally tested in the absence of other instruments. Nevertheless, one may argue that the degree of political equality in neighbouring countries could have influence on their governance outcomes, which may in turn affect domestic quality of government. In fact, the empirical evidence provided by Seldadyo et al. (2010) and Kelejian et al. (2013) shows that governance in one country exhibits a positive and statistically significant relationship with governance in neighbouring countries. In view of this, we should control for the (weighted) average of the quality of government in neighbouring countries in order to capture the possible existence of direct spatial spillovers in terms of governance. The inclusion of this additional regressor means that our baseline model becomes a spatial autoregressive (SAR) model, as it incorporates a spatial lag of the dependent variable as a covariate. As is well known in the spatial econometrics literature, the presence of a spatial lag of the dependent variable in the list of regressors is endogenous to the model, since it implies simultaneous spatial interactions (Anselin, 1988). In order to overcome this difficulty, we resort to the generalized spatial two stage least squares (GS2SLS) estimator derived by Kelejian & Prucha (1998, 1999) and extended by Arraiz et al. (2010) and Drukker et al. (2013), which implements a multistep estimation strategy based on the generalized method of moments (GMM) and IV to provide consistent estimates of the coefficients of the model.¹³

Table 3 shows the results obtained when the SAR model just described is estimated by GS2SLS for the case of heteroskedasticity of unknown form in the error term. Following our identification strategy, in all regressions we include the degree of political equality in neighbouring countries as instrument for the domestic level of political equality. Our estimates reveal that government performance in one country is not affected by governance in neighbouring countries, which contrasts with the findings obtained by Seldadyo et al. (2010) and Kelejian et al. (2013). Turning our attention to the main aim of the paper, the information provided by Table 3 shows that the coefficient of the measure of political equality remains in all cases positive and statistically significant. This confirms that political equality exerts a positive and significant impact on government quality, which supports the first hypothesis proposed in section 2. Indeed, if we compare the estimates in Table 3 with the OLS regressions in Table 1, we observe that the coefficient estimates of the measure of political equality are very similar in size.

At this point it is important to note that the presence of the quality of government in neighbouring countries in the list of regressors complicates the interpretation of the coefficient estimates in a SAR model. As shown by LeSage and Pace (2009, pp. 33–42), in this type of model a change in a particular explanatory variable in country *i* has a direct effect on the dependent variable in that country, but also an indirect effect on the remaining countries. The total effect is the sum of the direct and indirect effect. Table 4 shows these effects calculated from the SAR model with the full set of controls. The results reveal that the total effects are clearly driven by the direct effects, whereas the indirect effects are in all cases considerably smaller and non-significant. Accordingly, the total effect of political equality on government quality is very similar to the coefficient estimate in column 5 of Table 3.

The results in Tables 3 and 4 may be sensitive to the method employed to construct the instrument. In order to explore this issue, we now recalculate the instrument using different cut-off values (2,000, 3,000, 4,000, 5,000, 6,000 and 7,000 kilometres) above which spatial interactions between countries are assumed to be negligible. The results of this robustness test are presented in Tables A10 and A11. As can be checked, the observed impact of political equality on the quality of government holds in all cases.

¹²As we discuss below in greater detail, the results of the first stage regressions in Table 2 should be treated with caution because of the inclusion of the degree of political equality in neighbouring countries in the list of regressors leads to bias in OLS estimates. Nevertheless, the relevance of the instrument remains unaltered if we address this problem using alternative estimation methods. See Table A9 in the online Appendix for further details.

¹³See Arraiz et al. (2010) or Drukker et al. (2013) for further technical details on the estimation method.

TABLE 3 Political equality and quality of government: GS2SLS regressions

	(1)	(2)	(3)	(4)	(5)
Political equality	0.184** (0.081)	0.109* (0.062)	0.183** (0.080)	0.149** (0.061)	0.117** (0.053)
Democracy	0.022* (0.013)	0.037*** (0.010)	0.017 (0.014)	0.005 (0.008)	0.015** (0.007)
Economic inequality	0.856 (0.925)	0.246 (0.696)	0.501 (0.926)	1.043 (0.648)	0.354 (0.619)
English legal origin	-0.489 (0.384)	-0.312 (0.283)	-0.399 (0.379)	-0.237 (0.238)	-0.139 (0.217)
French legal origin	-0.821* (0.435)	-0.456 (0.315)	-0.722* (0.428)	-0.284 (0.280)	-0.156 (0.256)
German legal origin	-0.223 (0.333)	-0.131 (0.251)	-0.171 (0.330)	0.088 (0.202)	0.088 (0.196)
Socialist legal origin	-1.575*** (0.414)	-0.878*** (0.288)	-1.454*** (0.411)	-0.435 (0.274)	-0.273 (0.250)
Former colony	0.411** (0.163)	0.369** (0.152)	0.335* (0.174)	0.117 (0.136)	0.124 (0.146)
Protestant	-0.608 (0.523)	-0.177 (0.358)	-0.362 (0.538)	0.330 (0.320)	0.486 (0.312)
Catholic	0.123 (0.170)	-0.135 (0.162)	0.201 (0.175)	-0.075 (0.156)	-0.110 (0.157)
Muslim	-0.268 (0.180)	0.012 (0.152)	-0.217 (0.177)	0.004 (0.155)	0.127 (0.147)
Latitude	0.021*** (0.007)	0.012** (0.006)	0.020*** (0.007)	0.012** (0.005)	0.008* (0.005)
Surface (log)	-0.110*** (0.039)	-0.112*** (0.027)	-0.094** (0.040)	-0.109*** (0.023)	-0.099*** (0.021)
Elevation	0.108 (0.128)	0.299*** (0.104)	0.085 (0.127)	0.142 (0.095)	0.228*** (0.088)
Roughness	-0.813** (0.376)	-0.785*** (0.295)	-0.808** (0.370)	-0.261 (0.292)	-0.406 (0.270)
Ethn. fractionalization	-0.210 (0.241)	-0.038 (0.198)	-0.196 (0.221)	-0.081 (0.164)	-0.007 (0.147)
Ethn. polarization	-0.183 (0.237)	-0.400** (0.181)	-0.144 (0.243)	-0.201 (0.164)	-0.295** (0.150)
GDP per capita (log)		0.400*** (0.063)			0.237*** (0.052)
Natural resources			-0.009* (0.005)		-0.007** (0.004)
Globalization				0.041*** (0.003)	0.029*** (0.004)
Quality of government in neighbouring countries	0.319 (0.302)	0.339 (0.232)	0.102 (0.299)	-0.046 (0.206)	-0.072 (0.189)
Constant	1.639** (0.703)	-2.261*** (0.731)	1.581** (0.676)	-1.787*** (0.515)	-3.100*** (0.610)
Regional fixed effects	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.762	0.836	0.769	0.878	0.893
Observations	145	145	145	145	145

Notes: The dependent variable is in all cases the measure of quality of government described in section 3. The estimation method is GS2SLS with heteroskedastic innovations of unknown form in the disturbance process. Scandinavian legal origins as base level category. Standard errors in parentheses.

*Significant at the 10% level

**significant at the 5% level

***significant at the 1% level.

TABLE 4 Direct, indirect and total effects

	Direct effects	Indirect effects	Total effects
Political equality	0.117** (0.053)	−0.008 (0.021)	0.109** (0.046)
Democracy	0.015** (0.007)	−0.001 (0.002)	0.014* (0.008)
Economic inequality	0.354 (0.619)	−0.024 (0.075)	0.331 (0.575)
English legal origin	−0.139 (0.217)	0.009 (0.023)	−0.130 (0.211)
French legal origin	−0.156 (0.256)	0.010 (0.026)	−0.145 (0.248)
German legal origin	0.088 (0.196)	−0.006 (0.023)	0.082 (0.178)
Socialist legal origin	−0.273 (0.250)	0.018 (0.042)	−0.255 (0.253)
Former colony	0.124 (0.146)	−0.008 (0.023)	0.115 (0.136)
Protestant	0.486 (0.312)	−0.033 (0.091)	0.454* (0.269)
Catholic	−0.110 (0.157)	0.007 (0.019)	−0.102 (0.151)
Muslim	0.127 (0.147)	−0.008 (0.026)	0.118 (0.132)
Latitude	0.008* (0.005)	−0.001 (0.001)	0.008* (0.004)
Surface (log)	−0.099*** (0.021)	0.007 (0.016)	−0.092*** (0.026)
Elevation	0.228** (0.088)	−0.015 (0.037)	0.212** (0.095)
Roughness	−0.406 (0.270)	0.027 (0.072)	−0.379 (0.252)
Ethn. fractionalization	−0.007 (0.147)	0.000 (0.010)	−0.007 (0.137)
Ethn. polarization	−0.295** (0.150)	0.020 (0.048)	−0.275** (0.155)
GDP per capita (log)	0.237 *** (0.052)	−0.016 (0.039)	0.221 *** (0.061)
Natural resources	−0.007** (0.004)	0.000 (0.001)	−0.007** (0.003)
Globalization	0.029*** (0.004)	−0.002 (0.005)	0.027*** (0.006)

Notes: The different effects are calculated from the estimates in column 5 of Table 3. The dependent variable is in all cases the measure of quality of government described in section 3. Scandinavian legal origins as base level category. Standard errors in parentheses.

*Significant at the 10% level,

**significant at the 5% level

***significant at the 1% level.

6 | A POTENTIAL TRANSMISSION CHANNEL: THE ROLE OF EDUCATION

In order to complement our previous findings, in this section we present an exploratory analysis about why the degree of concentration of political power across income groups should affect the quality of government. According to the theoretical framework in section 2, our hypothesis is that education is a plausible transmission channel linking political equality and governance. Therefore, we now aim to examine whether education can mediate the positive reduced-form cross-country relationship found between political equality and quality of government. To do so, we use a measure of education drawn from the V-Dem dataset, which captures to what extent is high quality basic education guaranteed to all, sufficient to enable them to exercise their basic rights as adult citizens. This measure of education is particularly appropriate in our context because, unlike other possible alternatives, it takes explicitly into account the quality of education and its role in promoting political development.

We begin our analysis by investigating the link between political equality and education. The information provided by columns 1–4 of Table 5 reveals that countries with a higher degree of political equality are characterized by a greater level of education of the population, which is consistent with the various arguments laid down in section 2. In view of these results, we now include in our baseline model the measure of education. If education were a valid transmission channel, the inclusion of this additional control should reduce the effect of political equality on the

TABLE 5 Political equality and quality of government: The role of education

Estimation method	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	OLS	GS2SLS	OLS	GS2SLS	OLS	GS2SLS
	Education	Education	Education	Education	Quality of government	Quality of government
Political equality	0.530*** (0.106)	0.341** (0.167)	0.320*** (0.103)	0.275** (0.117)	0.074* (0.044)	0.056 (0.055)
Democracy	0.013 (0.021)	0.023 (0.021)	−0.000 (0.021)	0.005 (0.019)	0.015* (0.008)	0.016** (0.007)
Economic inequality	−1.818 (1.541)	−1.948 (1.547)	−2.575 (1.635)	−2.986** (1.480)	0.651 (0.634)	0.607 (0.579)
English legal origin			−0.079 (0.566)	−0.032 (0.499)	−0.142 (0.229)	−0.155 (0.210)
French legal origin			−0.127 (0.642)	−0.052 (0.576)	−0.155 (0.273)	−0.170 (0.252)
German legal origin			0.177 (0.561)	0.230 (0.510)	0.056 (0.217)	0.038 (0.204)
Socialist legal origin			−0.186 (0.672)	−0.094 (0.629)	−0.266 (0.257)	−0.285 (0.241)
Former colony			−0.030 (0.309)	−0.101 (0.279)	0.128 (0.158)	0.122 (0.141)
Protestant			−0.871 (0.656)	−0.641 (0.634)	0.563* (0.318)	0.556* (0.303)
Catholic			−0.876*** (0.298)	−0.813*** (0.281)	−0.019 (0.168)	−0.023 (0.151)
Muslim			−0.833** (0.404)	−0.815** (0.365)	0.218 (0.159)	0.218 (0.145)
Latitude			0.003 (0.009)	0.004 (0.009)	0.007 (0.005)	0.007 (0.004)
Surface (log)			−0.137*** (0.052)	−0.136*** (0.046)	−0.082*** (0.023)	−0.081*** (0.021)
Elevation			0.172 (0.175)	0.152 (0.166)	0.212** (0.093)	0.217*** (0.083)
Roughness			−0.248 (0.473)	−0.313 (0.454)	−0.368 (0.300)	−0.360 (0.275)
Ethn. fractionalization			0.033 (0.372)	0.047 (0.334)	−0.007 (0.153)	0.000 (0.135)
Ethn. polarization			−0.620 (0.404)	−0.600* (0.361)	−0.228 (0.182)	−0.227 (0.166)
GDP per capita (log)			0.528*** (0.138)	0.560*** (0.123)	0.176*** (0.065)	0.177*** (0.059)
Natural resources			−0.012 (0.007)	−0.014** (0.006)	−0.006 (0.004)	−0.005 (0.004)

TABLE 5 (Continued)

Estimation method	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	OLS	GS2SLS	OLS	GS2SLS	OLS	GS2SLS
Globalization	Education	Education	Education	Education	Quality of government	Quality of government
Education			−0.001 (0.011)	−0.002 (0.009)	0.029*** (0.005)	0.029*** (0.004)
Education in neighbouring countries		0.570 (0.409)			0.116*** (0.044)	0.122*** (0.042)
Quality of government in neighbouring countries				−0.378 (0.372)		0.054 (0.190)
Constant	1.857*** (0.551)	1.274 (0.783)	−0.309 (1.382)	−0.159 (1.218)	−3.051*** (0.640)	−3.039*** (0.582)
Regional fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.588		0.756		0.900	
Pseudo R-squared		0.572		0.757		0.900
Observations	145	145	145	145	145	145

Notes: In odd columns the estimation method is OLS with robust standard errors in parentheses, while in even columns the estimation method is GS2SLS with heteroskedastic innovations of unknown form in the disturbance process. Scandinavian legal origins as base level category.

*Significant at the 10% level

**significant at the 5% level

***significant at the 1% level.

quality of government, in terms of coefficient size and/or its statistical significance. Columns 5 and 6 of Table 5 present the results of the analysis. As can be seen, there is a positive and statistically significant association between education and governance, conditional on political equality and the remaining covariates. Nevertheless, the inclusion of education in the list of controls affects the observed relationship between political equality and government performance. Our estimates in column 5 indicate that, once education is controlled for, the coefficient of the measure of political equality remains positive, but its effect on the quality of government is only significant at the 10% level. At the same time, the quantitative importance of political equality as a predictor of governance outcomes experiences a decrease of 39% in comparison with the estimates in column 5 of Table 1. When we treat the measure of political equality as endogenous in column 6 of Table 5, the decline is even larger (52%) in comparison with the results in column 5 of Table 3. Indeed, in this case the degree of political equality does not exert a statistically significant impact on the quality of government.¹⁴

Consistently with the second hypothesis formulated in section 2, these findings reveal the role of education as a transmission channel linking political equality and quality of government. However, the exploratory nature of the analysis implies that the information provided by Table 5 should be treated with some caution. In particular, it is important to note that education may itself be potentially endogenous (Fortunato & Panizza, 2015). Accordingly, in order to assess more conclusively the importance of our hypothesized transmission channel, one should exploit an independent exogenous source of variation for the measure of education, a task that we leave open for future research.

7 | CONCLUSIONS

In this paper we have examined the relationship between political equality and quality of government. Our hypothesis is that political equality fosters access to inclusive education and ultimately promotes good governance. We empirically test this hypothesis using data for 145 countries with different levels of economic development. In order to overcome potential endogeneity problems, our identification strategy exploits the variation in political equality in geographically neighbouring countries by means of spatial econometric techniques. The results reveal a positive and statistically significant effect of political equality on the quality of government. This implies that countries where political power is more evenly distributed tend on average to have higher levels of institutional quality, which is consistent with our theoretical framework. In fact, this result is not affected by the inclusion in the analysis of a substantial number of controls that may be correlated with both political equality and quality of government, including the extent of democracy and the degree of economic inequality. In fact, the observed link between political equality and governance remains robust to alternative measures of quality of government, estimation techniques, and other sensitivity checks. Our estimates also show that education acts as a transmission channel linking political equality and quality of government.

Nowadays there is a wide consensus on the importance of the quality of government for economic growth and long-run development, which explains why governance has figured prominently in the international development agenda over the last years. Against this background, the results of the paper raise some potentially interesting implications. Specifically, our research reveals that the degree of concentration of political power across income groups is a strong predictor of the quality of government, thus underlining the relevance of political equality in this context. This implies that, although intervention strategies in this context cannot be based on a “one size fits all” framework, policy-makers at the national level and international organizations concerned with the promotion of good governance should not overlook how the political power is distributed across income groups. In any case, increasing the degree of political equality may not be an easy task, as it is likely that the political elites have incentives to oppose any reform that threaten the *status quo*.

¹⁴This result is confirmed if we calculate the corresponding direct, indirect and total effects. See Table A12 in the online Appendix for further details.

DATA AVAILABILITY STATEMENT

Replication files with codes and databases are provided in the Data Supplementary Materials.

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