# POLITICAL INSTITUTIONS AND INVESTOR PROTECTION

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**How to cite this paper:** Geller, G., & Guedes, M. J. (2020). Political institutions and investor protection [Special issue]. *Corporate Ownership & Control, 17*(4), 339-352.
http://doi.org/10.22495/cocv17i4siart11

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**ISSN Online:** 1810-3057
**ISSN Print:** 1727-9232

**Received:** 21.06.2020
**Accepted:** 13.08.2020

**JEL Classification:** C33, C38, H11, H63, N2, N20, D02
**DOI:** 10.22495/cocv17i4siart11

## Abstract

This study examines how political institutions are associated with investor protection. Our results show that consensual political institutions have higher creditor protection but lower minority shareholder protection. Further, the system of government (parliamentary vs. presidential) and the level of democracy are the two dimensions of political institutions that best explain investor protection. The study presents some recommendations that add to the debate that shows that there is no single political theory or set of factors that fully explain the range of outcomes across OECD countries, and that looking to other dimensions of political institutions are useful to explain investor protection.

**Keywords:** Political Institutions, Investor Protection, Creditor Protection, Ownership

**Authors' individual contribution:** Conceptualization – G.G. and M.J.G.; Methodology – G.G. and M.J.G.; Formal Analysis – G.G. and M.J.G.; Investigation – G.G. and M.J.G.; Software – G.G. and M.J.G.; Writing – Original Draft – G.G. and M.J.G.; Writing – Review and Editing – G.G. and M.J.G.; Visualization – G.G. and M.J.G.; Validation – G.G. and M.J.G.; Supervision – G.G. and M.J.G.; Project Administration – G.G. and M.J.G.

**Declaration of conflicting interests**: The Authors declare that there is no conflict of interest.

**Acknowledgement:** The authors acknowledge the financial support from FCT (Fundação para a Ciência e a Tecnologia, Portugal) through the Advance Research Centre (project UIDB/04521/2020).

## 1. INTRODUCTION

The evolution of political institutions and the emergence of governments with limited powers have long been associated with financial development. However, even amongst democratic countries, there is significant variance in investor protection and finance, despite all the direct and indirect positive impacts that finance has on economic growth (Ho, Huang, Shi, & Wu, 2018). We argue that this variance can be better explained by politics, in comparison to time-invariant factors such as legal origins or culture. In this paper, we specifically explore the impact of political institutions on investor protection and ownership concentration.

The political explanation for variances in finance and governance across countries and over time can be divided into two dimensions: 1) political preferences, which refers to the ideology that determines the actions of the political party or heads of government in power, which is described by Gourevitch and Shinn (2005) as: "interests groups that advocate policies that promote their goals" (p. 8); and 2) political institutions, "the machinery that refracts the preferences and that aggregates them into policy outcomes" (Gourevitch & Shinn, 2005, p. 8), referring to those rules and systems of each country which condition politics, such as, for instance, the electoral system, the form of government, the level of democracy and constraints limiting the power of heads of government.

Unlike political preferences, an approach based on political institutions recognises that citizens do not directly choose policies and regulations. Therefore political institutions have a significant influence on policymaking, as they seek out

preferences and aggregate them into policies (Gourevitch & Shinn, 2005). Our central political institutions dimension is consensualism, which is defined as 'to what extent a government needs negotiation between different parts, in order to implement new regulations and policies'. In other words, 'to what extent the executive power is constrained institutionally'.

We contribute to the previous literature in this field by expanding the concept of political consensualism by using four variables (*Democracy, Veto, Parliamentary* and *Proportional*) to measure this construct, instead of only one (the traditional majoritarian vs. proportional electoral systems used by Pagano and Volpin (2005a)). We build two indexes to measure the degree of consensualism of political systems, based on these four political variables. In addition, we develop a political bargain rationale between three different interest groups: large capitalists, small capitalists and workers, to provide theoretical support to our argument that more consensual systems are associated with lower minority shareholder protection and higher creditor protection. We also provide empirical evidence of these associations in a sample of 25 countries during the period between 1995 and 2005.

This study is organised as follows. Section 2 discusses the theoretical background of the association between political institutions and investor protection, and sets the hypotheses to be tested. Section 3 describes our variables and the sample, data and models that were used to test the hypotheses. Section 4 shows the results. Section 5 presents some robustness checks, and Section 6 presents a discussion on the impact and the limitations of this study.

## 2. THEORETICAL BACKGROUND AND HYPOTHESES

The evolution of political institutions has long been associated with financial activities (North & Weingast, 1989; De Vries & van der Woude, 1997; Lambert & Volpin, 2018). Unconstrained governments can undermine financial activity through expropriation, given that financial assets are fungible and easily transferable (North & Weingast, 1989; Perotti, 2013; Miller & Whitford, 2016). Unconstrained governments have strong incentives to use the financial system to facilitate their political survival at the expense of the development of sound securities markets and banking systems (Haber, North, & Weingast, 2007; Gorton, 2017; Geller & Guedes, 2017). Thus, stable autocratic regimes can only create a certain degree of financial growth through direct state control, such as in the form of sovereign banks, or by associating with an entrenched economic elite which maintains high oligopolistic rents and barriers to entry, thus limiting access to finance to a few connected individuals (Perotti, 2013).

The emergence of limited government is characterised by the restriction of the authority of public officials by regulatory institutions that grant a certain degree of power to representatives of the populace. In the first model of limited government, only a small group had this privilege. The crucial difference from unlimited autocracies is that this elite had its status defined by explicit rules and proprietorial rights, rather than only by political connections with just the head of government. The earliest examples of this model are those of "democratic" Athens and England after the Glorious Revolution (Ober, 1998, North & Weingast, 1989, Perotti, 2013). North and Weingast (1989) show how the limitations over the powers of the Crown after the Glorious Revolution have contributed to the development of a system that allowed England to finance its rise to global military dominance, although the privileges invested in a restricted elite (parliament) impeded a more efficient early financial development, resulting in the financial structure needed to sustain England's subsequent industrial revolution having to wait until entrepreneurs' rights were better represented in parliament. Perotti (2013) concludes that "the early stages of limited government entrench strong rights for an economic elite that is broader and more efficient than a royal court, but soon forms a political block restraining further financial development and entry" (p. 10).

If England's Glorious Revolution was a pioneer in limiting the powers of the Crown, then it was the French Revolution that provided a broader distribution of power through land redistribution and access to justice through the Civil Code. These events have influenced Europe and the US (and later on, other countries too) by increasingly expanding political rights. Together with increased political rights, stronger financial systems have also emerged. Perotti (2013) shows that "the liberalisation of entry in banking took place alongside a progressive expansion in suffrage, just as in France and other continental European states" (p. 11). Benmelech and Moskowitz (2005) have tested the association between suffrage laws and financial regulation with panel data from US states and concluded that there is a positive association and that as suffrage broadened, US states voted for legislation which improved access to finance. Haber et al. (2007) argue that "there tends to be congruence between the openness and competitiveness of political systems and the openness and competitiveness of their financial systems" (p. 7).

Finance brings significant benefits to the development of nations, as it increases total factor productivity (Beck, Levine & Loayza, 2000), promotes better allocation of resources across firms and economic sectors (Bencivenga, Smith, & Starr, 1995; Wurgler, 2000), enhances entrepreneurship (King & Levine, 1993b), fuels growth in sectors that are more financially dependent (Rajan & Zingales, 1998), increases the capacity of firms to deal with macroeconomic crises (Cavallo, Galindo, Izquierdo, & Leon, 2013), and promotes economic growth (Gupta, 1984; Jung, 1986; Bencivenga & Smith, 1991; King & Levine, 1993a; Levine, 1997; Levine & Zervos, 1998; Beck et al., 2000; Johnson & Koyama, 2017). Taking into account all these benefits, together with the fact that democracy promotes better conditions for the development of finance than unlimited autocracies or oligarchic governments (North & Weingast, 1989; Perotti, 2013; Lambert & Volpin, 2018; Mertzanis, 2019), a natural question arises as to whether citizens in democratic countries lobby enough for the reforms needed to promote financial development and openness.

Perotti (2013) provides a negative answer to this question, arguing that "while democracies tend to generate financial systems that distribute capital more broadly than autocracies, a democratic majority does not necessarily seek to achieve the

broadest degree of financial development possible" (p. 18). As stated above, the political explanation is divided into preferences and institutions. Explanations based on political preferences reflect financial policies and outcomes as a result of the median direct will of voters (Roe, 2003; Perotti & von Thaden, 2006). Perotti (2013) argues that a limitation of median voters' models (preferences) is that they assume that voters choose policies and laws directly, despite the fact that public scrutiny and direct citizen choice is hindered by limited information and coordination problems.

On the other hand, explanations that focus on political institutions limit the role of preferences, as they arise from the assumption that it is institutions which determine the ability of political groups and coalitions to be able to impose their preferences (whether the preferences are those of an absolute majority/median voters, or not), and that institutions are also key to limit the power of governments, or certain groups, to implement self-interested policies (captured regulation). Thus, institutions are key for translating preferences into practice, either through direct policy choice or by public scrutiny. In other words, the "rules of the game" are able to change the "results of the game". Therefore, the "median voters' will" might not be prevalent, but instead, the "strongest voters' will" is. The relevant strength of these two types of interests depends on the political institutions in place in each country.

A central variable in political institutions' models is the electoral system (majoritarian vs. proportional). Majoritarian electoral systems are those that give the right to the majority to appoint all representatives and are based on the logic that the most qualified candidate should represent the populace. In contrast, in proportional systems, parties are assigned seats proportional to the number of votes received, which fosters the competition of ideas and more consensual decisions on policy. The seminal work of Pagano and Volpin (2005a) develops a model where three types of agents compete for firms' rents: entrepreneurs (inside capital or controlling shareholders), rentiers (outside capital or minority investors) and workers. Rentiers want strong minority investor protection to protect their capital from expropriation by insiders, entrepreneurs suffer from bear the cost of weak investor protection when they make the initial efforts with little access to equity capital, however, once their firms have been able to raise capital and become profitable, then they prefer weak protection, in order to prevent competition and increase their rents. Finally, workers want to preserve labour rents thus generally prefer weak minority investor protection. The model considers that two parties compete for political power. Controlling shareholders and workers have relatively homogeneous political preferences and are biased towards one of the two parties, whilst minority shareholders are more dispersed in their preferences and have a less pronounced bias for either party.

Based on this theoretical model, Pagano and Volpin (2005a) predict that proportional electoral systems (where the winning a majority of votes is crucial) are associated with lower minority shareholder protection and higher worker protection than majoritarian systems (where winning a majority of districts is crucial), which tend to provide strong shareholder protection and weak worker protection. The intuition is that in proportional systems, parties are obliged to cater for the votes of homogeneous groups, as the mass of voters that can be attracted by a shift in the parties' electoral platform is higher if the shift favours a homogeneous group, whereas, in majoritarian systems, the dispersed group is key, as it is dominant in the pivotal district for the very reason that it does not automatically align with any party. Pagano and Volpin (2005a) provide statistical evidence that the proportional voting system is negatively correlated to shareholder protection, in a panel of 45 countries during the 1993-2001 interval. Accordingly, Pagano and Volpin (2005b) argue that some opportunistic activities of managers (e.g., empire building) also benefit workers, who could then ally themselves with managers or own capital (blockholders) against protection to outside capital (minority shareholders). In subsequent work, Pagano and Volpin (2006) show that there is a self-reinforcing mechanism that leads to multiple equilibria, with investor protection and stock market development being positively associated across equilibria. The logic is that, as investor protection increases, firms issue more equity, thus expanding the shareholder base and increasing support for shareholder protection.

Gourevitch and Shinn (2005) show how political preferences can be explained through coalitions between owners, managers and workers, and argue that political institutions are probably the most important factor in determining the triumph of one type of coalition over another. They follow Lijphart (1999) and Beck, Clarke, Groff, Keefer, and Walsh, (2001), to incorporate electoral laws into a broader typology, separating systems into "majoritarian" and "consensus". They develop an index of "political cohesion", based on electoral system rules and veto players. "The first (majoritarian) is typified by the U.K. Westminster system, where the government rests on a majority of deputies in the lower house, chosen by single-member plurality districts. The second (consensus) is typified by Sweden and a number of democracies in continental Europe, where the government relies on a majority of deputies provided by a coalition of political parties chosen through proportional representation" (Gourevitch & Shinn, 2005, p. 10).

According to Gourevitch (2007), "majoritarian systems magnify the impact of small shifts of votes, thus allow large swings of policy", whilst "consensus systems reduce the impact of vote shifts by giving leverage to a wide range of players through coalitions, thus have lesser swings of policy" (p. 36). Gourevitch and Shinn (2005) argue that, as consensual systems promote greater continuity of policy, they thus favour investment in "relationship-specific assets", whereas majoritarian systems produce more swings in policy, which reward investment in more flexible strategies, sustaining a diffuse governance model. Thus, consensus systems are less likely to protect minority shareholders (Gourevitch & Shinn, 2005). These authors correlate the political cohesion index with shareholder protection and find a negative and significant correlation that supports their rationale.

Our argument follows the same line, and we contribute to previous literature by acknowledging that the proportionality of the voting system is not

the sole indicator for measuring how consensual a political system is, and perhaps it may not even be the best. We identify at least three other characteristics that are determinant in identifying the level of consensualism in any given political system: 1) whether the interests of the government in power are aligned with those of the veto players, because when there are more veto players and when their orientation differs from the governments' ideas, then more negotiation is necessary in order to implement policies; 2) the level of democracy, as more competitive and open democratic systems are expected to be more consensual than less competitive democracies, given that in the case of the former, scrutiny is higher (with more information and greater participation rights and instruments for common citizens), and thus political leaders have to take more care about their reputations, in order to remain in power. More open democratic institutions require more negotiation with different political players to achieve successful lawmaking and policy implementation; and 3) presidentialism vs. parliamentarism, with the argument that presidential systems are generally less consensual than parliamentary systems, based on the fact that heads of government are allocated more power in the case of presidentialism, which is not the case for parliamentarism, and also that parliamentary governments can be overthrown more easily, which requires a constant level of negotiation within the legislative houses.

Furthermore, we add another reason to support why consensual systems do not favour minority shareholder protection. For besides the electoral system rationale of Pagano and Volpin (2005a), and the 'continuity' rationale of Gourevitch and Shinn (2005), the aggregation costs and incentives faced by the different players that lobby for favourable regulation also help to explain why more consensual systems tend not to favour minority shareholder protection. Contrary to Pagano and Volpin (2005a), our rationale does not occur in the pre-election periods, but rather during the leadership of government by a person, or the party controlling the government. At this point in time, more consensual systems require greater negotiation, in order to implement policy changes, regardless of governments' or median voters' preferences, and a more complex negotiation process increases the cost of political bargaining, thus making it harder for dispersed groups (such as minority shareholders, for instance) to achieve their goals.

Let us consider the three basic groups (analogous to Pagano and Volpin (2005a)) which compete for power in the capitalist system: large capitalists (e.g., bankers, controlling shareholders, traditional families), small capitalists (e.g., small property owners, minority shareholders) and workers (this model is analogous to the Pagano and Volpin's (2005a) model with inside capital (blockholders), outside capital (minority shareholders) and inside labor (workers)). The problems of collective action (aggregation costs) are harder to overcome in the case of the more dispersed group. 'Large' owners are lower in number, control more resources, usually have some kind of direct or indirect tie with each other, and have high incentives to lobby, as the rewards are high if they are able to benefit from regulation, as generally, they have a significant proportion of their resources allocated to the controlling shares of their firms. Workers have institutionalised means of collective interest aggregation (e.g., unions), have a clear and relatively homogeneous agenda and also benefit from a significant reward, which is of high relative importance to them, as they are thus able to assure favourable labour regulation, considering that they rely on human capital, rather than financial capital. Finally, minority shareholders form a dispersed and heterogeneous group with limited resources, and the benefits that they can achieve from a successful pro-minority shareholder protection bargain are individually low and of relatively low importance in relation to their goals (assuming that they diversify investments), which makes them the weakest group in terms of bargain power in this scenario. In less consensual systems, a strong government might achieve gains from promoting pro-shareholder reforms if they identify this as the will of median voters, or feel that this will bring about positive economic consequences that are perceptible to median voters, which will then help them to remain in power. However, more consensual systems have more political institutions which are able to limit the power of governments, and the articulation of these institutions in implementing or impeding some policies is more likely to be achieved by either large capitalists or workers, or an alliance between them both, in order to impede any increase in the level of minority shareholder protection which could, in turn, prejudice either of these groups. Thus, our first hypothesis is the following:

*Hypothesis 1 (H1): More consensual political systems (where more bargain is needed for policy implementation) are associated with lower minority shareholder protection.*

In addition to shareholder protection, our model should also work to predict outcomes related to creditors' rights. There is a clash between banks and security markets, as "deposit banks have an interest in keeping securities markets weak unless they can control securities flows themselves" (Roe, 2012). Roe (2012) shows that political conflicts that determine the size and depth of capital markets occur between haves and have-nots (capital owners against those who do not own capital) and also between haves and haves (among capital owners themselves). In this sense, the author argues that "banks have an interest in preserving bank financing channels and in weakening securities markets channels (…). Dominant owners, such as families traditionally or private equity firms more recently have interests in preserving their privileges. Owners of existing firms want access to cheap capital but prefer that their competitors not have the same easy access" (Roe, 2012). Indeed, Macey and Miller (1991) show evidence that in the United States, banks often lobbied for regulation that increased stock market costs. If we combine the rationale above with our basic capitalist model which is typified by clashes between large capitalists, small capitalists and workers, then there is an indication that creditor rights are favoured in consensual systems, whereas the opposite occurs to shareholder rights, given the higher bargain power and lower aggregation costs faced by large capitalists (especially bankers in this case), in relation to small capitalists.

Additionally, strong protection for creditors can be also seen as being a consequence of weak

protection for minority shareholders and weak stock markets. There is consensus in the literature on finance and growth that financial development and economic growth are positively associated (although causality issues are still under discussion). In the words of Schumpeter (1959) "the entrepreneur – in principle and as rule – does need credit (…) He can only become an entrepreneur by previously becoming a debtor" (p. 102) (in the same line Gurley & Shaw, 1955; Goldsmith, 1969; McKinnon, 1973, etc.). Particularly interesting here is the understanding of Robinson (1952), who argues that finance follows economic development, "where enterprise leads, finance follows" (p. 52). If enterprise and economic growth need financing, it will come from one of two ways: strong credit markets or stock markets. Thus, "if securities markets are weak, more capital will flow through the banking system" (Roe, 2012). Credit markets are always the first to develop (McKinnon, 1973) and, if the political system makes it hard for stock markets to flourish, it is a logical consequence that creditors have to fulfil a higher proportion of entrepreneurs' need for financing, which makes creditors a stronger group that will demand more sophisticated regulation in protection to their rights. This leads us to our second hypothesis:

*Hypothesis 2 (H2): More consensual political systems (where more bargaining is needed for policy implementation) are associated with higher creditor protection.*

## 3. DATA AND METHODS

### 3.1. Variables

Our independent variables are measures of minority shareholder protection and creditor protection across countries and throughout time, developed by Siems et al. (2009) and Armour et al. (2009b), respectively.

We measure shareholder protection across countries and throughout time, according to the index developed by Siems et al. (2009), as part of the Law, Finance and Development project at the Centre for Business Research, the University of Cambridge, the UK. This index consists of ten core variables which act as proxies for shareholder protection law for 25 countries during the period between 1995-2005. The variables used are: 1) the powers of the general meeting for de facto changes, 2) agenda-setting power, 3) anticipation of shareholder decision facilitated, 4) the prohibition of multiple-voting rights (super-voting rights), 5) independent board members, 6) the feasibility of the dismissal of director, 7) the private enforcement of directors' duties (derivative suit), 8) shareholder action against resolutions of the general meeting, 9) mandatory bid, and, 10) disclosure of major share ownership. Each variable has a value of between 0 and 1 and thus the index ranges between 0 and 10. Detailed information on the computation of variables for each country can be found in Siems et al. (2009).

The measure of creditor protection also comes from the Law, Finance and Development project (Armour et al., 2009b). The index consists of ten core variables which act as proxies for creditor protection law for 25 countries during the period of 1995-2005. Variables used in this index are: 1) minimum capital, 2) dividend restriction, 3) directors' duties to creditors, 4) security: scope, 5) security: registration, 6) security: enforcement, 7) entry to corporate bankruptcy proceedings, 8) stay of secured creditors, 9) outcome of bankruptcy proceedings, 10) subordination of secured claimants. Each variable has a value of between 0 and 1 and thus the index ranges between 0 and 10. Detailed information on the computation of variables for each country can be found in Armour et al. (2009b).

Armour, Deakin, Sarkar, Siems, and Singh (2009a) argue that the choice of the time period (1995-2005) is justifiable, as it was a time of considerable change in investor protection regulation. Although it is a short period, due to the immense difficulties in gathering and organising data, it represents several changes within each country and variance across countries, which allows us to test the association between political institutions and investor protection, although not without significant limitation regarding the time period our findings refer to.

The predictors we are mostly interested in are those that measure the political dimension we are testing – the degree of 'consensualism' of political systems. As stated above, we use four characteristics to measure this construct, and we have a variable for each of them: 1) the degree of democracy (*Democracy*), 2) alignment between government and veto players (*Veto*), 3) government system (*Parliamentary*) and, 4) electoral system (*Proportional*).

*Democracy* is computed based on a variable developed by Marshall and Jaggers (2004) (*Polity*) to reflect the competitiveness and openness of a political system. It is computed from two other variables, called *DEMOC* (democracy) and *AUTOC* (autocracy) (Marshall, Jaggers, & Gurr, 2011). Democratic regimes are characterised by three essential and interdependent elements: 1) presence of institutions and procedures for citizens to express effective preferences about policies and leaders, 2) existence of institutionalised constraints of the governing power, and 3) guarantee of civil liberties for all citizens (Marshall et al., 2011). The variable *DEMOC* is computed considering categories that incorporate characteristics "1" and "2". By this definition, a "mature and internally coherent democracy (…) might be operationally defined as one in which: a) political participation is unrestricted, open and fully competitive; b) executive recruitment is elective, and c) constraints on the government are substantial (Marshall et al., 2011, p. 15). Autocracies (*AUTOC*), on the other hand, sharply restrict or suppress competitive political participation, choose heads of government through a regularised process within the political elite, and, once they are in power, there are few institutional constraints (Marshall et al., 2011, p. 15), thus the variable *AUTOC* is computed-based on categories that reflect these characteristics. Both *DEMOC* and *AUTOC* range between 0 and 10, and their scales do not share any category in common, which allows systems to have mixed characteristics. *Polity* is then computed by subtracting the *AUTOC* score from the *DEMOC* score, which thus ranges between -10 and +10.

*Democracy* is computed by rescaling *Polity* to range between 0 (total autocracy) and 10 (total democracy).

*Veto* is a variable that was developed by Henisz (2000) (originally named *Polcon* by the author) which measures the number of independent veto points over policy outcomes and the alignment between institutional and political veto players, capturing institutional and political constraints on heads of government, ranging between 0 (executive power is not constrained institutionally) and 1 (there are a significant number of veto players and preferences of executive power, and veto players diverge).

*Parliamentary* is a variable that measures the government system. It uses the value of 0 for unelected executives, for presidents who are elected directly or by an electoral college specifically called for this purpose, and for systems where there is a President and a Prime Minister, but the President can veto legislation and parliament needs a supermajority to override the veto, or the President can appoint and dismiss the Prime Minister and dissolve parliament and call for new elections. Countries in which the legislature elects the head of government are parliamentary (variable equals 2), except in cases where that assembly or group cannot impeach him easily (where 2/3 of votes are needed to do so, or there is a need to dissolve parliament in order to force him, or her, out) when the variable equals 1 (Keefer, 2012).

Proportional is a variable based on Pagano and Volpin (2005a), which represents proportional, mixed or majoritarian electoral systems. This variable is constructed using a combination of three distinct binary indicators, as explained by Pinto, Weymouth, and Gourevitch (2010): 1) PR, which equals one if at least some government officials are elected using PR; 2) Plurality, which equals one, if at least some officials are elected under majoritarian (non-proportional) rules; and 3) Housesys, equal to one if the majority of parliament seats are allocated via a non-PR rule. *Proportional* (PR Pagano/Volpin) is then calculated as PR-Pluralty-Housesys + 2, indicating the degree of proportional representation of the electoral system. Proportional equals 3, if the system is purely PR 2 if the majority of seats are assigned using PR 1 if the minority of seats is assigned using PR, and 0 if the system is purely majoritarian (Pinto et al., 2010).

We test these four variables (*Democracy, Veto, Parliamentary, Proportional*) in isolation, as proxies for the degree of 'consensualism' of political systems in order to predict investor protection and ownership concentration outcomes. However, we also combine them into two new variables: *Consensualism* and *Index_c*. We consider that our four previously-described variables measure the same concept, that of the degree of consensualism of political systems and we use principal components (factor) analysis with each of the four variables for political institutions representing one component of the single factor consensualism, in order to reduce the four variables to just one, more precise, a measure of the concept. In addition, we create an index of political consensualism which uses our four political institutions variables. The following formula has been used:

$$Index\_c = Democracy/10 + Proportional/3 + Parliamentary/2 + Veto \quad (1)$$

The intuition is very simple – each variable has been adjusted to take a value of between 0 and 1. Thus, *Index_c* takes a maximum value of 4, when political systems are extremely consensual, with less flexibility for policy change, and the value is closer to 0 when the government has more concentrated power and more flexibility for policy implementation. *Consensualism* and *Index_c* are to be used alternatively in our models to measure the same characteristic of political systems.

For panel data tests, we use the average of the values of the last 5 years for each year. This is because changes in institutions should take some time to reflect changes in policies and regulation, thus this moving average value better reflects these slow-paced changes than the use of single values for each year. For example, if a given country increases the competitiveness and openness of its political system (variable *Democracy*) in a given year, it will take some time before this change is reflected in investor protection regulation, as political bargaining, lawmaking and voting takes time. Thus, using the moving average, we allow for changes to be slowly incorporated into the political system, thus influencing political decisions up to 5 years later.

Finally, we use several control variables as predicted in the literature. Following the legal traditions literature, we use *Common_law* to control for this element. This variable takes the value of 1 if the origin of the legal system is English common law, and 0 otherwise. Data comes from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997). We use three variables to control for economic development and economic conditions in a given year: *Log_gdp*, *Log_gdp_pc* and inflation. *Log_gdp* and *Log_gdp_pc* are respectively the natural logarithm of gross domestic product (to control for the size of the economy) and gross domestic product per capita (to control for economic development). Data comes from the World Bank. The natural logarithm is used following empirical literature. *Inflation* reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services as computed by the International Monetary Fund (IMF). *Gini* is a measure of income inequality, ranging between 0 (perfect equality) and 100 (perfect inequality) and it is only used here in cross-sectional models, due to data limitations.

In addition, following the Rajan and Zingales (2003) rationale, we also control for cross-border trade and financial liberalisation. *Trade* is the sum of exports and imports as a percentage of gross domestic product each year, using the World Bank data. Capital account openness (*Kaopen*) is an index developed by Chinn and Ito (2006), which measures the extent of openness in capital account transactions, based on local regulations and policies.

### 3.2. Sample and models

We use a dataset with panel data from 1995 to 2005 for up to 25 countries. The sample is restricted to 25 countries, given the limited availability of variables developed by Siems et al. (2009) and Armour et al. (2009a, 2009b), as they are very

difficult to gather and code, and are thus only available for these countries. Countries covered are Argentina, Brazil, Canada, Chile, China, Czech Republic, France, Germany, India, Italy, Japan, Latvia, Malaysia, Mexico, the Netherlands, Pakistan, Russia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States. Our panel data sample covers 81.7% of global market capitalisation in 2011 and 77.5% of its GDP.

We use random effects generalised least squares on panel data from up to 25 countries in the period between 1995 and 2005 to test our hypotheses. An interesting issue is whether to use fixed-effects or random effects. If, on one hand, fixed-effects is better for testing the within-country variation, thus overcoming problems associated with the variance in interpretations of how political institutions work across countries, then, on the other hand, this doesn't allow us to include time-invariant characteristics, such as, for instance, legal origin, and neither is it adequate to account for slow-changing variables over time, such as political institutions. Furthermore, we are also interested in cross-country variation, for which fixed effects are not adequate.

Therefore, our basic random effects generalised least squares (GLS) model is the following:

$$Y_{i,t} = \beta_0 + \beta_1 X_{1i,t} + \beta_2 X_{2i,t} + \varepsilon_i + \mu_{i,t} \quad (2)$$

where $Y$ = investor protection; $X_1$ = variables measuring the degree of consensualism of the political system (used alternatively – one in each model); $X_2$ = control variables (legal and economic characteristics and year dummies); $\varepsilon_{i,t}$ = cross-section, or country-specific error term; $\mu_{i,t}$ = combined time-series and cross-section error component.

## 4. RESULTS AND DISCUSSION

Table 1 shows regression results for models that have political institutions variables as predictors and shareholder rights as the dependent variable. We find that all measures of political consensualism have negative and significant coefficients at 1% level, except for proportional, which is significant at 5%. This is strong evidence in favour of *H1*.

Results for democracy should be interpreted carefully, bearing in mind that our sample is biased towards more democratic countries. Therefore, the negative association between democracy and shareholder protection is to be interpreted as valid for democratic countries only. It is not that autocracies are more protective towards shareholders than democracies, but above a certain threshold of democratic power, where expropriation risk by the government is very low, it is probable that our 'bargain power' rationale might well be at work. Thus more democracy makes it harder for shareholders to bargain for greater protection, especially if we consider the median voter as a worker instead of a shareholder, or in cases where the alliance between workers and inside capital intends to prevent competition and to secure rents from the firm.

Also, it is relevant to note that the coefficient for proportional is less significant than the other variables. Although proportional has a negative and significant coefficient, our results indicate that there are other political institutions characteristics that might be more determinant for shareholder protection, to some extent in an opposite direction to that of the predictions of Gourevitch and Shinn (2005), and Pagano and Volpin (2005a). These differences in our results might be due to several differences in our samples, namely time period and measure of shareholder protection.

Pagano and Volpin (2005a) use data from 45 countries, over the 1993-2001 interval, whereas our results are based on data from 25 countries, over the 1995-2005 interval. Pagano and Volpin's (2005a) measure of shareholder protection is the anti-directors' rights index, developed by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998), computed as the sum of six dummy variables which indicate whether proxy by mail is allowed, shares are not blocked before a shareholder meeting, cumulative voting for directors is allowed, oppressed minorities are protected, the percentage of share capital required to call an extraordinary shareholder meeting is less than 10 percent, and that existing shareholders have preemptive rights during new equity offerings. Differently from Pagano and Volpin (2005a), the measure we use is the one developed by Siems et al. (2009), based on ten core variables which act as proxies for shareholder protection law for 25 countries, during the period between 1995-2005. The variables used are: 1) powers of the general meeting for de facto changes, 2) agenda-setting power, 3) anticipation of shareholder decision facilitated, 4) prohibition of multiple voting rights (super-voting rights), 5) independent board members, 6) feasibility of director's dismissal, 7) private enforcement of directors duties (derivative suit), 8) shareholder action against resolutions of the general meeting, 9) mandatory bid, and 10) disclosure of major share ownership. Nonetheless, our results support the theoretical rationale developed by Gourevitch and Shinn (2005), Pagano and Volpin (2005a), we only disagree regarding the relevance of the electoral system as the sole or the most relevant determinant of political consensualism.

Another relevant result shown in Table 1 is that the dummy for common law is not significant in any of the models. This supports the view that legal origins are not very helpful in explaining the dynamics of investor protection throughout time. Among the control variables, the gross domestic product has a positive coefficient for most models, indicating that the size of the economy matters for shareholders' rights. Furthermore, trade and capital account openness have a positive and significant effect on minority shareholder protection in all models, providing support to the Rajan and Zingales' (2003) theory, whereby trade and capital openness improves competition in capital markets and does not favour incumbents' interests to restrict minority shareholder protection.

**Table 1.** Shareholder protection and political institutions

| *Predictor/Model* | *1a* | *2a* | *3a* | *4a* | *5a* | *6a* |
|---|---|---|---|---|---|---|
| Index_c | -0.581*** | | | | | |
| | (0.132) | | | | | |
| Consensualism | | -0.032*** | | | | |
| | | (0.075) | | | | |
| Democracy | | | -0.121*** | | | |
| | | | (0.038) | | | |
| Veto | | | | -2.003*** | | |
| | | | | (0.394) | | |
| Parliamentary | | | | | -0.495*** | |
| | | | | | (0.140) | |
| Proportional | | | | | | -0.429** |
| | | | | | | (0.190) |
| Common_law | 0.429 | 0.541 | 0.677 | 0.709 | 0.727 | 0.083 |
| | (0.632) | (0.626) | (0.583) | (0.588) | (0.572) | (0.629) |
| Log_gdp | 0.448 | 0.516** | 0.499*** | 0.492*** | 0.503*** | 0.419* |
| | (0.229) | (0.226) | (0.192) | (0.192) | (0.188) | (0.225) |
| Log_gdp_pc | -0.170 | -0.201 | -0.286 | -0.162 | -0.296 | -0.308 |
| | (0.237) | (0.234) | (0.199) | (0.201) | (0.194) | (0.225) |
| Inflation | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 | 0.004 |
| | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) |
| Kaopen | 0.110** | 0.099** | 0.133*** | 0.082* | 0.138*** | 0.124** |
| | (0.048) | (0.048) | (0.045) | (0.045) | (0.045) | (0.049) |
| Trade | 0.013*** | 0.0128** | 0.009** | 0.010** | 0.012*** | 0.009* |
| | (0.005) | (0.005) | (0.004) | (0.004) | (0.004) | (0.005) |
| Intercept | 0.669 | -1.423 | 0.683 | -0.518 | 0.229 | 1.753 |
| | (1.968) | (1.998) | (1.752) | (1.735) | (1.728) | (2.072) |
| Year dummies | YES | YES | YES | YES | YES | YES |
| Observations | 246 | 246 | 270 | 270 | 270 | 246 |
| Countries | 23 | 23 | 25 | 25 | 25 | 23 |
| R-sq (within) | 0.61 | 0.60 | 0.61 | 0.63 | 0.62 | 0.58 |
| R-sq (between) | 0.18 | 0.22 | 0.23 | 0.28 | 0.17 | 0.21 |
| R-sq (overall) | 0.23 | 0.28 | 0.28 | 0.33 | 0.22 | 0.27 |
| Chi-sq | 316.94*** | 313.97*** | 355.99*** | 395.2*** | 360.97*** | 280.6*** |
| Method | Random-effects GLS | Random-effects GLS | Random-effects GLS | Random-effects GLS | Random-effects GLS | Random-effects GLS |

*Notes: Random-effects GLS results having political institutions variables as predictors and a minority shareholders rights index (Siems et al., 2009) as the dependent variable.*

****, ** and * indicate significance at 1%, 5% and 10% levels respectively.*

*Share_r is an index of minority shareholder protection developed by Siems et al. (2009); Creditor_r is an index of creditor protection developed by Armour et al. (2009b). Consensualism is an index that measures consensualism of political systems, computed using principal components analysis with variables Democracy, Veto, Parliamentary and Proportional, and takes higher/positive values for more consensual systems. Index_c is an index that measures consensualism of political systems, computed according to the formula: Democracy/10 + Proportional/3 + Parliamentary/2 + Veto, ranging from 0 (not consensual) to 4 (totally consensual). Democracy is a measure of the competitiveness and openness of the political system, ranging from between 0 (Autocracy) and 10 (Democracy); Veto indicates the level of constraints the head of government faces, ranging from 0 (no constraints), to 1 (high institutional constraints); Proportional indicates proportional, mixed or majoritarian electoral systems, ranging from 0 (purely majoritarian), to 3 (pure proportional); Parliamentary takes the value of 2 for parliamentary systems, 1 for an Assembly-elected President, and 0 for presidential systems; Common_law is a dummy which takes the value of 1 if the country has an English common law legal origin, or 0 otherwise; Log_gdp is the natural logarithm of the gross domestic product; Log_gdp_pc is the natural logarithm of gross domestic product per capita; Inflation is the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services; Trade is the sum of exports and imports as a percentage of gross domestic product each year; Kaopen is a measure of capital account openness developed by Chinn and Ito (2006).*

Table 2 shows the results for models that have creditor protection as the dependent variable. Results show that our two indexes of political consensualism have positive and significant coefficients at 1% level, providing support to *H2* – that consensualism is good for creditor protection as an alternative to minority shareholder finance. When political variables are tested in isolation, *Democracy, Parliamentary* and *Proportional* have strongly significant coefficients. Again, there is an indication that proportional might not be the best proxy of political consensualism to predict investor protection, as its significance is lower than that of the other political predictors. Finally, legal origins are not significant in most models, except for the model where *Proportional* is used, where *Common_law* is a positive predictor of creditor protection. Control variables are not significant in our models.

**Table 2.** Creditor rights and political institutions

| *Predictor/Model* | *1b* | *2b* | *3b* | *4b* | *5b* | *6b* |
|---|---|---|---|---|---|---|
| Index_c | 0.475*** | | | | | |
| | (0.135) | | | | | |
| Consensualism | | 0.235*** | | | | |
| | | (0.075) | | | | |
| Democracy | | | 0.173*** | | | |
| | | | (0.038) | | | |
| Veto | | | | -0.004 | | |
| | | | | (0.421) | | |
| Parliamentary | | | | | 0.474*** | |
| | | | | | (0.145) | |
| Proportional | | | | | | 0.416** |
| | | | | | | (0.205) |
| Common_law | 0.824 | 0.722 | 0.524 | 0.669 | 0.527 | 1.232* |
| | (0.740) | (0.764) | (0.715) | (0.695) | (0.688) | (0.742) |
| Log_gdp | 0.045 | -0.004 | 0.036 | -0.056 | 0.003 | 0.058 |
| | (0.262) | (0.269) | (0.227) | (0.223) | (0.220) | (0.259) |
| Log_gdp_pc | 0.115 | 0.147 | 0.079 | 0.310 | 0.170 | 0.268 |
| | (0.266) | (0.272) | (0.231) | (0.231) | (0.224) | (0.255) |
| Inflation | -0.003 | -0.004 | -0.003 | -0.004 | -0.003 | -0.003 |
| | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) |
| Kaopen | 0.007 | 0.013 | 0.055 | 0.048 | 0.048 | -0.006 |
| | (0.048) | (0.048) | (0.044) | (0.047) | (0.045) | (0.049) |
| Trade | -0.002 | -0.001 | -0.000 | 0.002 | -0.001 | 0.002 |
| | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) |
| Intercept | 2.585 | 4.147* | 2.714 | 3.200* | 3.243* | 1.309 |
| | (2.140) | (2.220) | (1.899) | (1.933) | (1.888) | (2.242) |
| Year dummies | YES | YES | YES | YES | YES | YES |
| Observations | 246 | 246 | 270 | 270 | 270 | 246 |
| Countries | 23 | 23 | 25 | 25 | 25 | 23 |
| R-sq (within) | 0.20 | 0.20 | 0.25 | 0.18 | 0.21 | 0.17 |
| R-sq (between) | 0.23 | 0.15 | 0.09 | 0.17 | 0.25 | 0.24 |
| R-sq (overall) | 0.23 | 0.15 | 0.10 | 0.18 | 0.24 | 0.24 |
| ChI-sq | 57.85*** | 54.66*** | 80.43*** | 55.04*** | 68.09*** | 47.96*** |
| Method | Random-effects GLS | Random-effects GLS | Random-effects GLS | Random-effects GLS | Random-effects GLS | Random-effects GLS |

*Notes: Random-effects GLS results having political institutions variables as predictors and a creditors rights index (Armour et al., 2009b) as the dependent variable.*

****, ** and * indicate significance at 1%, 5% and 10% levels respectively.*

*Share_r is an index of minority shareholder protection developed by Siems et al. (2009); Creditor_r is an index of creditor protection, developed by Armour et al. (2009b). Consensualism is an index which measures consensualism of political systems, computed using principal components analysis with variables Democracy, Veto, Parliamentary and Proportional, and takes higher/positive values for more consensual systems. Index_c is an index which measures consensualism of political systems, computed according to the formula: Democracy/10 + Proportional/3 + Parliamentary/2 + Veto, ranging from 0 (not consensual) to 4 (totally consensual). Democracy is a measure of the competitiveness and openness of the political system, ranging from between 0 (Autocracy) and 10 (Democracy); Veto indicates the level of constraints that the head of government faces, ranging from 0 (no constraints) to 1 (high institutional constraints); Proportional indicates proportional, mixed or majoritarian electoral systems, ranging from 0 (purely majoritarian), to 3 (pure proportional); Parliamentary takes the value of 2 for parliamentary systems, 1 for an Assembly-elected President, and 0 for presidential systems; Common_law is a dummy which takes the value of 1 if the country has an English common law legal origin or 0 otherwise; Log_gdp is the natural logarithm of the gross domestic product; Log_gdp_pc is the natural logarithm of gross domestic product per capita; Inflation is the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services; trade is the sum of exports and imports as a percentage of gross domestic product each year; Kaopen is a measure of capital account openness, developed by Chinn and Ito (2006).*

In summary, our results indicate that political institutions which characterise more consensual systems are negatively associated with minority shareholder protection, and positively associated with creditor protection. Furthermore, we find that parliamentary vs. presidential systems, together with the level of democracy, are the dimensions of political institutions that best explain outcomes in terms of investor protection and ownership concentration.

## 5. ROBUSTNESS

We carried out several robustness checks to examine the reliability of our results. First, we considered a fixed-effects model. For our theoretical rationale to be correct, results have to also be significant in fixed-effects models, as changes within countries towards more consensual systems are to be associated with lower levels of minority shareholder protection, and higher levels of creditor protection, regardless of cross-country comparability. The weakness in the use of fixed-effects models is that we cannot control for legal origins, which is not problematic, as we have already done that during the random-effects GLS tests shown above. Unreported results for the association between political consensualism and minority shareholder protection, using show that all the political variables used have negative coefficients, which are significant at 1% level, providing even stronger evidence in favour of *H1*. Additionally, for the association between political consensualism and creditor protection, show that the coefficients for *Consensualism* and *Index_c* are positive and significant at 1% level, as expected, further supporting *H2*. When considered in isolation, *Democracy* and *Parliamentary* also have positive and significant coefficients, but *Veto* and *Proportional* are not significant predictors of creditor protection, although they have positive coefficients.

Second, as we use moving averages using data from the past five years to compute our political institutions variables, it is relevant to test whether results are the same when single values for each year are used. We argue that this is not the most adequate model, as changes in political institutions are slow and take some time to have a significant impact on lawmaking, but it is, nonetheless, a relevant robustness check for our results. Once more, the (unreported) results show that the association between shareholder rights and political institutions is once more negative and significant at 1% level. When we use each political institutions variable in isolation, *Democracy* and *Parliamentary* have negative and significant coefficients, similar to those of all previous models, whereas *Veto* and *Proportional* have negative, but not significant, coefficients.

Third, the (unreported) results for the association between creditor rights and political institutions, using single variables instead of moving averages are not significant, although they are positive, as expected. As explained before, this is probably due to the fact that changes in political institutions take time to be implemented and have some effect on lawmaking. Among political variables tested in isolation, *Democracy* and *Parliamentary* have positive and significant coefficients and proportional has a positive, but not significant, coefficient. Most surprisingly, *Veto* has a negative and significant coefficient, which in part contradicts *H2*, at least for this variable, especially when this result is combined with the one presented in Table 2, which goes along the same line. This might be explained by the fact that *Veto* is a distinctive feature among our political predictors, as it reflects what extent veto players diverge from the government during a given year, whereas the other political predictors used in this work reflect more permanent (slow changing) characteristics of political institutions, such as competitiveness and openness of political systems, electoral laws and government system (i.e., they reflect the rules of the game more accurately than veto, which reflects not only institutions but also political preferences). Therefore, it might be the case that in years where *Veto* is high, improvements both in shareholder and creditor rights are made more difficult. Given the more transitory nature of this characteristic (its within-country standard deviation is the highest among political predictors, which gives some support to this rationale), politicians and lobbyists should wait for more favorable moments to put their pledges into practice.

Therefore, due to the contradictory results presented in robustness checks with the variable *Veto*, we reconstruct our political consensualism indexes and test their predictive power, in relation to shareholder and creditor protection. Results are now consistent with *H1* and *H2*, as the indexes for political consensualism have positive coefficients in relation to shareholder rights, and negative coefficients in relation to creditor rights, all significant at 1% level, with no loss of explanatory power in the models.

In summary, after robustness checks, our results still show strong support for *H1* and *H2*. Also, we have identified that the competitiveness and openness of the political system (democracy) and the government system (parliamentary vs. presidential) are the most consistent political variables for explaining shareholder and creditor protection across countries and over time, with robust results across different models and statistical techniques.

## 6. CONCLUSIONS AND LIMITATIONS

Despite all the benefits that a sound financial system can bring to any economy, and also the evolution of democratic systems which, in theory, allow citizens to make optimal choices for their own benefit, many countries chose not to implement policies that would enable their financial sector to achieve its full potential. We depart from this paradox, to analyse the role of political institutions in investor protection. Following previous literature in this field (Gourevitch & Shinn, 2005; Pagano & Volpin, 2005a), we use the political consensualism dimension of political institutions.

We provide at least four key contributions to the literature in this field. Firstly, we develop a political bargaining rationale which adds to the arguments of Pagano and Volpin (2005a), and Gourevitch and Shinn (2005): in our model, aggregation costs, and incentives faced by different players for lobbying for favourable regulation, both help to explain why more consensual systems do not favour minority shareholder protection. Our second contribution is the extrapolation of this model, showing that political consensualism favours creditor protection. The third contribution is the use of two new measures of political consensualism, based on four characteristics of political systems. Finally, we contradict previous work, by showing that the electoral system (majoritarian vs. proportional) is not the best political institutions characteristic to be used to explain investor protection.

Our results, based on panel data of 25 countries during the 1995-2005 period, give support to our hypotheses and show the robustness of our newly created measures of political consensualism as predictors of investor protection. Although we find strong evidence in favour of our arguments, causality issues are not sufficiently addressed here. Aguilera and Jackson (2010) argue that a problem with political theories is that various interpretations can be given to key cases. If political consensualism leads to lower shareholder protection and higher creditor protection, is this due to our political bargaining rationale? Or maybe it is more associated with the continuity rationale of Gourevitch and Shinn (2005), or the electoral system logic of Pagano and Volpin (2005a)? What is the correct interpretation of this evidence? Future research could better explore the reasons underlying this association.

Another limitation of our research is that we only look at one dimension of political institutions. As Aguilera and Jackson (2010) have shown, "no single political theory, or set of factors, fully explains the range of outcomes across OECD countries, let alone a more extended set of developing and emerging market economies" (p. 517). So, what other dimensions of political institutions are useful to explain investor protection? In addition, in relation to the sample and

time period used, is the political institutions argument developed here valid for larger samples, over a longer period of time? The difficulties in gathering and organising data limit study in this field, and therefore research efforts are welcomed for the collection of data from different countries, over a significant period of time like Siems et al., (2009) and Armour et al. (2009b) have done, and when this is made available, it will certainly contribute significantly to research in this field.

Our findings also show that the competitiveness and openness of the political system (democracy) and the government system (parliamentary vs. presidential) are the most consistent political variables for explaining shareholder and creditor protection across countries, and over time. More democratic or parliamentary countries provide worse shareholder protection and better creditor protection, whereas less democratic or presidential models go in the opposite direction. In relation to democracy, given our biased sample towards more democratic countries, we argue that possibly it is not that autocracies are more protective towards shareholders than democracies, but that above a certain threshold, more democracy is associated with lower shareholder protection. The validity of this argument is an issue that needs to be better explored in future research.

Furthermore, we find that legal origins are not a significant predictor of investor protection in our models. Combining this evidence with previous findings (LLSV and subsequent work on the legal origins approach), it is hard to state that legal origin does not matter at all. It is more likely that it has some influence, thus it might be that the origin of the legal system helps to shape the field where the political game is played but is not a significant direct predictor of the dynamics of investor protection over time. If that is the case, then further research could explore the role of legal origins, bearing in mind more recently developed political arguments.

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## APPENDIX A

**Table A.1.** Summary statistics

This table shows basic descriptive statistics per variable.

| *Variable* | | *Mean* | *Std. dev.* | *Min* | *Max* |
|---|---|---|---|---|---|
| Share_r | overall | 4.92 | 1.62 | 1.50 | 7.38 |
| | between | | 1.50 | 2.14 | 7.16 |
| | within | | 0.67 | -0.25 | 7.78 |
| Creditor_r | overall | 5.71 | 1.46 | 1.99 | 7.97 |
| | between | | 1.42 | 3.22 | 7.92 |
| | within | | 0.43 | 4.25 | 7.47 |
| Consensualism | overall | 0.00 | 0.76 | -3.38 | 1.03 |
| | between | | 0.70 | -1.63 | 1.01 |
| | within | | 0.37 | -1.76 | 1.68 |
| Index_c | overall | 2.59 | 0.76 | 0.25 | 3.65 |
| | between | | 0.76 | 1.40 | 3.64 |
| | within | | 0.20 | 1.40 | 3.55 |
| Democracy | overall | 8.86 | 2.09 | 1.50 | 10.00 |
| | between | | 2.01 | 1.50 | 10.00 |
| | within | | 0.67 | 6.22 | 13.22 |
| Veto | overall | 0.42 | 0.19 | 0.00 | 0.68 |
| | between | | 0.16 | 0.00 | 0.64 |
| | within | | 0.10 | 0.01 | 0.73 |
| Parliamentary | overall | 1.40 | 0.88 | 0.00 | 2.00 |
| | between | | 0.87 | 0.00 | 2.00 |
| | within | | 0.20 | 0.49 | 2.49 |
| Proportional | overall | 1.52 | 1.21 | 0.00 | 3.00 |
| | between | | 1.23 | 0.00 | 3.00 |
| | within | | 0.00 | 1.52 | 1.52 |
| Common_law | overall | 0.28 | 0.45 | 0.00 | 1.00 |
| | between | | 0.46 | 0.00 | 1.00 |
| | within | | 0.00 | 0.28 | 0.28 |
| Log_gdp | overall | 12.87 | 1.58 | 8.51 | 16.35 |
| | between | | 1.60 | 9.02 | 16.09 |
| | within | | 0.23 | 12.07 | 13.61 |
| Log_gdp_pc | overall | 9.02 | 1.31 | 5.97 | 10.86 |
| | between | | 1.32 | 6.18 | 10.65 |
| | within | | 0.22 | 8.21 | 9.78 |
| Inflation | overall | 7.91 | 18.24 | -1.40 | 197.47 |
| | between | | 12.88 | -0.07 | 54.69 |
| | within | | 13.13 | -38.60 | 162.78 |
| Kaopen | overall | 1.06 | 1.53 | -1.86 | 2.44 |
| | between | | 1.44 | -1.17 | 2.44 |
| | within | | 0.57 | -0.99 | 3.31 |
| Trade | overall | 65.27 | 39.91 | 14.93 | 220.41 |
| | between | | 40.11 | 20.91 | 201.65 |
| | within | | 6.54 | 45.39 | 87.01 |

**Table A.2.** Correlation between independent variables

| *Variables* | *Index_c* | *Consensualsm* | *Democracy* | *Veto* | *Parliamentary* | *Proportional* | *Commonlaw* | *Log_gdp* | *Log_gdp_pc* | *Inflation* | *Kaopen* | *Trade* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Index_c | 1 | | | | | | | | | | | |
| Consensualism | 0.8427* | 1 | | | | | | | | | | |
| Democracy | 0.5840* | 0.8476* | 1 | | | | | | | | | |
| Veto | 0.6215* | 0.8519* | 0.6068* | 1 | | | | | | | | |
| Parliamentary | 0.7597* | 0.6092* | 0.3240* | 0.2267* | 1 | | | | | | | |
| Proportional | 0.6692* | 0.3770* | 0.1811* | 0.3078* | 0.1031 | 1 | | | | | | |
| Commonlaw | -0.2960* | -0.2252* | -0.0337 | -0.0698 | 0.0447 | -0.5006* | 1 | | | | | |
| Log_gdp | -0.1825* | 0.0695 | 0.1014 | -0.0167 | -0.0785 | -0.3866* | 0.0935 | 1 | | | | |
| Log_gdp_pc | 0.3151* | 0.4886* | 0.6332* | 0.3985* | 0.2935* | -0.0069 | -0.2283* | 0.4330* | 1 | | | |
| Inflation | -0.0945 | -0.2792* | -0.1333 | -0.1369 | -0.1406 | 0.1608 | -0.1341 | -0.126 | -0.2626* | 1 | | |
| Kaopen | 0.2407* | 0.3459* | 0.4966* | 0.2435* | 0.3747* | -0.1358 | -0.12 | 0.2942* | 0.7979* | -0.4222* | 1 | |
| Trade | 0.2249* | 0.0603 | -0.0112 | 0.0277 | 0.3855* | 0.0525 | 0.0325 | -0.4848* | 0.1149 | -0.0949 | 0.1395 | 1 |

*Note: Consensualism is an index that measures consensualism of political systems computed using principal components analysis with variables Democracy, Veto, Parliamentary and Proportional, and takes higher/positive values for more consensual systems. Index_c is an index which measures consensualism of the political systems, computed according to the formula: Democracy/10 + Proportional/3 + Parliamentary/2 + Veto, ranging from 0 (not consensual) to 4 (totally consensual). Democracy is a measure of the competitiveness and openness of the political system, ranging from between 0 (Autocracy) and 10 (Democracy); Veto indicates the level of constraints that the head of government faces, ranging from 0 (no constraints) to 1 (high institutional constraints); Proportional indicates proportional, mixed or majoritarian electoral systems, ranging from 0 (purely majoritarian) to 3 (pure proportional); Parliamentary takes the value of 2 for parliamentary systems, 1 for an Assembly-elected President, and 0 for presidential systems; Common_law is a dummy which takes the value of 1 if the country has an English common law legal origin, or 0 otherwise; Log_gdp is the natural logarithm of the gross domestic product; Log_gdp_pc is the natural logarithm of gross domestic product per capita; Inflation is the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services; Trade is the sum of exports and imports as a percentage of gross domestic product each year; Kaopen is a measure of capital account openness developed by Chinn and Ito (2006).*