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THE POLITICAL ECONOMY OF INVESTOR PROTECTION

by Pietro Tommasino*

Abstract

Why do some countries suffer from backward financial institutions and weak corporate governance rules? We show that, even if, overall, the economy would benefit from corporate governance reforms, not all the agents would stand to gain from the improvement. In particular, entrepreneurs and firms that are already well-established fear better rules, which would allow the financing of new firms and enhance competition. As a consequence, industry incumbents will try to influence the political process to block the reforms. If national political institutions are weak, these efforts are likely to be successful.

Contents

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1. Introduction[1]

A large body of literature documents that financial development is associated with higher per capita incomes and a faster rate of economic growth.[2] It is also apparent that financial systems differ markedly across the world, with some countries having highly inefficient systems compared with other countries. The obvious question to ask, then, is what are the causes of prolonged financial backwardness in some nations. Recent empirical work has demonstrated that various dimensions of financial development, such as the breadth and depth of financial markets, the number of IPOs, firms' access to external finance, and prevailing ownership patterns are positively correlated with the degree of legal investor protection (La Porta et al., 1998).[3] However, even if one is ready to accept this point of view, the question of why some countries have poor legal investor protection remains unanswered: [4] why are laws not changed in order to increase legal investor protection? We argue that although society would benefit overall from better corporate governance rules, not all the agents in the economy would stand to gain. In particular, stronger investor protection allows the financing of new ideas and new firms which represent a threat to the profits and rents of incumbent firms. Improvements in the functioning of the financial system are less valuable for the incumbents than they are for the potential entrants. Indeed, the former can rely on the cash flow produced by existing assets; they can use such assets as collateral; they may benefit from a reputation developed over time. Therefore, the net effect of reforms aimed at improving the financial system can be negative for them, the advantage of easier access to financing being second order with respect to the increased threat of competition represented by new entrants in the market. As a consequence, the incumbents will try to influence the political process in the direction of

[2]   See, e.g., King and Levine (1993), Jayaratna and Strahan (1998), Rajan and Zingales (1998). Levine (2005) is an up-to-date and thorough survey.

[3]   For the definition and measurement of investor protection, see La Porta et al. (1997).

[4]   La Porta et al. (1997) argue that differences in legal protection are related to legal origins, but the legal origin explanation cannot account for variations in investor protection over relatively short time spans, such as those documented by Rajan and Zingales (2003) over the twentieth century.

not adopting efficiency-enhancing changes to the financial system (this line of reasoning has been advanced informally by Rajan and Zingales, 2003). The attempts to block the reform process would be ineffective if the only objective of the politicians were the maximization of social welfare, but the political economy literature has convincingly shown that politicians are vulnerable to the influence of lobbyists and special interests. For instance (leaving aside bribes and corruption) they care about being re-elected and re-election depends, among other factors, on campaign contributions. Moreover, incumbents are in a better position to enter into mutually beneficial agreements with the political establishment since they are currently enjoying the rents that new entry would dissipate. We argue that, as a consequence, politicians in many countries do not adopt the reforms because they do not want to lose the contributions received from the incumbents.

In this paper we build a model that captures the links between legal investor protection and the economic and political features of the insider-outsider conflict. More precisely, our model has the following features: entrepreneurs need to have access to the capital markets to finance their projects, but they have different financial needs. In particular, those who are already operating in the market can re-invest in new projects (part of) the cash flow produced by the existing assets and therefore have lower financial needs than potential entrants. There is also moral hazard on the entrepreneur side, as we assume that the entrepreneur can divert a fraction of the cash flow as private benefits of control. Investors are ready to finance the project only if they expect to break even. Thus, when the threat of expropriation by managers is very high, they will not fund the project, even though it would be socially optimal to do so: the project will be financed only when the entrepreneur's financing needs are low. Legal protection shapes the ability of entrepreneurs to appropriate corporate resources in the form of private benefits of control: namely, stronger legal protection implies that a lower fraction of corporate resources can be diverted by the entrepreneur. As a consequence, when legal protection is weak only "rich" entrepreneurs (i.e. entrepreneurs who have large private wealth and therefore reduced financial needs) will be able to finance their project. "Poor" entrepreneurs will remain outside the market. Instead, better rules, by restraining the entrepreneur's ability to divert resources in his or her favour, give access to funds even to "poor" entrepreneurs. New entry in the market can be socially desirable but it is certainly opposed by incumbent entrepreneurs who would face new competitors. To stop any attempt to improve legal protection "rich" entrepreneurs (incumbents) can try to influence the political process. Politicians have an

objective function that is a mixture of social welfare and monetary transfer received from entrepreneurs. We show that when politicians are sufficiently self-interested, they will not pass policies designed to implement a stronger legal protection. In fact, incumbents have both larger incentives to lobby the politicians than the entrants[5] and more funds to spend on such activities. This is indeed the central result of the paper: the political process may preserve an inefficient level of legal investor protection.

The paper also deals with the economic and political interactions between investor protection and the regulation of labour: there is indeed evidence that bad investor protection tends to go hand in hand with highly regulated labour markets (Pagano and Volpin, 2005, Botero et al., 2005). We argue that as higher wages (and, more generally, a better bargaining position of workers vis-à-vis entrepreneurs) reduce the profits expected from starting a firm, worker-friendly labour laws represent for the incumbents another effective, albeit costly, barrier to entry, to be used in circumstances in which weak investor protection is not enough to keep potential competitors at bay. In particular, laws that favour workers (e.g. minimum wage laws, collective bargaining rules, employment protection legislation) might reduce the share of corporate rents accruing to the owner up to the point that post-entry profits are not enough to grant an adequate ex ante return to lenders. Cash-poor entrepreneurs are then unable to get funds in the first place and are consequently kept out of the market. If fiercer product market competition destroys more profits than workers' empowerment does, incumbents will push for a weak investor protection/strong labour regime; if political institutions are weak, their efforts will be successful. On the contrary, consistent with the empirical findings of Giavazzi and Tabellini (2005), improvements in the political environment trigger comprehensive pro-market reforms.

Our final step is to open up the black box of the political process. We present a model of political competition where politicians need campaign contributions to win the vote of uninformed voters who are influenced by ideology. We show that a high fraction of uninformed voters and strong ideologies increases the value of contributions for politicians and makes them more vulnerable to lobbying pressure. Our model thus predicts that countries where voters'

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[5] The argument is identical to the so-called efficiency effect in R&D models. The price that a monopolist is ready to pay to acquire a patent for a new innovation is higher than the price a potential entrant would pay whenever competition destroys total profits in the market.

behaviour is highly influenced by ideology and where the media are not credible (say, becouse they are owned by the different lobbies) are less likely to be captured by the incumbents' lobby.

The rest of the paper is organized as follows: after a short review of the related literature, in Section 3 we study the equilibrium consequences of the degree of investor protection on the welfare of different classes of agents. This allows us to derive their political preferences. From Section 4 to Section 6 we study how these policy preferences are translated into a policy outcome, under different assumptions about the mechanics of the political system. For each institutional setting we characterize the political-economic equilibrium. In the last section we draw some conclusions and we point to several extensions and refinements of our results.

2. A Review of the Literature

Of course this is not the first paper to investigate what determines legal protection; in particular, the previous literature has put forward two competing explanations: legal origins and politics.[6]

La Porta et al. (1997) show that differences in legal protection are related to the legal family to which a country belongs: namely, civil law systems seem to grant less protection compared with common law systems. La Porta et al. (1999) explain this finding with the circumstance that in common law countries property rights were already protected and recognized in the early stages of economic development: this tradition translated naturally into better investor rights later on. Johnson et al. (2000) focus instead on differences in enforcement mechanisms: as common law systems are mainly case-based, common law judges are given more discretionary power, and they use this power to detect and punish more effectively investor expropriation.

While differences in legal origins seem to fit well with cross-country differences in investor protection, they cannot explain changes in a country's level of investor protection, like the ones documented by Rajan and Zingales (2003). Two recent papers (Pagano and Volpin, 2005, Rajan and Zingales, 2003) argue that investor protection is not the heritage of ancient institutional vicissitudes, but the outcome of ongoing political struggles.[7] In this light

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[6]   See La Porta et al. (2000), Beck et al. (2001) and Pagano and Volpin (2001) for useful surveys.

[7]   Roe (1994) also looks at the political conflicts that shaped the US system of corporate governance, but he concentrates on the pro-market, anti-monopoly ideology which distinguishes American politics. We instead

it becomes crucial to understand what the relevant political conflicts are and what actors are involved, as well as what features of the political system are more important in determining the outcome of these conflicts. Pagano and Volpin (2005) focus on the firm-level conflict among outside investors, managers and workers. They argue that managers and workers can form a political coalition at the expense of investors, which translates into less investor protection but higher employment protection and higher benefits from control.[8] Rajan and Zingales (2003) and Hellwig (1999) suggest that the industry-level conflict which opposes industrial and financial incumbents to outsiders can be relevant as well. While we think that both lines of research are promising and that they are to a large extent complementary, in this paper we try to build what is -to our knowledge- the first formal model that tries to spell out the links between legal investor protection and the economic and political features of the insider-outsider conflict.[9]

Our paper is also related to a recent strand of literature that tries to assess empirically the role of non-legal istitutions as an alternative source of investor protection. Among others, Stulz and Williamson (2003) and Coffee (2001) find that factors such as religion, ethnic composition, and moral norms go some way towards explaining differences in financial development. Dyck and Zingales (2001) in turn show the explanatory role played by the diffusion of newspapers. The growing awareness of the social and cultural embededness of finance is certainly good news, but one should also avoid the risk of theoretical indeterminacy: the temptation to conclude that, after all, "anything matters". We think that one advantage of our approach is that it is able to reconcile these recent empirical findings with the law and finance paradigm. Indeed, non-legal factors in our model do not matter per se but only insofar as they shape

focus on the incentives faced by self-interested and rational policy-makers. Perotti and Von Thadden (2001) build a political economy model to explain another prominent difference between financial systems: the one between bank-centered and market-centered systems.

[8] Furthermore, in Pagano and Volpin the political success or failure of the various groups depends on un-modeled ideological differences between groups. We focus instead on the amount of resources on which the interest groups can rely: these resources are in turn a function of the underlying stucture of the economy. On top of this, while Pagano and Volpin model politics as a voting game in a two-party democracy, in most of the analysis we abstract from institutional details to concentrate on the overall "quality" of political institutions (a similar approach is, among others, advocated by Mulligan et al., 2004). In Section 6 we show that our framework encompasses the political systems studied by Pagano and Volpin.

[9] We came to know Perotti and Volpin (2004) after a first version of this essay had been completed. While their basic intuition is similar to ours they concentrate on a different economic setting and model the political game in a different way. More importantly, they do not study the interactions between capital market and labour market regulations.

political competition and the relative strength of the competing interest groups. Politics is not only the main determinant of legal protection, but also the main channel through which non-legal factors influence the effectiveness of national corporate governance mechanisms.

Williamson (1969) is the first paper to highlight the anti-competitive effects of high wage rates. He discusses a Supreme Court decision in which it is pointed out that an agreement among established employers to raise wages in order to disadvantage newcomers can be seen as a violation of antitrust laws. Williamson shows that such behaviour can be rational on the part of the incumbents if they use a technology that is less labour-intensive than that of the outsiders. This result has since been generalized by Salop and Scheffman (1983) to the case in which both the incumbents and the entrants share the same technology. While making the more general point that binding, publicly observable contracts with a third party can be an effective entry-deterrence tool, Dewatripont (1987, 1988) also argues that clauses protecting employees can be good for incumbent firms. He also stresses that such contracts are useful only to the extent that their enforcement is a credible out-of-equilibrium threat (incidentally, this point lends support to our assumption that labour law matters: legal rules, contrary to private agreements, cannot be re-negotiated ex post by the parties).

3. The Economic Model

Consider an economy populated by a set N of individuals with identical utility functions, but different endowments. Utility of individual $i \in N$ is quasi-linear in consumption q and money W:

$$U(q, W) = \frac{\varepsilon}{\varepsilon - 1} q^{\frac{\varepsilon - 1}{\varepsilon}} + W$$

where $\varepsilon > 1$ (the specification of the utility function is not crucial, but it makes calculations much easier). The population is divided in turn into two subgroups: entrepreneurs and a large number of consumers. In this section we investigate the impact of different degrees of investor protection on the welfare of the different categories, which in turn shapes their political preferences.

3.1 *Consumers*

If an agent belongs to the subset $N_c \subset N$ of consumers (from now on lower case letters will stand for the cardinality of the correspondent sets, e.g. $|N_c| \equiv n_c$), he has nominal wealth A_c, and chooses consumption to maximize utility, given the budget constraint: $pq + W \leq A_c$.

Thanks to the isoelastic specification, the solution to the consumer's maximization problem turns out to be independent from income, yielding the following demand function:

(1)
$$q(p) = p^{-\varepsilon}.$$

3.2 *Entrepreneurs*

Optimal consumption is the same for both consumers and entrepreneurs.[10] The crucial difference between a consumer and an entrepreneur is that only the latter can manage a firm, which is in turn represented by a very simple technology: with a fixed cost I and with constant marginal costs equal to one, it is possible to produce one unit of the consumption good. This implies that if an entrepreneur's wealth is equal to A_j he needs an amount I-A_j of external finance to cover the entry costs.

Let there be a subgroup $N_r \subset N_e \equiv N/N_c$ of "rich" entrepreneurs, each of them endowed with an amount A_r of money, and a subgroup $N_p \equiv N_e/N_r$ of "poor" entrepreneurs, endowed with wealth $A_p < A_r$. As to the size of the different subgroups, we take for granted that n_c is so large that consumers take prices as given in both the financial and the goods markets. To make the problem interesting we make the following restrictions:

Condition 1 $A_p < I$

Condition 2 $n_r A_r + n_p A_p + n_c A_c > I n_e$

In words: even if poor entrepreneurs need to borrow in order to start up their activity (Condition 1), in the economy as a whole there are potentially enough resources to meet the financial needs of the entrepreneurs (Condition 2).

3.3 *Product Market Competition*

Those entrepreneurs that have enough funds to open a firm choose simultaneously and non-cooperatively their quantities in order to maximize profits.[11] The equilibrium price level

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[10] We are implicitly assuming that even if entrepreneurs can influence prices by varying the quantity of the good they produce, they do not try to influence prices by changing their demand as consumers. This is quite realistic as long as the number of entrepreneurs is small with respect to the number of consumers.

[11] As will become apparent, the assumption of Cournot competition in the product market is disposable. Crucial to our point is that each firm's profits are decreasing with the number of competitors.

is:

(2)
$$p(m) = \frac{\varepsilon}{\varepsilon - \frac{1}{m}}$$

where m is the number of firms in the industry; individual gross profits and individual profits net of entry costs are given respectively by :

$$R(m) = \frac{n(m\varepsilon - 1)^{\varepsilon-1}}{m^{\varepsilon+1}\varepsilon^\varepsilon}; \quad \Pi(m) = \frac{n(m\varepsilon - 1)^{\varepsilon-1}}{m^{\varepsilon+1}\varepsilon^\varepsilon} - I$$

We also impose:

Condition 3 $\Pi(n_e) > 0$

That is, poor entrepreneurs, if given the possibility, are willing to enter the market, as they would earn positive profits.

3.4 *Corporate Governance*

As remarked before, would-be entrepreneurs need to borrow the difference between I (the sunk entry costs) and their personal wealth if they want to open a firm. In this subsection we describe the financing game between potential lenders, under the hypothesis that the personal wealth of each entrepreneur can be observed at no cost by the consumers/investors, and we characterize the equilibrium number of producers as a function of the quality of governance.

We assume that the firm's returns are partially non-verifiable, so the entrepreneur can appropriate a fraction of revenues up to $(1-\Phi)R$, where the parameter $\Phi \in [0, 1]$ is determined by the law and is taken to represent the degree of investor protection, and the expropriation decision is not contractable, so the entrepreneur will ex post divert resources up to $(1-\Phi)R(m)$. The extreme discontinuity of the expropriation technology avaliable to the entrepreneur, and the assumption that Φ is completely determined by the legal environment, are both unrealistic; however, this framework (which is reminescent of Holmstrom and Tirole, 1997, and Tirole, 2001) captures the essence of the legal approach to corporate governance: the relationship between outside investors and firm's insiders is hindered by an agency problem that neither private contracting nor reputational mechanisms can fully solve. This implies that the agents

must rely on the rights that the law assigns to investors if they want to limit expropriation by the insiders.

The market for funds it also modelled in a very stylized way: each $j \in N_e$ is matched with a group of N_c^j consumers, collectively endowed with enough resources to cover start-up costs. After the match, entrepreneurs choose simultaneously and non-cooperatively the amount B_j of funds to ask from investors and a promised rate of return r_j. Having observed the proposed contracts $(B_j, r_j)_{j \in N_e}$ consumers simultaneously and non-cooperatively decide whether, and how much, to lend. Individual rationality requires that an investor $k \in N_c^j$ stands ready to finance j iff:

$$B_j \leq \Phi R_k^{\exp} \text{ and } r_j \geq 1^{12},$$

where $R_k^{\exp}$ is k's forecast of the revenues that j will enjoy if he is allowed to produce. $R_k^{\exp}$ depends in turn upon k's beliefs about other investors' choices, summarized by a probability distribution on $N_e{}^{13}$.

We restrict our attention to "serious" contracts, i.e. contracts for which $B_j \geq I - A_j$ and $r_j \geq 1$ (indeed, it is easy to see that all the other offers are weakly dominated); besides, we also need to impose some restrictions on investors' beliefs in order to pin down the market outcome. However, it turns out that under very mild conditions one is able to completely characterize the outcomes of the financing game. Indeed, let the following condition hold:

Condition 4 *Investors' beliefs are such that: (i) they all share the same expectations about entrepreneurial revenues: $R_k^{\exp} = R^{\exp}$ for any $k \in N_c$; (ii) each of them forecasts correctly whether the borrower will make the promised repayments or not (i.e. in equilibrium there are no defaults); (iii) they coordinate on the equilibrium with the maximum number of financed firms, compatible with points (i) and (ii).*

It can then be proved that:

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[12]   We make the simplifying assumption that if the constraint holds as an equality, the investor stands ready to lend all the money he has. The way in which the overall borrowing requirement is divided between lenders in case of excess demand of bonds is not relevant for the results.

[13]   Formally, $R_k^{\exp} = \sum_{m=1}^{n_e} R(m)\pi_k(m)$, with $\pi_k(m) \geq 0$, $\sum_{m=1}^{n_e} \pi_k(m) = 1$. With a large number of consumers/investors, the probability that any single lender is decisive in determining whether an entrepreneur is financed is negligible. This is why we assume that each investor ignores the impact of his own choices on the number of firms that are financed (this line of reasoning is analogous to the one pioneered by Grossman and Hart, 1980).

Lemma 1[14] *An equilibrium for the financing game exists for any level of Φ. Besides, there is a one to one relationship between the level of investor rights and the number m of active firms. In particular, there are two thresholds $\tilde{\Phi}, \bar{\bar{\Phi}}$, with $\bar{\bar{\Phi}} \in (0,1), \tilde{\Phi} < \bar{\bar{\Phi}}$, such that m is given by:*

(3)
$$m(\Phi) = \left\{ \begin{array}{c} 0 \text{ if } \Phi < \tilde{\Phi} \\ n_r \text{ if } \bar{\bar{\Phi}} > \Phi \geq \tilde{\Phi} \\ n_e \text{ if } \Phi \geq \bar{\bar{\Phi}} \end{array} \right.$$

Lemma 1 delivers the important economic insight that an ineffective corporate governance acts as a barrier to entry. Indeed, when there are a lot of firms in the industry individual returns are lower; even if firms still enjoy positive profits, entrepreneurs can credibly pledge to the borrowers only a fraction Φ of total returns. As a result, poor entrepreneurs get funds only if Φ is high enough. Simple as it is, we will see that this fact can have big economic and political consequences.

3.5 *Policy Preferences*

We have just shown that Φ determines the number of active firms: in particular, a higher (lower) degree of investor protection makes product market competition harder (softer). Suppose now that two different corporate governance regimes can be chosen , a "good" one in which expropriation is limited, characterized by a level of Φ equal to Φ^h, and a "bad" one in which $\Phi = \Phi^l$, and let the following condition hold true:

Condition 5 $\tilde{\Phi} < \Phi^l < \bar{\bar{\Phi}} < \Phi^h$

As we have already derived the equilibrium price level as a function of m (equation 2) and the demand schedule of the generic individual (equation 1), we can write the indirect utilities of the different kinds of agents as a function of Φ, in order to assess the effect of changes in the policy variable on their economic welfare:

Lemma 2 (*i*) *Total profits are reduced by an improved investor protection; (ii) Both consumers and poor entrepreneurs are better off with a high level of investor protection; as*

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[14] All propositions are proved in the Appendix.

long as N_r is not a singleton, the rich entrepreneurs are worst off, too;[15] *(iii) The overall effect on social welfare*

$$U(\Phi) \equiv n_c U_c(\Phi) + n_p U_p(\Phi) + n_r U_r(\Phi)$$

of an increased investor protection is in principle ambiguous: $U(\Phi^h)$ can be greater, equal or higher than $U(\Phi^l)$ depending on the parameter values. In particular, $U(\Phi^h) > U(\Phi^l)$ when n_c is large, and I is small.

Point (i) and point (ii) of the lemma are quite intuitive: consumers benefit from better corporate governance because it enables more firms to enter the market and the increased competition lowers prices. The poor entrepreneurs benefit even more from a high Φ because it gets their project financed. At the same time increased competition hurts the incumbents because it cuts their profits, and this negative effect more than offsets the positive effect on their consumption expenditure. Taken together, points (i) and (ii) deliver the main result of this subsection: incumbents will oppose reforms to improve the quality of the national corporate gonvernance system, *whatever the effect of these reforms on the overall social welfare,* as poor investor protection is for them a shelter from competition.

The rest of this subsection will be devoted to point (iii) which is perhaps less transparent. Indeed a high Φ has a positive impact on overall welfare because it allows the "poor" entrepreneurs to enter the market, so prices go down and overall production goes up. But at the same time each firm now produces a smaller amount of total output, and this implies (due to the presence of the fixed cost I) higher average costs. As has been noted in the industrial organization literature (e.g. Mankiw and Whinston, 1986), uncoordinated entry in an oligopolistic market can lead to a suboptimally high number of firms. Weak corporate governance can then be seen as a third-best policy from an efficiency point of view, in those situations in which the regulator cannot fix either the price or the exact number of entrants. This is more likely to be the case when the number of potential entrepreneurs is large compared with consumers and when sunk costs are high. We think that this side effect of a high degree of investor protection is interesting per se and it would be useful to assess whether it is robust

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[15] In the appendix we demostrate that even in the extreme case in which $n_r = 1$ the result holds true, provided ε is not too small (in particular, a sufficient condition is that $\varepsilon > 1 + \frac{1}{n_c}$). Intuitively, one needs this restriction because, with a single producer, $\varepsilon \to 1^+$ implies that $p(1) = \frac{\varepsilon}{\varepsilon - 1} \to +\infty$ so that the consumption of the good goes to 0. In turn, this entails the monopolist's stake as a consumer becoming predominant over its corporate interests (indeed, its utility from consumption becomes $\log(q)$ and the marginal utility of consumption goes to infinity). We exclude such configurations as implausible (as n_c is large) and uninteresting.

to different modelling assumptions. Besides, it makes it even more likely that in equilibrium a low level of Φ will be chosen. However, putting ourselves in the worst possible position, we try to demostrate that a poor corporate governance can arise even when it is unambiguously harmful for social welfare. So, in the following, we will restrict ourselves to the case in which $U(\Phi^h) - U(\Phi^l) > 0$.

4. The Political Model

The indirect utility functions of the agents, as summarized in lemma 2, determine their policy preferences, which are clearly divergent: incumbent entrepreneurs prefer lower investor protection (which acts for them as a shelter from competition), whereas consumers and entrant entrepreneurs prefer high investor protection. Which group will get its way? It obviously depends on the specific assumptions about how the political system aggregates individual preferences into a collective choice about Φ. Given that good corporate governance is beneficial overall , a benevolent politician would of course implement it. Unfortunately, the public choice and the political economy literature have argued convincingly (if needed) that textbook pigouvian policy-makers are more the exception than the rule. So we assume that politicans are, at least to some extent, self-interested.

The second crucial assumption that we make about politics is that people can influence political outcomes not only voting at elections but also through the initiatives and actions of organized interest groups. Self-interested politicians, when taking decisions, pay attention not only to social welfare but also to the interests of organized groups and lobbies, so that in the end the preferences of some citizens (those that happen to belong to some powerful lobby) are more politically relevant than the preferences of others. Of course, good political institutions aim to mitigate the agency problem between citizens and politicians and to minimize the power of organized special interests. In this and in the following sections we will show how different political institutions determine the winners and losers in the conflict that opposes industry insiders to the rest of the population with regard to corporate governance. In this chapter we assume the existence of an incumbent policy-maker who is free to choose the policy he prefers: elections and democratic checks and balances are left on the background. In the next chapter we will instead explicity take elections and electoral incentives into account.

Suppose that the political choice is about the level of $\Phi \in \left\{ \Phi^h, \Phi^l \right\}$. Of course one could ask from the start: why do we assume away other more direct barriers to entry? Following Rajan and Zingales (2003), a first answer is that indirectly restricting entry through financial markets is far less costly, from a political point of view, than imposing overt barriers to entry. As corporate governance seems not a crucial issue in the day-by-day political mayhem or in pre-electoral debates a politician can disguise more easily his political deal with the economic establishment. Besides, restricting entry through corporate governance can be really efficient (you do not need an ongoing policing activity to keep the borders of the market safe: investors will do the job for you) and effective (e.g. you do not have to be afraid that a slighly different product or production process may void your red tape barriers). On the other hand, we really view financial barriers to entry as a possible complement, not a substitute, for other forms of restrictions (like the ones surveyed in Dyankov et al., 2002).

4.1 *Lobbies*

We also suppose that both "rich" entrepreneurs and "poor" entrepreneurs are organized into lobbies (respectively lobby R and lobby P) whereas consumers are not.

What social groups are more easily organized in a pressure group and how they manage to solve the free riding problem is still an open and debated question. Typically, we observe hard lobbying when the special interest group is small and the stake in the political issue is big (Olson, 1965). Consumers are a large and widely dispersed group, so each of them has a strong temptation to free ride. Besides, each of them stands to gain relatively little by contributing to the common struggle, so overall it seems plausible (and in line with previous contributions) not to see them as a powerful interest group.

We adopt a common agency framework of the kind first studied by Bernheim and Whinston, 1986 (an early application of this model to economic policy-making is Grossman and Helpman, 1994) in which active lobbies try to influence politicians by promising them valuable monetary resources.[16]

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[16]   Of course, straight monetary transfers are not the only way through which lobbies gain political power. A comprehensive exposition of the role and effects of organized interest groups is provided by Grossman and Helpman (2001).

Lobby R and lobby P submit two contribution schedules (here couples of non-negative real numbers $(C_R(\Phi^h), C_R(\Phi^l)), (C_P(\Phi^h), C_P(\Phi^l))$) to the politician in order to maximize the profits of their reference groups, i.e. the objective of lobby j is:

$$\max_{(C_j(\Phi^h), C_j(\Phi^l))} \Pi_j(\Phi) - \frac{1}{n_j} C_j(\Phi) \ \ j = R, P,$$

where we define $\Pi_R(\Phi) \equiv \Pi(m(\Phi))$, $\Pi_P(\Phi^l) \equiv 0$, $\Pi_P(\Phi^h) \equiv \Pi(n_e)$ and assume that members of a lobby share equally the costs of lobbying.

4.2 *The Policy-maker*

A single individual (or a cohesive political establishment) has the authority to set Φ. His objective function is given by:

$$W(\Phi) = C_R(\Phi) + C_P(\Phi) + \frac{\eta}{n} U(\Phi)$$

where $\eta \geq 0$ wants to capture the extent to which the policy-maker internalizes the welfare of the polity. It can be seen as the degree of policy-maker's benevolence as well as a summary parameter that depends on the ex post accountability, through elections or other democratic institutions, of incumbent politicians (as we will see better in the next section). Given the contribution schedules, the politician decides the level of Φ. After his decision, the financing choices are made and finally the promised contributions are payed.

4.3 *Political Equilibrium*

We are looking for a subgame perfect Nash equilibrium $(\Phi^*, (C_j^*(\Phi^k))_{j=R,P,k=h,l})$ of the lobbying game. To rule out implausible equilibria we concentrate, following the literature, on "truthful" subgame perfect Nash equilibria, whose properties are investigated by Bernheim and Whinston (1986).[17] These are SPNE in which lobbies use "truthful" contribution schedules, in the sense that the difference between the two offers is equal to the corresponding difference in the gross pay-off levels: $|\Delta\Pi_j| = |\Delta C_j|$, provided $C_j(\Phi) \leq \Pi_j(\Phi)$, for j=R,P. In other words,

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[17] See also Dixit et al. (1997). As a matter of fact, in the simple setup of this chapter, truthful equilibria coincide with those equilibria in which players do not play weakly dominated strategies, as the proof of proposition 1 below makes clear. The same is true for proposition 2, in Section 6.5.

we have:

$$C_j(\Phi) = \max[0, n_j \Pi_j(\Phi) - \underline{u}^j]$$

The competition among interest groups then concentrates on the choice of the reservation utility $\underline{u}^j \geq 0$. It turns out that there exists a unique truthful SPNE. Moreover, the equilibrium outcome depends crucially on η :

Proposition 1 *There is a threshold $\bar{\eta} > 0$ such that if $\eta > \bar{\eta}$, the only truthful SPNE outcome has $\Phi^* = \Phi^h$, and if $\eta < \bar{\eta}$, the only truthful SPNE outcome has $\Phi^* = \Phi^l$[18].*

The moral of the story is quite crude: if the politician does not sufficiently internalize the welfare of the citizenship (if political institutions do not provide an adequate level of ex post accountability) the country will be left with a backward governance regime (and a subotimal level of production). The economic and political establishment will strike a mutually beneficial deal at the expense of the rest of the population. The mechanics that lead to this result are also straightforward: as potential allies the entrants are less interesting for the politician. The higher competition that they would bring into the market would destroy profits, so they have less to offer in the political bargaining stage. Conversely, the rich can pledge a greater amount of prospective resources, conditionally on being left undisturbed in the market. Therefore, in those countries in which politicians are not subject to effective popular oversight, incumbents will succeed in tilting policy in their favour.

5. Complicating the Economic Environment: Investor Protection and the Regulation of Labour

Weak investor protection need not be the only instrument used by incumbents to keep potential competitors out of the market. In this section we argue that labour laws can be used as a barrier to entry as well, and that under certain conditions incumbents will lobby to introduce pro-worker legislation. Corporate governance and labour laws can be seen as complementary institutions, as they move in the same direction in response to exogenous changes in the political environment. The intuition is that both weak investor protection and pro-worker legislation reduce the money that producers can credibly pledge to creditors ex post, therefore making it more difficult for them to raise funds ex ante.

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[18]   In the threshold case in which $\eta = \bar{\eta}$, both outcomes are possible.

To study these interactions, let us enrich our economic framework: consider now an economy in which in order to produce 1 unit of the good an entrepreneur needs 1 unit of labour, and in which consumers are also workers and supply labour at a utility cost of 1 for each hour of work, so that in equilibrium the labour market clears with a wage equal to 1. In such a framework, unit costs and profits are identical to the ones derived in Section 3 and therefore all those results go through without changes. Suppose, however, that politicians can implement a package of policy measures that tilt the intrafirm distribution of rents in favour of workers. Labour market institutions are complex and multi-dimensional, ranging from minimum wage legislation to the rules regulating collective bargaining, to hiring and firing restrictions, all of which indirectly determine the wages accruing to workers; we take a shortcut and assume that politicians have the option of directly setting wage rates at any level w≥1.[19] In such a case one has:

$$p(m; w) = \frac{\varepsilon}{\varepsilon - \frac{1}{m}} w,$$

and:

$$R(m; w) = \frac{n(m\varepsilon - 1)^{\varepsilon - 1}}{m^{\varepsilon + 1} \varepsilon^\varepsilon} \frac{1}{w^{\varepsilon - 1}} = \frac{R(m; 1)}{w^{\varepsilon - 1}}$$

(where prices and revenues depend now both on the number of competitors and on w). As a consequence, the number of active firms also depends on both sets of rules. In particular, following the same logic behind Lemma 1, it turns out that equation (3) becomes:

$$m(\Phi, w) = \begin{cases} 0 \text{ if } \frac{\Phi}{w^{\varepsilon - 1}} < \tilde{\Phi} \\ n_r \text{ if } \bar{\Phi} > \frac{\Phi}{w^{\varepsilon - 1}} \geq \tilde{\Phi} \\ n_e \text{ if } \frac{\Phi}{w^{\varepsilon - 1}} \geq \bar{\Phi} \end{cases}$$

The political choice becomes two-dimensional as well, involving a couple (Φ, w) with $\Phi \in \left\{ \Phi^h, \Phi^l \right\}$ and $w \geq 1$. Overall welfare is maximized by the "pro-market" package $(\Phi^h, 1)$. Indeed, *for any level of* Φ, for society as a whole it is optimal to avoid labour market distortions and to set w=1. If employment is concentrated among a small set of workers/consumers, these "insiders" may prefer high wages, provided they are high enough to compensate them for the induced higher prices. However, the gains enjoyed by such inside workers are exactly offset by the losses incurred by their employers: in the aggregate, the only effect of high wages is

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[19] To be completely rigorous, w has to be restricted to an at most numerable set of values: $1, 1+\tau, 1 + 2\tau, ...$ for some $\tau > 0$, to grant that the choice set of the agents is closed. However, as τ can be taken to be as small as one wishes, we can disregard this assumption in the exposition.

to induce higher prices and thus lower consumption, both directly (by raising marginal costs) and indirectly, by making entry impossibile for poor entrepreneurs.[20] As a result, from a social point of view (Φ, w') is (strictly) preferred to (Φ, w'') for any Φ and for any $w' \leq w''$ (resp. $w' < w''$). In turn, *for any level of w,* (Φ^h, w) is preferred to (Φ^l, w), where the preferences must be understood to be strict in those cases in which $m(\Phi^h, w) \neq m(\Phi^l, w)$. It follows that when organized lobbies are absent, or when the decision is taken by a fully benevolent social planner, $(\Phi^h, 1)$ is implemented.[21] It also follows from this discussion that the poor entrepreneurs' lobby will also favour the "pro-market" set of rules.

With regard to the policy preferences of the rich entrepreneurs' lobby, it has to be noted that pro-worker laws reduce insiders' rents as well, so that high wages represent a particularly expensive barrier to entry. This implies that lobby R will prefer w=1 as well, unless two necessary conditions are met: (i) weak investor protection is not enough per se to prevent entry; (ii) the minimum level of w which discourages entry is not so high that a higher degree of product market competition reduces overall profits less than the redistribution of corporate rents due to the empowerment of labour.[22] Stated formally, a necessary condition for w> 1 to be an equilibrium outcome is the following:

Condition $5'$ *(i)* $\Phi^l \geq \bar{\Phi}$; *(ii)* $\Phi^l < \bar{\Phi}[\frac{n_r R(n_r;1)}{n_e R(n_e;1) - n_p I}]$

It turns out that if political checks and balances on the policy-maker are not strong enough, condition 5' is not only necessary but also *sufficient* to observe a high wage/bad governance equilibrium:

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[20] This also implies that there is no need to spell out the rules of the matching of workers and firms in the labour market.

[21] For some parameter values there are indeed wage levels for which neither the people nor the policy-maker care about Φ. That is because in such cases w is so high (resp. so low) that $m(\Phi^h, w) = m(\Phi^l, w) = n_r$ (resp. $m(\Phi^h, w) = m(\Phi^l, w) = n_e$) and because in our simple framework corporate governance is *nothing but* a barrier to entry. For simplicity's sake, in such circumstances we will focus on the equilibria in which $\Phi = \Phi^h$.

[22] That is the minumum entry-deterring wage must be lower than $[\frac{n_r R(n_r;1)}{n_e R(n_e;1) - n_p I}]^{\frac{1}{\varepsilon - 1}}$.

Proposition $1'$ *There is a unique threshold* $\bar{\eta} > 0$ *and a unique* $w^h > 1$ *such that if* $\eta > \bar{\eta}, (\Phi^h, 1)$ *is the truthful SPNE outcome; if* $\eta < \bar{\eta}, (\Phi^l, w^h)$ *is the truthful SPNE outcome.*[23]

Proposition $1'$ then formalizes the idea that strong investor protection is associated with flexible labour markets and that both rely on the quality of political institutions; political reforms that align the objectives of the policy-makers with those of society (in the model, an increase in η from below to above the threshold) will trigger economic liberalization in both the labour and the financial markets.

6. Complicating the Political Environment: Electoral Competition

To sum up, if one wants to find the causes of a country's financial underdevelopment, one should look at the workings of the national political system. To defeat the vested interests and enhance corporate governance a country needs institutions that guarantee a high congruence between policy outcomes and social preferences.

Of course, the main instrument people have to keep politicians on their toes is elections, so in this section we put electoral competition at the centre-stage to see how and when elections provide politicians with the right incentives to overlook the organized interest groups and enact welfare-enhancing financial reforms.

We use a version of the voting model developed by Baron (1994) and extended by Grossman and Helpman (1996)[24] to argue that the effectiveness of elections in disciplining politicians cannot be taken for granted and crucially depends on the broad social and political characteristics of a country. The driving force here is the assumption that agents, when voting, are of two different kinds: informed and uninformed. Uninformed voters are not aware of the importance of corporate governance for their own well-being. Besides, they can be influenced by campaign spending, in the form of political advertising or whatever, which has in turn to be funded by the contributions of lobbies. This implies that, when choosing electoral platforms, candidates face a fundamental trade-off: by putting in their agenda a package of

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[23] In the threshold case in which $\eta = \bar{\eta}$, both outcomes are possible.

[24] The main simplification we introduce with respect to Grossman Helpman (1996) is given by the different timing. In their model contributions are decided before, not after, political positions are set. This implies that lobbies can use their contributions to influence both the electoral outcomes and the electoral platforms.

pro-market measures they can attract votes from the (majority of) the well-informed portion of the electorate. On the other hand, if they sweep reforms under the carpet they will be rewarded by the incumbent's lobby with valuable resources that can be used to influence the voting of the uninformed and impressionable voters. In what follows we spell out the extensive form of the electoral game and characterize the equilibrium level of the relevant policy variables.

6.1 *Candidates*

Let there be two candidates (or cohesive political parties), say A and B. Each candidate has a fixed ideological position that cannot be credibly changed, but each of them can freely and credibly choose a vector of policy variables Ψ to be implemented if he wins the elections. The ideological position of a candidate can summarize a set of exogenous characteristics of the politician (e.g. ability) and, more generally, all those political issues that are either (perceived as) orthogonal to Ψ or as not manipulable by the candidates. Candidates are office seekers: they maximize the probability of winning the elections. We will first explore the implications of the model when the only policy to be chosen is the level of investor protection Φ. As in real world politics issues come in bundles, we will subsequently enrich the framework to account for the simultaneous determination of Φ and w.

6.2 *Lobbies*

Once the candidates have chosen their preferred Ψ, lobbies can influence the electoral outcome by giving electoral contributions to whatever party they want (or to both of them), in order to maximize:

$$\max_{C_j^A, C_j^B} P_A \Pi_j(\Psi^A) + (1 - P_A)\Pi_j(\Psi^B) - \frac{1}{n_j}[C_j^A(\Psi^A, \Psi^B) + C_j^B(\Psi^A, \Psi^B)] \quad j = R, P$$

where P_A is the probability that party A wins the elections. P_A is of course endogenous and we will see immediately how it depends on the candidates' choices and on the contributions. Finally, one should note that (unlike in Section 4), in order to be helpful in the political struggle, contributions must be handled before the elections. To avoid unnecessary clutter, we assume that lobbies are not credit-constrained, so that they can borrow from the market

the resources that they channel to the parties and give the money back after production and consumption has taken place.[25]

6.3   Informed Voters

Informed voters represent a fraction μ of the electorate.[26] When casting their ballot, they evaluate both the ideological position and the policy platform of the candidates. So a generic informed voter i of group j=C,R,P votes for party A if and only if $U_j(\Psi^A) > U_j(\Psi^B) + b_{ij}$, where b_{ij} measures the net ideological preference of i for party B. We abstract from cross-group differences in the ideological bias for B, assuming that it is distributed identically across different groups in the population, as a uniform distribution with mean b/f and density f. Here f is inversely related to the strength of ideological preferences in the population: a low level of f implies that a larger fraction of the electorate entertains extreme ideological views. Therefore, the fraction of informed voters that votes for party A is approximately given by:

(4)
$$s_A^I = \frac{1}{2} - b + f[\frac{1}{n}U(\Psi^A) - \frac{1}{n}U(\Psi^B)].^{27}$$

Following Grossman and Helpman (2001) and the literature on probabilistic voting we further assume that candidates are uncertain about the true value of b, and they perceive it as drawn by a distribution F_b, uniform with mean 0 and density β.[28]

6.4   Uninformed Voters

The fraction (1-μ) of uninformed voters, when voting, does not evaluate the potential consequences of each of the two the policy platforms. They just care about the ideological position of the candidates and, on the top of this, they are influenced by campaign spending. As in Grossman and Helpman (1996), we assume that the fraction of informed voters that is

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[25]   As is clear from the proofs of propositions 2 and 2′ below, this assumption is not crucial: what is needed is for lobby R to be able to mobilize a greater amount of resources than lobby P before elections.

[26]   We abstract from differences in the percentage of uninformed people across the different economic groups.

[27]   Following the literature (e.g. Stromberg, 2004), we simplify the exposition disregarding the idiosyncratic individual-level uncertainty. The approximation error is negligible as long as n_c is sufficiently large.

[28]   One could have alternatively hypothesized that parties maximize their vote share, while knowing the exact value of b (Grossman and Helpman, 1996).

expected to vote for party A is given by:

$$(5) \qquad s_A^U = \frac{1}{2} - b + e(C^A - C^B).^{29}$$

Where $C^q = C_R^q + C_P^q$ for q=A,B and e is a parameter that captures the efficiency of the technology which transforms campaign contributions into electoral consensus. Implicit in this reduced-form specification is the idea that, without campaign contributions, the relative popularity of the parties is the same for the two kinds of voters.

6.5 Political Equilibrium when $\Psi = \Phi$

We are now in a position to say something about the subgame perfect Nash equilibrium of the electoral game: $(\Phi^{A*}, \Phi^{B*}, (C_j^{q*}(\Phi^A, \Phi^B))_{j=R,P}^{q=A,B})$. In particular, the main result of this section is given by the following proposition:

Proposition 2 Define $\eta \equiv \frac{\mu f}{(1-\mu)e}$. There is a unique threshold $\bar{\eta}$ such that if $\eta < \bar{\eta}$, $\Phi^{A*} = \Phi^{B*} = \Phi^l$ is the only truthful equilibrium outcome of the election game, and if $\eta > \bar{\eta}$ the equilibrium has $\Phi^{A*} = \Phi^{B*} = \Phi^h$ ($\bar{\eta} > 0$, provided β is sufficiently large). Furthermore, C_j^{q*} is always zero in equilibrium for each j and q[30].

What is the main intuition behind this result? First note that the expected percentage of votes earned by party A is given by the weighted sum of s_A^I and s_B^U (given in equation 4 and 5 respectively):

$$s_A = \mu s_A^I + (1-\mu)s_A^U = \frac{1}{2} - b + \mu f \frac{U(\Phi^A) - U(\Phi^B)}{n} + (1-\mu)e(C^A - C^B).$$

So the probability of party A winning when n is large is given by:

$$(6) \qquad P_A = \Pr ob(s_A > \frac{1}{2}) = F_b(\mu f \frac{U(\Phi^A) - U(\Phi^B)}{n} + (1-\mu)e(C^A - C^B)).$$

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[29]   We are implicitly taking for granted that f and e are small enough (and β is large enough) for s_A^I and s_A^U to fall between 0 and 1 for any feasible policy option.

[30]   If $\eta = \bar{\eta}$, both the equilibria exist.

When both parties know that lobbies' contributions will be zero, they will both choose Φ^h, the welfare-maximizing policy, so that $P_A = F_b(0)$. For this *not* to be an equilibrium, it is necessary that if parties deviate from the welfare-maximizing policy they should be adequately rewarded by lobby R through campaign contributions; at the same time, lobby R will find it worthwhile to spend money on a political party that endorses Φ^l only if contributions are an effective electoral tool: in sum, in order to deviate from the welfare maximizing equilibrium it is required that $\left.\frac{\partial P_A}{\partial C_j^A}\right|_{\Phi^A=\Phi^B, C^A=C^B} = \beta(1-\mu)e$ be big enough. Equation 6 also implies that the objective function of the candidates is given by:

$$(7) \qquad W(\Phi^q) = \frac{\mu f}{(1-\mu)e} U(\Phi^q) + (C_R^q + C_P^q),$$

for q=A,B, which is equal to the objective function that we assumed in the post-election model of Sections 4 and 5, save that we now have that $\eta = \frac{\mu f}{(1-\mu)e}$.

Equation 7 is important for many reasons, besides being the key to proving proposition 2. First, it shows clearly the trade-off between welfare and contributions faced by both candidates. As we anticipated above, electoral competition is per se a force that pushes candidates towards welfare maximizing policies. On the other hand, to the extent that campaign rethoric has an appeal for a significant fraction of the voting population, tilting platforms towards the lobbies' desiderata is tempting, because it provides candidates with resources to invest in campaign messages. We demostrate in the appendix that the economic asimmetry between the two competing interest groups (which we have already discussed at length) leads to a political asymmetry so that the incumbent's lobby is always privileged.

Equation 7 also explains what factors influence the relative importance of the two forces:

1) A large percentage of informed voters on the total population should be associated with high investor protection. Not only does this reinforce the intuition of Pagano and Volpin that a widespread "equity culture" is important for the development of the financial sector; it can be also seen to rationalize recent empirical findings (Dyck and Zingales, 2001) of a positive impact of well-functioning media on a country's corporate governance. While informal explanations of the corporate governance role of the media have focused on a direct effect of information on the incentives of managers (Dyck and Zingales, 2002), we highlight

here an indirect effect, which works through the disciplining effect of the media on political actors.

2) If ideological preferences are very strong, investor protection will be low. This is a new and potentially testable implication of our analysis. It is also quite intuitive: voters in countries that are swept by harsh political and ideological conflicts obviously care less about the parties' positions on such "technical" issues. Then politicians have more room to engage in political bargaining with influential interest groups at a reduced political cost. Deep ideological, ethnolinguistic and cultural divides have already been associated in the empirical literature with financial underdevelopment (Coffee, 2001), Stulz and Williamson, 2003). Here we provide a new rationale for these findings, to the extent that social cleavages translate into political ones. We think that the cultural variables used so far could be seen as a proxy for more precise measures of what political scientists call the "political culture" of a country and that more empirical investigation along these lines could be fruitful.

6.6 *Political Equilibrium when* $\Psi = (\Phi, w)$

The results of the last section go through almost unchanged in the case in which the political struggle is not only about corporate governance but also about the condition of labour. Indeed, provided condition $5'$ holds, one can demonstrate the following:

Proposition $2'$ *There is a unique threshold $\bar{\eta}$ such that if $\eta < \bar{\eta}$, $\Phi^{A*} = \Phi^{B*} = \Phi^l$ and $\mathrm{w}^{A*} = w^{B*} = w^h$ is the only truthful equilibrium outcome of the election game, and if $\eta > \bar{\eta}$ the equilibrium has $\Phi^{A*} = \Phi^{B*} = \Phi^h, \mathrm{w}^{A*} = w^{B*} = 1$ ($\bar{\eta} > 0$, provided β is sufficiently large). Furthermore, C_j^q is always zero in equilibrium for each j and q.*[31]

6.7 *Electoral Rules*

As we gave a first look into the black box of the political process, we saw that several socio-political characteristics of a country can influence the equilibrium level of legal investor protection through their impact on the electoral competition. From a normative point of view one could be disappointed to recognize that "soft" or informal elements of the political system

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[31] Again, if $\eta = \bar{\eta}$, both the equilibria exist.

are so important, because they seem quite difficult and slow to change. It would be interesting to see whether different formal political institutions per se, other things being equal, can generate differences in Φ. One easy step to take in this direction is to look at the impact of different electoral rules.[32]

Suppose that the country is divided into 3 different electoral districts, 1, 2 and 3. To concentrate on politics, supose also that they have the same economic composition and the same population. The only difference is in the direction and the strength of the ideological preferences. For instance, let district 1 be ideologically biased toward party A: the ideological preferences of the population of district 1 are distributed as a uniform of mean -(b+l)/f$_1$ and density f$_1$where l>0, and let district 2 be ideologically biased toward party B, with the ideological preferences of the population distributed as a uniform of mean (b+l)/f$_3$ and density f$_3$. In addition, suppose that l is so big that, whatever Φ^A, Φ^B are, the majority of votes of district 1 will go to party A and the majority of votes of district 3 will go to party B. District 2's ideological preferences can instead by summarized by a uniform distribution of mean b/f$_2$ and density f$_2$. District 2 is taken to be not only the more "moderate" district, but also the more homogeneous one from an ideological point of view: $f_1 < f_2, f_3 < f_2$.

Now suppose the electoral rule is proportional, i.e. to win a party needs a vote share greater than 1/2 of the population. Following the same steps as in Section 4, candidate q=A,B can be shown to maximize

$$\frac{\mu \bar{f}}{(1-\mu)e}U(\Phi^q) + (C_R^q(\Phi^q) + C_P^q(\Phi^q))$$

with $\bar{f} = (f_1 + f_2 + f_3)/3$.

But now suppose that the electoral rule is majoritarian, so that each candidate wins if he gets a majority of votes in *two districts out of three (*one can also interpret the 3 districts as three electoral colleges in a presidential election). This implies that, when choosing their policy platforms, both candidates completely disregard the 2 extreme districts, so that the electoral competition takes place only in the "marginal" district. One can show that now candidate q maximizes:

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[32]   The modelling strategy in this section closely follows Persson and Tabellini (1999, 2000).

$$\frac{\mu f_2}{(1-\mu)e}U(\Phi^q) + (C_R^q(\Phi^q) + C_P^q(\Phi^q)).$$

As $f_2 > \bar{f}$ this implies that, ceteris paribus, it is easier to observe a high degree of investor protection in a majoritarian than in a proportional country: to the extent that majoritarian voting systems tend to concentrate electoral competition in some marginal district that is particularly sensitive to policy, the pressure towards policies that are optimal from a utilitarian point of view becomes stronger.

7. Conclusions

The law and finance approach has had a major impact on our understanding of corporate governance. While the earlier literature put the emphasis on the comparison between different financial systems, the work of La Porta and coauthors has asked the more fundamental question of why financial systems differ across the world. The more recent literature has underlined the importance of legal investor protection in defining the features of financial systems. However, the law and finance approach raises a new set of questions: What are the determinants of legal investor protection? Why are some countries stuck in a situation of poor investor protection?

To answer these questions one needs to understand the workings of the political process. In this paper we have applied the tools of political economy to understand the evolution (or the lack thereof) of corporate governance systems. Following Rajan and Zingales (2003), we have argued that while improvements in legal investor protection are socially desirable, they harm incumbent entrepreneurs. In fact, better corporate governance law, by facilitating access to financing for new entrepreneurs, induces new entry that dissipates the incumbents' rents. Incumbents can try to stop the evolution to better corporate governance rules by lobbying self-interested politicians. We have shown that the equilibrium outcome is shaped by factors such as the role of the press, the type of electoral competition, the ideological entrenchment of voters. Our paper is only a preliminary attempt to understand the political economy of corporate governance. Much remains to be done. First, while we have discussed general corporate rules, it is interesting to study specific rules and laws. For instance, in an interesting paper Biais and Récasens (2002) study the political economy determinants of bankruptcy law. Second, the increasing integration of capital markets poses a threat to the incumbents' ability to bend the political process in their favour. In fact, firms can decide to migrate to more "investor

friendly" legal regimes. For instance, Italian firms may decide to be listed in the NYSE or the LSE, thereby committing to the tougher corporate governance rules imposed by those stock exchanges. The possibility of a migration of national firms to more investor friendly regimes can undermine the ability of incumbents to preserve inefficient rules in their country. Some authors have come to the extreme conclusion that differences in corporate governance will soon disappear (Hansmann and Kraakman, 2000). Although this conjecture seems extreme, it is nonetheless very interesting to understand how the reduction in mobility barriers impact on the political decision process. These questions await further research.

Appendix

Lemma 1 Define $\tilde{\Phi} \equiv \frac{(I-A_r)}{R(n_r)} = \frac{(I-A_p)\varepsilon^\varepsilon n_r^{\varepsilon+1}}{n(n_r\varepsilon-1)^{\varepsilon-1}}$ and $\bar{\Phi} \equiv \frac{(I-A_p)}{R(n_e)} = \frac{(I-A_p)\varepsilon^\varepsilon n_e^{\varepsilon+1}}{n(n_e\varepsilon-1)^{\varepsilon-1}} > \tilde{\Phi}$.

Note that condition 1 implies that $\bar{\Phi} > 0$ and condition 3 implies that $\bar{\Phi} < 1$. Condition 4 (i) guarantees that only three kinds of equilibria are possible: equilibria in which all the entrepreneurs are financed, equilibria in which all the rich are financed whereas no poor are financed, and equilibria in which nobody gets funds. Condition 4 (ii) implies that a necessary condition for an equilibrium is that all the promises made by borrowers are honoured. Then, as long as $\Phi < \tilde{\Phi}$, the only equilibrium is the one in which no-one is financed. On the contrary,

if $\Phi \geq \bar{\Phi}$ Condition 4 (ii) is always fulfilled. So, if $\Phi \geq \bar{\Phi}$ the only equilibrium is the one in which all the entrepreneurs offer r=1, and investors lend to them enough money to start the firm.

If $\tilde{\Phi} \leq \Phi < \bar{\Phi}$ there cannot exist equilibria in which all the borrowers are financed. However, there do exist equilibria in which all the rich are financed (again, they will offer a unitary interest rate). These are the only ones that comply with Condition 4 (iii).

Lemma 2 Point (i) in the lemma is an obvious consequence of Cournot competition, and can be ascertained by inspecting the derivative of R(m) for m$\geq$ 1. The first two statements under Point (ii) stem from the indirect utility functions of consumers and poor entrepreneurs:

$$U_c\left(\Phi\right) = A_c + \frac{1}{\varepsilon-1}p(m(\Phi))^{-(\varepsilon-1)}$$

$$U_p\left(\Phi\right) = A_p + 1_{\left[\bar{\Phi},1\right]}(\Phi)\left[\frac{n(m(\Phi)\varepsilon-1)^{\varepsilon-1}}{m(\Phi)^{\varepsilon+1}\varepsilon^\varepsilon} - I\right] + \frac{1}{\varepsilon-1}p(m(\Phi))^{-(\varepsilon-1)}.$$

The third statement concerning the welfare of rich entrepreneurs can also be proven by writing down the indirect utility function of this class of agents as a function of prices, taking

into account that in equilibrium there is a one-to-one relationship between p and m: $p(m)=\frac{\varepsilon}{\varepsilon-\frac{1}{m}}$, or $m(p)=\frac{1}{\varepsilon}\frac{p}{p-1}$:

$$
\begin{aligned}
U_r\left(p\right) &= A_r + \frac{n}{m(p)}p^{-\varepsilon}(p-1) - I + \frac{1}{\varepsilon-1}p^{-(\varepsilon-1)} \\
&= A_r + \varepsilon n p^{-1-\varepsilon}(p-1)^2 - I + \frac{1}{\varepsilon-1}p^{-(\varepsilon-1)}.
\end{aligned}
$$

As $p(\Phi^l) > p(\Phi^h)$, a sufficient condition for having $U_r\left(\Phi^l\right) > U_r(\Phi^h)$ is that $\frac{\partial U_r(p)}{\partial p} > 0$ for any p>1. As $\frac{\partial U_r(p)}{\partial p} = p^{-\varepsilon}[-1+2\varepsilon n(\frac{p-1}{p})-\varepsilon n(1+\varepsilon)(\frac{p-1}{p})^2] = \frac{p^{-\varepsilon}}{m^2}(-m^2+2nm-\frac{1+\varepsilon}{\varepsilon}n)$, $\frac{\partial U_r(p)}{\partial p} > 0$ if and only if $n=n_c + n_e>\frac{m^2}{2m-\frac{1+\varepsilon}{\varepsilon}}$. As $m\leq n_e$, a sufficient condition for this inequality to hold is $n_c + m>\frac{m^2}{2m-\frac{1+\varepsilon}{\varepsilon}}$ i.e. $n_c > \frac{m(\frac{1+\varepsilon}{\varepsilon}-m)}{2m-\frac{1+\varepsilon}{\varepsilon}}$. If $m\geq 2$ this is always true. If m=1, the inequality becomes $\varepsilon > 1 + \frac{1}{n_c}$.

Regarding point (iii), note that the change in average social welfare associated with the change from Φ^l to Φ^h is given by

$$
\frac{\Delta U}{n} = p(n_e)^{-\varepsilon}[\frac{\varepsilon}{\varepsilon-1}p(n_e) - 1] - p(n_r)^{-\varepsilon}[\frac{\varepsilon}{\varepsilon-1}p(n_r) - 1] - \frac{n_p}{n}I.
$$

So $\frac{\Delta U}{n} \gtreqqless 0$ iff $I\lesseqqgtr \frac{n}{n_p}\left\{p(n_e)^{-\varepsilon}[\frac{\varepsilon}{\varepsilon-1}p(n_e) - 1] - p(n_r)^{-\varepsilon}[\frac{\varepsilon}{\varepsilon-1}p(n_r) - 1]\right\} \equiv \frac{n}{n_p}Q(n_p, n_r, \varepsilon)$. Now the only restriction that we have imposed on I is that $A_p < I < R(n_e)$. To demostrate that $\frac{\Delta U}{n}$ can take any sign, one just needs to show that there are admissible parameter values for which $A_p < \frac{n}{n_p}Q(n_p, n_r, \varepsilon)$ as well as admissible parameter values for which $\frac{n}{n_p}Q(n_p, n_r, \varepsilon) < R(n_e) = \frac{n}{n_e}p(n_e)^{-\varepsilon}(p(n_e) - 1)$. The first statement is obvious (just take n_c big enough); the second can be proved by means of example (e.g. take $n_r = 1, n_p = 2$, $\varepsilon = 2$).

Proposition 1 Define

$$
\bar{\eta} \equiv \frac{n_r\left|\Delta\Pi_R\right| - n_p\Delta\Pi_P}{\Delta U/n}.
$$

First of all note that $\bar{\eta} > 0$ by lemma 2 (i). Consider first the case in which $\eta < \bar{\eta}$. The proof of the statement is in two parts. First we demonstrate that in any SPNE $\Phi^* = \Phi^l$ and then we show that such an SPNE exists.

Indeed $\Phi^* = \Phi^h$ cannot be an equilibrium, as $\eta < \bar{\eta}$ implies $\eta \Delta U/n < n_r |\Delta \Pi_R| - n_p \Delta \Pi_P$ i.e that

$$n_r |\Delta \Pi_R| > \eta \Delta U/n + n_p \Delta \Pi_P > \eta \Delta U/n + \Delta C_P$$

But then lobby R can deviate and offer a menu of contributions in which $C_R(\Phi^h) = 0$, and $C_R(\Phi^l)$ is such that $n_r |\Delta \Pi_R| > C_R(\Phi^l) > \Delta C_P + \eta \Delta U/n$, which would make their members better off. Consider instead the set of strategy profiles :

$$
\begin{aligned}
C_R(\Phi^h) &= 0, C_R(\Phi^l) = n_p \Pi_P(\Phi^h) + \eta \Delta U/n \\
C_P(\Phi^l) &= 0, C_P(\Phi^h) = n_p \Pi_P(\Phi^h) \\
\Phi^* &= \Phi^l
\end{aligned}
$$

It is immediate that all of them are in fact SPNEs, with strategies that are truthful with respect to the reservation utilities: $\underline{u}^P = 0, \underline{u}^R = n_r \Pi(n_r) - n_p \Pi(n_e) - \eta \Delta U/n$.

The case in which $\eta > \bar{\eta}$ can be treated symmetrically.

Proposition 1' Define

$$w^h \equiv \min \left\{ w : \left[\frac{\Phi^l}{\bar{\Phi}} \right]^{\frac{1}{\varepsilon - 1}} < w \right\}.$$

w^h is then the lowest wage level of those that block entry. Condition $5'$ insures that

$$w^h < \left[\frac{n_r R(n_r; 1)}{n_e R(n_e; 1) - n_p I} \right]^{\frac{1}{\varepsilon - 1}},$$

so that total profits are higher if $m = n_r$ and $w = w^h$ that if $m = n_e$ and $w = 1$. First, one has to note that if w*, Φ^*, $C_P^*(.)$, $C_R^*(.)$ is a truthful SPNE than it is constrained efficient, in the sense that there does not exist another couple (w', Φ') such that:

$$
\begin{aligned}
\Pi_R(w', \Phi') &\geq \Pi_R(w^*, \Phi^*) \\
\Pi_P(w', \Phi') &\geq \Pi_P(w^*, \Phi^*) \\
U(w', \Phi') &\geq U(w^*, \Phi^*)
\end{aligned}
$$

with at least one of the inequalities holding strictly. Indeed, if this were the case, then one would have

$$
\begin{aligned}
C_P^*(w', \Phi') &\geq C_P^*(w^*, \Phi^*) \\
C_R^*(w', \Phi') &\geq C_R^*(w^*, \Phi^*) \\
U(w', \Phi') &\geq U(w^*, \Phi^*)
\end{aligned}
$$

with at least one strict inequality and the politician would choose (w', Φ') instead of (w^*, Φ^*). This simple fact implies that in equilibrium if $w > 1$ then w=w^h : in fact, if

$$
1 < w < w^h
$$

entry is not deterred and the profits of both groups as well as social welfare would be greater with w=1. If w>w^h either entry is not deterred or it is, but in this latter case it could be done more efficiently if the politician chose (Φ^l, w^h). Efficiency also implies that in equilibrium w=w^h only if $\Phi = \Phi^l$. So there remain just two candidate equilbrium outcomes: $(\Phi^h, 1)$ and (Φ^l, w^h).

The logic behind the first part of the proof of proposition 1 applies, provided one re-defines $\Delta\Pi_R = R(n_r; w^h) - R(n_e; 1)$ (which incidentally is strictly greater than zero tanks to condition 3 and conditon 5' (ii)), $\Delta\Pi_P = R(n_e; 1) - I$, and $\Delta U = U(n_e; w^h) - U(n_r; 1)$: as in the one-dimensional case, $(\Phi^h, 1)$ is not an equilibrium if $\eta < \bar\eta$ (condition 5'(ii) guarantees that in this case too $\bar\eta > 0$). On the other hand, it is immediate to check that if $\eta < \bar\eta$, truthful strategies with reservation utilities:

$$
\begin{aligned}
\underline{u}^R &= n_r \Pi(n_r; w^h) - n_p \Pi(n_e; 1) - \frac{\eta}{n}[U(n_e; 1) - U(n_r; w^h)] \\
\underline{u}^P &= 0
\end{aligned}
$$

constitute an equilbrium, and if this strategies are played, the policy maker chooses $(\Phi^*, w^*) = (\Phi^l, w^h)$ (indeed, we just need to check that $(\Phi^h, 1)$ is not a profitable deviation). The case in which $\eta > \bar\eta$ is symmetric.

Proposition 2 We have to consider three cases:

− β(1-μ)$en_r(\Pi_R(\Phi^l) - \Pi_R(\Phi^h)) < 1$: Suppose that one of the parties chooses Φ^h and the other chooses Φ^l. The marginal benefit of contributions to the party which choses Φ^l for lobby R and, a fortiori, the marginal benefits of contributions to the party which chooses Φ^h for lobby L, are lower than the marginal cost, so the lobbies will never contribute to a party whatever the electoral platforms. Choosing the social optimum is then a dominant strategy for both parties. As a consequence, the unique equilibrium has $\Phi^{A*} = \Phi^{B*} = \Phi^h$.

− β(1-μ)$en_r(\Pi_R(\Phi^l) - \Pi_R(\Phi^h)) > 1 > \beta$(1-$\mu$)$en_p(\Pi_P(\Phi^h) - \Pi_P(\Phi^l))$: the parties know that if they choose different policies, lobby R will contribute to the party which proposes Φ^l, up to the point at which its contribution exhausts all the gains it would enjoy from a worse corporate governance regime, i.e. up to the point at which its contribution is equal to $n_r[\Pi_R(\Phi^l) - \Pi_R(\Phi^h)]$. On the contrary, lobby P will not make contributions in favour of the party which proposes Φ^l, as the marginal benefit of doing so is higher than the marginal cost. Suppose, without loss of generality, that $\Phi^A = \Phi^l$ and $\Phi^B = \Phi^h$. The contribution of lobby R to party A amounts to

$$C_R^A(\Phi^l, \Phi^h) = \min[\eta \frac{U(\Phi^h) - U(\Phi^l)}{n} + \frac{1}{2\beta(1-\mu)e}; n_r(\Pi_R(\Phi^l) - \Pi_R(\Phi^h))]$$

(to understand this formula, note that if $C_R^A(\Phi^l, \Phi^h) = \eta\frac{U(\Phi^B)-U(\Phi^A)}{n} + \frac{1}{2\beta(1-\mu)e}$, A wins with probability one. The probability of party A winning is then equal to:

$$\min\{1, F_b[-\mu f\frac{U(\Phi^h) - U(\Phi^l)}{n} + (1 - \mu)en_r(\Pi_R(\Phi^l) - \Pi_R(\Phi^h)]\}$$

If this probability is higher (lower) than one half there is just one equilibrium, in which both parties choose Φ^l (Φ^h). In particular:

$$P_A > \frac{1}{2} \text{ iff } \eta < \frac{n_r(\Pi_R(\Phi^l) - \Pi_R(\Phi^h))}{(U(\Phi^h) - U(\Phi^l))/n}.$$

So that if $\eta < \bar{\eta} \equiv \frac{n_r(\Pi_R(\Phi^l)-\Pi_R(\Phi^h))}{(U(\Phi^h)-U(\Phi^l))/n}$, both parties choose Φ^l, while if $\eta > \bar{\eta}$ both parties choose Φ^h.

− β(1-μ)$en_p(\Pi_P(\Phi^h) - \Pi_P(\Phi^l)) > 1$. As before, we have to analyze what happens after the histories in which the two parties propose different policies (let us consider without loss of

generality the case in which $\Phi^A = \Phi^l$ and $\Phi^B = \Phi^h$). Again one has:

$$C_R^A(\Phi^l, \Phi^h) = \min[\eta \frac{U(\Phi^h) - U(\Phi^l)}{n} + \frac{1}{2\beta(1-\mu)e} + C_P^B(\Phi^l, \Phi^h); n_r(\Pi_R(\Phi^l) - \Pi_R(\Phi^h))]$$

The intuition behind the formula is exactly the same as in the previous case, but now the best response takes into account the negative impact on P_A of the contributions of lobby P to B. Symmetrically:

$$C_P^B(\Phi^l, \Phi^h) = \max\{0, \min[-\eta \frac{U(\Phi^h) - U(\Phi^l)}{n} + \frac{1}{2\beta(1-\mu)e} + C_R^A(\Phi^l, \Phi^h); n_p(\Pi_P(\Phi^h) - \Pi_P(\Phi^l))]$$

The Nash equilibrium of the subgame is found by looking for the point at which the two best response functions cross. It is easy to see that this point exists and is unique. In particular, the Nash equilibrium in the subgame depends on η. If

$$\eta \leq \frac{n_r[\Pi_R(\Phi^l) - \Pi_R(\Phi^h)] - n_p[\Pi_P(\Phi^h) - \Pi_P(\Phi^l)] - \frac{1}{2\beta(1-\mu)e}}{(U(\Phi^h) - U(\Phi^l))/n},$$

one has

$$\begin{aligned} C_P^B(\Phi^l, \Phi^h) &= n_p(\Pi_P(\Phi^h) - \Pi_P(\Phi^l)) \\ C_R^A(\Phi^l, \Phi^h) &= \eta(U(\Phi^h) - U(\Phi^l)) + \frac{1}{2\beta(1-\mu)e} + n_p(\Pi_P(\Phi^h) - \Pi_P(\Phi^l)) \end{aligned}$$

and A wins with probability 1. If

$$\frac{n_r[\Pi_R(\Phi^l) - \Pi_R(\Phi^h)] - n_p[\Pi_P(\Phi^h) - \Pi_P(\Phi^l)] + \frac{1}{2\beta(1-\mu)e}}{(U(\Phi^h) - U(\Phi^l))/n} \geq \eta,$$

but

$$\eta > \frac{n_r[\Pi_R(\Phi^l) - \Pi_R(\Phi^h)] - n_p[\Pi_P(\Phi^h) - \Pi_P(\Phi^l)] - \frac{1}{2\beta(1-\mu)e}}{U(\Phi^h) - U(\Phi^l)},$$

one has

$$C_P^B(\Phi^l, \Phi^h) = n_p(\Pi_P(\Phi^h) - \Pi_P(\Phi^l))$$

$$C_R^A(\Phi^l, \Phi^h) = n_r(\Pi_R(\Phi^l) - \Pi_R(\Phi^h))$$

and A wins with probability

$$F_b[-\mu f(U(\Phi^h) - U(\Phi^l)) + (1 - \mu)en_r(\Pi_R(\Phi^l) - \Pi_R(\Phi^h) - (1 - \mu)en_p(\Pi_P(\Phi^h) - \Pi_P(\Phi^l)],$$

which is less that one half if and only if

$$\eta \leq \frac{n_r[\Pi_R(\Phi^l) - \Pi_R(\Phi^h)] - n_p[\Pi_P(\Phi^h) - \Pi_P(\Phi^l)]}{(U(\Phi^h) - U(\Phi^l))/n}.$$

Finally, if:

$$\eta > \frac{n_r[\Pi_R(\Phi^l) - \Pi_R(\Phi^h)] - n_p[\Pi_P(\Phi^h) - \Pi_P(\Phi^l)] - \frac{1}{2\beta(1-\mu)e}}{(U(\Phi^h) - U(\Phi^l))/n},$$

$$C_P^B(\Phi^l, \Phi^h) = \max\{0, -\eta(U(\Phi^h) - U(\Phi^l)) + \frac{1}{2\beta(1-\mu)e} + n_r(\Pi_R(\Phi^l) - \Pi_R(\Phi^h)\}$$

$$C_R^A(\Phi^l, \Phi^h) = n_r(\Pi_R(\Phi^l) - \Pi_R(\Phi^h))$$

and A loses with probability 1. When it comes to the first stage of the electoral game, then, it follows that $\Phi^{A*} = \Phi^{B*} = \Phi^l$ (resp. $\Phi^{A*} = \Phi^{B*} = \Phi^h$) if and only if η is less than (respectively higher than):

$$\frac{n_r[\Pi_R(\Phi^l) - \Pi_R(\Phi^h)] - n_p[\Pi_P(\Phi^h) - \Pi_P(\Phi^l)]}{(U(\Phi^h) - U(\Phi^l))/n}.$$

Proposition 2': In a truthful SPNE no candidate will ever choose an equilibrium which is constrained inefficient (see the proof of proposition 2 above for the definition of constrained inefficiency). To determine what equilibrium is actually played it is then enough to study the equilibrium in the subgame among lobbies after the history $((\Phi^l, w^h), (\Phi^h, 1))$. But it is immediate to see that the steps here are exactly the same as in the proof of proposition 2 once one substitutes $n_r[\Pi_R(\Phi^l) - \Pi_R(\Phi^h)]$ with $n_r[\Pi_R(\Phi^l, w^h) - \Pi_R(\Phi^h, 1)]$, $n_p[\Pi_P(\Phi^h) - \Pi_P(\Phi^l)]$ with $n_p[\Pi_P(\Phi^h, 1) - \Pi_P(\Phi^l, w^h)]$ and $U(\Phi^h) - U(\Phi^l)$ with $U(\Phi^h, 1) - U(\Phi^l, w^h)$.

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