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Co-evolution of politics and corporate governance

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ABSTRACT

In the OECD countries, there exists a negative cross-country correlation between an economy's degree of employment protection and its degree of corporate ownership dispersion. One explanation is that employees' political rights influence corporate governance: systems characterized by strong employees' rights tend to be balanced by strong and concentrated owners. In this approach, the separation between ownership and control is only possible when unions and social democratic parties are sufficiently weak. In this paper we argue that causation runs also in the opposite direction (from strong concentrated ownership to strong employees' protection) and leads to multiple equilibria characterized by alternative co-evolution paths of politics and corporate governance. To empirically assess our theoretical arguments we estimate a simultaneous equation model for workers rights' protection and corporate ownership structure determination by three-stage least squares in a sample of 21 OECD countries. We conclude by arguing that the relative relevance of each flow of causation has important economic policy implications.

1. Introduction

Countries, characterized by strong employees' rights, tend to exhibit a strong and concentrated corporate ownership structure (see Roe, 2003, and below in this paper). Fig. 1 plots an index of employment protection against an index of ownership dispersion[1] for a sample of 21 OECD countries. As it is apparent from the fitted regression line, there is a significant negative cross-country correlation between the degree of protection of workers' rights and the degree of corporate ownership dispersion.

Continental Europe and Japan cluster in the North-West quadrant (strong employment protection legislation and concentrated ownership), the extreme positions being occupied by France, Greece, Italy, Portugal, and Spain. At the other extreme (with the lowest degree of protection of employees' rights and the highest degree of ownership dispersion) is placed the US. A possible interpretation of this phenomenon is offered by Roe (2003), which suggests a causality relation that moves from employees' political rights to corporate governance forms. Roe's contribution is a valid and interesting alternative to the legal origin approach[2]: according to him the separation of ownership and control that characterizes many American large firms is not due to "better" corporate laws that protect minority shareholders but to the absence of a "social democratic" political pressure that, in absence of strong and present owners, would induce managers to collude with employees. The political power of the employees complicates the well-known agency problem that characterizes even the standard American public company. In this paper we want to stress the importance of another opposite direction of causation moving from the form of corporate governance and of ownership structure to employees political rights and stronger job protection. When there is no separation between ownership and control, employees are more likely to seek protection from the interference of the dominant block holders and of their relatives and friends. Thus, while employees' rights may prevent the separation between ownership and control, conversely the existence of pow-

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[1] Given a sample of 10 medium-sized firms with stock market capitalization in 1995, *Ownership* is an index that equals one if there is no controlling shareholder and zero otherwise (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998). *Employment protection* stands for employment protection legislation and is averaged over the period 1993–2002 (OECD, 2004).

[2] See La Porta et al. (1998) and La Porta, Lopez-de-Silanes, and Shleifer (1999). In some of the following footnotes, we will consider some comparative disadvantages of the legal origins explanation. See Section 3 for the empirical relevance of this theory.

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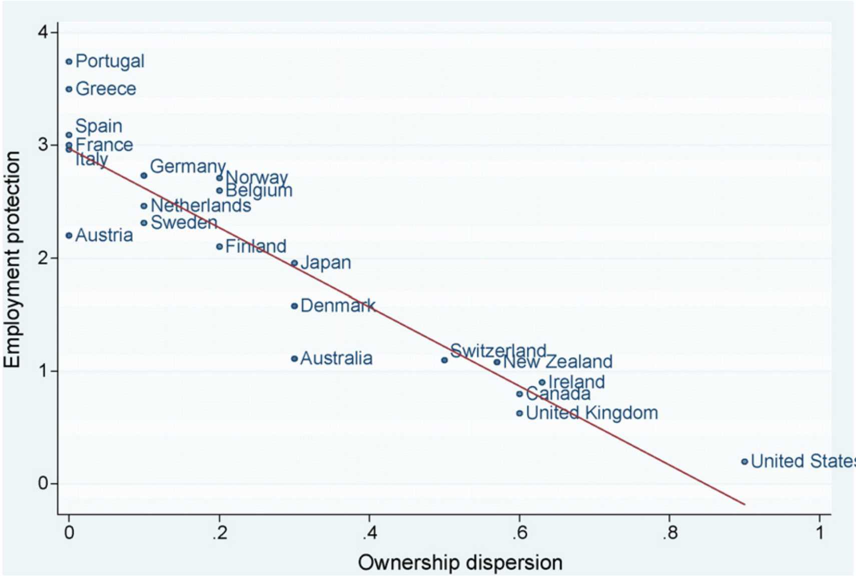

Fig. 1. Employment protection and ownership dispersion. Correlation coefficient = −0.9249 (*P*-value = 0.0000).

erful block holders may also favour some sort of "social democratic reaction".[3]

In the following section, we will consider in more detail this two-ways relation between corporate governance and workers' rights and its interaction with the productive capabilities of the different countries. We argue that, in general, these relations can be better characterized in terms of institutional complementarities rather than as one-way relations from employment rights to corporate governance forms. Two different equilibria may arise from these complementarities: a *dispersed equilibrium*, where neither employees nor owners concentrate their interests, and a *concentrate equilibrium*, where the interests of the employers are represented by few block holders and workers express their collective interests in social democratic parties and/or strong unions. We spell out the general conditions under which we believe that each direction of causation is more relevant and we consider the role of the alternative economic policies (and, more in general, the political traditions and origins of different countries) to push the economy towards a particular equilibrium.

In Section 3, we gauge the empirical relevance of our multiple equilibria argument, studying the co-determination of employment protection and corporate governance forms in a sample of 21 OECD countries. We find support for a strong and negative effect of corporate ownership dispersion on workers rights' protection, and for a strong and negative influence of "social democracy" on the ownership dispersion index.

Finally, in the last section, we consider the economic policy implications of our analysis for European corporate governance in a framework where, according to some, the pressure of globalization seems to imply a sort of obligatory convergence to the US model of corporate governance.

2. Politics, corporate governance rights and capabilities

In his book "Strong Managers, Weak Owners" Mark Roe (1994, p. 4) observed:

> "Although the defects of separation are today in the spotlight – without their own money on the line managers can pursue their own agendas, sometimes to the detriment of the enterprise – separation of ownership and control was historically often functional (and still is), because it allows skilled managers without capital to run the firm and separates unskilled descendants from control of the firm they could not run well. Sometimes successful founders became poor managers, because their accumulated wealth allowed them to slack off but still live well as historically was a problem in Britain."

Chandler (1990) illustrated this positive aspect of the separation between ownership and control, when he contrasted American and German managerial firms with British firms at the time of the second industrial revolution.[4] Especially in the US, salaried managers with little or no equity in the enterprises, for which they worked, participated in making decisions concerning current production and distribution, as well as in planning and allocating resources for future production.[5]

Managerial hierarchies do not simply imply the usual problem that interests of the managers should be made consistent with those of the shareholders but also a broader and, somehow, opposite problem: that of the consistency between the "family allocation of control" and the internal meritocracy of the firm. In order to work well, managerial hierarchies have to be organized according to fair rules of advancement in their career that may easily clash with the allocation of jobs that is done on the basis of family connections. In spite of the well-known agency problems, the separation between ownership and control had some positive effects because it implied a prevalence of competence allocation rules over family connection

[3] Even if Roe emphasizes the first relation of causation, in some passages (e.g. 2003, p. 78) he points out that also the second relation of causation is important and reinforces the historical stability of a particular arrangement. In our paper we try to examine the consequences of considering simultaneously both directions of causation and argue that, even if one direction of causation may have determined the establishment of a particular "equilibrium", both directions of causation are likely to contribute to its stability.

[4] Chandler contribution clarifies how Britain was not always part of a unique Anglo-American model, as the legal origins approach would imply. For a long time, they were a typical case of the family capitalism showing evident characteristics of the corporate governance continental tradition (Franks, Mayer, & Rossi, 2005).

[5] In Coasian terms, managers centralized transaction introducing complex private orderings. In this way, as Alfred Sloan emphasized, top management ended up having also a "judicial function" (Pagano, 2000).

rules. While small firms could easily work on the basis of a family allocation of control, this was much harder for large firms. For this reason, in spite of all its agency problems, managerial capitalism was bound to prevail.

The clash between dynastic and competence criteria to assign jobs preceded the advent of modern market economies. Kings and feudal lords followed dynastic rules while the Catholic Church did not. Berman (1985) has advanced the fascinating thesis that the papal revolution that occurred at the beginning of the last millennium laid the foundations of modern legal systems and of the first capitalist economy that was developed in Italy in the thirteenth century. One key advantage of the Church was that (at least explicitly) jobs were not assigned on a dynastic basis but were rather given according to the capacity to carry out a (god-given) mission.

With their competing Churches and its early deeply rooted passion for spontaneous rule making, the US were ideally suited to develop meritocratic institutions. Since the beginning,[6] it lacked also the sense of class divisions that underlies the dynastic assignment of many jobs in Europe. American populism created the ideal conditions to fight "economic royalists" who gathered "other people's money" to impose a "new industrial dictatorship" (Roosevelt quoted by Roe, 1994, p. 40). Managers' (and, some times, even workers') meritocracy was protected against dynastic interference of wealthy owners who were prevented from concentrating their wealth and exercise much power in the American large firms. The absence of "social democracy" was somehow related to the feeling that there was not a strong dynastic barrier and that, independently of their family background, able people could get high-ranking jobs. There was not a sense of a class bias in the achievement of economic power and no need of containing and eventually eliminating a well-defined centre of economic power. Populist politics influenced corporate governance and, in turn, the opportunities offered by the corporate governance system influenced politics and, in particular, the (under-)development of social democracy.

The two-way causation between politics and corporate governance is also evident in those countries where there were relevant class barriers and dynastic policies played an explicit role in both the political and economic sphere. In these economies, family dynasties have exercised a power that has interfered with the logic of managerial meritocracy. Wealth, family connections, proper accents, social skills and even appropriate table manners have interfered with the assignment of jobs on the basis of competence. One may call "social-democracy" the "political feeling" that people that have not been endowed with these assets have to be defended against the exercise of power of the privileged ones. Instead of blocking the concentration and growth of the power of the wealthy, the system limits and, sometimes, challenges the exercise of their power. "Social democracy" may scare owners and make it impossible the separation of ownership and control that characterizes the American corporation. However, "social democracy" was itself a reaction to a system of exercising power that was far more impermeable to non-wealthy people.

[6] "In New England, local communities had taken complete and definitive shape as early as 1650. Interests, passions, duties and rights took shape around each individual locality and were firmly attached thereto. Inside the locality there was a real, active political life which was completely democratic and republican. The colonies still recognised the mother country's supremacy; legally the state was a monarchy, but each locality was already a lively republic. The towns appointed their own magistrates of all sorts, assessed themselves, and imposed their own taxes. The New England towns adopted no representative institutions. As at Athens, matters of common concern were dealt in the marketplace and in the general assembly of all citizens" (Tocqueville, 1994, p. 44). Also the role of competing churches, and in particular the role of puritans did not escape Tocqueville remarkably anticipatory analysis.

Dispersed ownership and low degree of "social democracy" can be seen as institutional complements.[7] Similarly, concentrated ownership and high degree of "social democracy", can also be seen as institutional complements. One way of explaining these relations of complementarity is in terms of reciprocal disarmament and armament.[8] Each group can achieve a higher capacity of exercising power by concentrating dispersed interests that are bound to do worse than concentrated interests (Olson, 1971). Both capitalists and workers have to weight the benefits and the costs of collective action.

Following Milgrom and Roberts (1990) and Aoki (2001), we can describe the arms race between capitalists and employees as a supermodular game.

Suppose that we have two domains of choice $(C, W) \in S$, and two sets of individuals, namely capitalists, c, and workers, w. Capitalists choose in their domain of choice C between two alternatives $\{C_H, C_L\}$ that stand respectively for high and low concentration of their interests, and the workers choose in their domain of choice W between two alternatives $\{W_H, W_L\}$ that stand also respectively for high and low concentration of their interests. Strategy choices have a partial order, $\geq$, i.e. concentrated interests do better than dispersed interests ($H \geq C$). The concentration of interests can serve diverse purposes related to the provision of the public good for the group that are independent from what happens in the other domain. However, one important purpose of concentrating ownership and/or centralizing organizations is confronting the power that is exercised by the counterpart. The power that is consumed by each part is, in this respect, a zero-sum positional good.[9] For each part, any increase (decrease) in the power consumed by the counterpart has the effect of reducing (enhancing) its own power and of increasing its marginal benefit.

Denoting by u_c the utility that the capitalists get by choosing C_H or C_L in the domain C, the difference $u_c(C_H) - u_c(C_L)$ between the utility of high concentration of capitalist interests, C_H, and that of low concentration of capitalist interests, C_L, will be increased if the workers have chosen a high concentration of their interests, W_H, instead of a low concentration of their interests, W_L, in the domain W. Similarly, denoting by u_w the utility that the workers get from either W_H or W_L in the domain W, the difference $u_w(W_L) - u_w(W_H)$ between the utility of low concentration of workers' interests, W_L, and that of high concentration of workers' interests, W_H, will be increased if the capitalists choose a low concentration of their interests C_L instead of a high concentration of their interests C_H in the domain C.

Thus, the following two conditions will be satisfied:

$$u_c(C_H, W_H) - u_c(C_L, W_H) \geq u_c(C_H, W_L) - u_c(C_L, W_L) \tag{1}$$

$$u_w(W_L, C_L) - u_w(W_H, C_L) \geq u_w(W_L, C_H) - u_w(W_H, C_H) \tag{2}$$

Under some continuity conditions of function $u_i(\ldots)$, conditions (1) and (2) imply that game $G = \{2, (S_i, u_i, i = c, w), \geq\}$ is supermodular.[10] Furthermore, it can be proved[11] that the two strategy profiles (C_H, W_H) and (C_L, W_L) are Nash Equilibrium profiles. The first (C_H, W_H) is characterized by a high concentration of both capitalists' and workers' interests, while the second (C_L, W_L) is characterized by a low concentration of both capitalists' and workers' interests. When these two equilibria exist, using Aoki (2001)'s terminology, we can say that C_H and W_H, as well as C_L and W_L, are institutional complements.

[7] On the notion of institutional complementarity see Aoki (2001).
[8] See also Topkins (1998) and Milgrom and Roberts (1994).
[9] For a view of power as positional good as case polar to that of public goods see Pagano (1999).
[10] See Theorem 4 in Milgrom and Roberts (1990).
[11] See Theorem 5 in Milgrom and Roberts (1990).

Table 1
Political-economic asymmetries.

	Capitalist	Labour
Concentration	Economic forces	Political action
Dispersion	Political action	Economic forces

For instance, in a dispersed equilibrium, internal governance procedures may constrain unfair lay-offs, and the absence of organized unions may constrain work practices entailing an expropriation of workers wealth. In this situation there is little incentive for both workers and owners to centralize their power to prevent a possible expropriation of the other party.

The institutional complements C_L and W_L define a dispersed equilibrium where fragmented capitalist ownership and a low degree of social democracy reinforce each other:

Dispersed ownership ↔ Low degree of "social democracy".

Similarly, the institutional complements C_H and W_H define a concentrated equilibrium where concentrated capitalist ownership and high degree of social democracy reinforce each other:

Concentrated ownership ↔ High degree of "social democracy".

For instance, in this case the concentration of ownership may give owners the power to resist loose work practices damaging shareholders, while the concentration of workers' interests prevents opportunistic lay-offs and other abuses of employers' power.

In both cases, the (dis)armament of one party favours the dis(armament) of the other. Politics can push the institutions of corporate governance towards one of the two equilibria.[12]

However, this symmetric view of the role of politics must be qualified. Politics is essential to tame capitalist concentration and to induce workers' unionization but it may be irrelevant in the concentration of capitalist ownership and in the dispersion of the workers' interests. Spontaneous economic forces (by which here we mean ordinary self-seeking behaviour in standard competitive markets) have a tendency to concentrate capital and to disperse labour (or, at least, to concentrate capital more than labour).

The reason for the asymmetry, summarised in Table 1, is straightforward.

The ownership of capital can be concentrated, by the means of ordinary market transactions, in the hands of few owners and there will be a spontaneous tendency to do so whenever it increases profits. By contrast, because of non-slavery and self-ownership, the property of labour is necessarily dispersed and the concentration of labour cannot be achieved by the means of standard economic contracts. In this case, politics can be used to stop the concentration of capital or to further the concentration of labour interests in trade unions. Economic forces tend to concentrate capital and to disperse labour.

Thus, two possibilities are likely to arise:

(a) Politics is able to anticipate the economic forces leading to capitalist concentration and to prevent an arms race with labour. The result is a *dispersed equilibrium*.
(b) Economic forces anticipate political action and bring about a strong asymmetry between concentrated capital and dispersed labour. Political action (in particular the need of achieving social peace in a democratic society) is stimulated by this asymmetry and results in the concentration and protection of labour interests. This eventually leads to a *concentrated equilibrium*.

Once we are in a *dispersed equilibrium* the successful dispersion of capitalist owners and that of the workers reinforce each other but, in the process of a reaching equilibrium, causation is likely to have moved from politics to economics. It is necessary to have a strong policy to anticipate the concentration of capitalists' interests and, in this way, block also the fundamental motivation for "social democracy". Similarly, once we are in a *concentrated equilibrium*, centralized capitalist interests and "social democracy" reinforce each other but in this case causation is likely to have mainly moved from forms of concentrated corporate governance to political action. Here, politics is expected to have been anticipated by spontaneous capitalist concentration and is likely to have reacted to it by favouring a comparable concentration of interests on the workers' side. When politics is not able to anticipate capitalist concentration, it tends to react to it later. The result is "some degree of social democracy".[13]

The historical conditions under which a *dispersed equilibrium* is likely to arise are rather special and, perhaps, they were fully approximated only by the US.[14] When the need for large scale companies came about, no other country had so many citizens who had come from a massive and, sometimes, conscious exit from dynastic feudal relations. Many of them had been in search of religious freedom. Moreover, by revolting against the British colonial rule, their ancestors had also broken with the deference for established family dynasties. Only in America such a strong ideology against "economic royalists" and "industrial dictatorship" (Roosevelt quoted by Roe, 1994, p. 40) pre-existed the age of large scale capitalist firms. Some key elements of this ideology were the distaste for the type of concentrated dynastic interests that had characterized the old continent. Social admiration was moved from people born wealthy to "self-made" individuals. Thus, the meritocratic climbing of a corporate managerial ladder was far more compatible with American ideology than the deferential respect for the concentrated power of the capitalist dynasties. Managers did not need to plot against concentrated owners. They were the unintended beneficiaries of a political struggle against concentrated interests (Roe, 1994). The public company ruled by managers was itself the unintended outcome of this struggle and prevailed because its internal promotion system fitted better American ideology than dynastic succession. The very special conditions of American history allowed American politics to anticipate the concentration of the owners' interests in the way predicted by our general argument about *dispersed equilibria*: causation was mainly moving from politics to corporate governance.

The historical conditions for a *concentrated equilibrium* are quite common. In many other countries, some form of concentration of ownership interests went together with the growth of large-scale

[12] Observe that in the standard arms race argument one equilibrium (disarmament) is likely to be Pareto superior. By contrast, in our case it is not possible to rank equilibria. Both concentrated and dispersed equilibria require costly social and political institutions and one cannot a priori state which one may yield higher welfare.

[13] Following Roe (2003) we use this term "social-democracy" to indicate many alternative ways in which we can have forms of protection of employment and other workers' rights. The term includes many different arrangements such as those where employers get some protection at firms' level and the cases in which they are protected by the law. In this respect they include cases as different as Japan and Italy (Barca, Iwai, Pagano, & Trento, 1999) which, in other respects, lie at opposite poles.

[14] Fig. 1 shows that the UK and Switzerland are cases close to the US. However, the transition of UK from a concentrated to a dispersed equilibrium is an incomplete and recent phenomenon, which occurred during the Thatcher years (Franks et al., 2005). Similarly to the US, Switzerland had an early exit from feudal relations and established very early inclusive and decentralized democratic institutions (Steinberg, 1996) and its closeness to the US case seems to confirm our hypothesis. Observe that UK and Swiss histories seem to contradict the legal origin approach: the UK, the classical case of common law legal origin, moved from one equilibrium to the other while Switzerland, in spite of its continental legal origins, is close to the case of a dispersed equilibrium with a very vivacious stock market.

enterprises, and family dynasties were usually involved in the management of firms and in the appointment of managers. In many cases, financial institutions made the exercise of this power compatible with the needs of large-scale enterprises by putting in the hands of the "economic royalists" the availability of "other people's money". The limited diversification of risks and the poor incentives for professional managers were (partially) compensated by the capture of many important management jobs by the ruling families and by a decrease of the agency problems arising from the separation between ownership and control. The inability of politics to anticipate the "armament of capitalism" induced later a political reaction to arm labour by concentrating and organising its interests. Since, in most countries, politics could not limit the concentration of the ownership interests, the resulting model of corporate governance caused a "social democratic" political reaction. Thus, in most European countries the direction of causation is consistent with the general prediction concerning the achievement of *concentrated equilibria*: politics reacted only lately to a model of corporate governance serving the concentrated interests of capitalist dynasties.

3. The empirical relation between politics and corporate governance systems

3.1. Related empirical literature

In this section, we carry out an econometric analysis to gauge the two-way relation between corporate governance and "social democracy" that is suggested by the theory and the historical evidence reported in the previous paragraph. To elicit our purpose we also consider other theories for workers' rights protection and corporate governance forms determination. These can be distinguished in two broad groups: legal theories (La Porta et al., 1998; La Porta, Lopez-de-Silanes, & Shleifer, 1999; La Porta, Lopez-de-Silanes, & Shleifer, 2006) and political theories (Pagano & Volpin, 2005; Roe, 2000).

The former maintain that cross-country differences in labour and corporate regulation are rooted in the national legal traditions the various countries have inherited from their colonizers: British law economies are expected to regulate the least and French law countries the most, Scandinavian and German legal tradition countries being in the middle. Accordingly, on the one side (labour protection), Botero, Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2004) find that workers are protected more in countries with Civil legal tradition than in countries with Common laws. On the other (corporate governance), La Porta, Lopez-de-Silanes, and Shleifer (1999), starting from a sample of 27 wealthy economies, show that British law countries are characterized by the highest degrees of shareholder protection and of corporate ownership dispersion, whereas French legal tradition countries have the least. Furthermore, they observe that widely held firms are more common in the former group of countries, while family-controlled and state-controlled firms are more numerous in the latter. La Porta et al. (2006) find that this relations also hold in a larger sample of 49 countries, and provide evidence on the effects of security laws on stock market development.

The latter group of theories emphasizes the role of the political and institutional environment surrounding the firm to influence economic outcomes in the labour and financial markets. Pagano and Volpin (2005) argue that proportional electoral systems lead to stronger employment protection and weaker shareholder protection than majoritarian systems. Thus, in a political game, the former favour entrepreneurs and employees and the latter advantage the rentiers. The authors examine the simultaneous determination of shareholder and employment protection in a sample of 21 OECD countries; they find that the proportionality of the voting system is negatively correlated with the former variable and positively correlated with the latter. Roe (2000, 2003) highlights another aspect of the political system, what he calls "social democracy": leftist government, strict labour protection regulation and generous government consumption expenditure. Using political orientation as a proxy for "social democratic pressure" in a sample of 16 OECD countries, he finds that countries with a left-wing government tend to have a more concentrated corporate ownership structure, while countries with right-wing government exhibit a more dispersed one. Finally, Mueller and Philippon (2006) move the focus on the quality of labour relations and show that (family) concentrated ownership is relatively more common in countries where labour relations are hostile, while dispersed ownership is prevalent in countries characterized by cooperative labour relations.

3.2. Data source and variables' definition

Considering a sample of 21 OECD countries,[15] we examine the simultaneous determination of employment protection and ownership structure through the lens of our multiple institutional equilibria hypothesis. Accordingly, we estimate a two simultaneous-equation system where employment protection is allowed to react to ownership concentration (reaction of political forces), and ownership concentration is allowed to respond to "social democratic pressure" (reaction of economic forces), also controlling for the other determinants of the two variables suggested by the literature.

Variables' source and definitions are described as follows. *Epl* (Employment protection legislation) is an index normalised to range from zero to six, with higher scores representing stricter regulation, and is averaged over the 1993–2002 period (source: OECD, 2004). *Ownership* is the ownership dispersion index: given a sample of 10 firms with stock market capitalization of common equity at the end of December of 1995 (of at least $500 million), the index is equal to one if there is no controlling shareholder using 20% as criteria for (direct plus indirect) control and zero otherwise (source: La Porta, Lopez-de-Silanes, & Shleifer, 1999). *British* and *French* are dummy variables for respectively British and French legal origin (source: World Bank—Easterly & Sewadeh, 2002). *Prop* is 1986–1990 average proportionality, where the proportionality index equals three if 100% of the seats are assigned by proportional rule, equals two if the majority of the seats are assigned by proportional rule, one if the proportional rule applies to the minority of the seats and zero otherwise (source: Pagano & Volpin, 2005). *Union* stands for net union density and is the ratio of total reported union members (gross minus retired and unemployed members) to wage and salary employees (source: OECD, 2004). *Shareholder protection* ranges from zero to six. It is obtained adding one if: shareholders are allowed to mail their proxy vote; shareholders are not required to deposit their shares before the general shareholder meeting; cumulative voting or proportional representation of minority shareholders is permitted; there exist mechanisms for protection of oppressed minorities; the minimum percentage of share capital to call for an extraordinary shareholders meeting is less than or equal to 10%; shareholders are entitled of pre-emptive rights that can be waved only by a shareholders meeting (source: La Porta et al., 1998). *Left* is a proxy for "political ideology" and is measured by the cumulative number of years from 1975 to 2000 in which the government has been left-wing (Beck, Clarke, Groff, Keefer, & Walsh, 2001). *Gov effectiveness* is a proxy for government effectiveness (quality of public service provision and

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

Table 2
Descriptive statistics—cross-country data.

Variable	Obs	Mean	Std. dev.	Min	Max
Epl	21	2.038	1.015	0.200	3.745
Ownership	21	0.267	0.267	0.000	0.900
British	21	0.286	0.463	0.000	1.000
French	21	0.333	0.483	0.000	1.000
Gov effectiveness	21	1.663	0.413	0.790	2.210
Prop	21	1.911	1.132	0.000	3.000
Union	21	37.365	21.256	9.822	84.056
Shareholder prot	21	3.190	1.167	1.000	5.000
Left	21	10.524	6.675	0.000	26.000
Unemployment	21	7.807	3.495	3.350	18.160
Log GDP	21	26.828	1.327	24.895	29.722
Gov consumption	21	19.625	3.621	14.184	27.733
Mkt cap	21	0.558	0.387	0.067	1.443

of bureaucracy, competence of civil servants, independence of the civil service from political pressures, credibility of the government's commitment to policy) in 2000 and ranges between −2.5 and 2.5 with higher values standing for higher government effectiveness (source: Kaufmann, Kraay, & Mastruzzi, 2003).

In the robustness checks we also use: (1) *Unemployment* that is the average unemployment rate in the 1993–2002 period (source: World Bank, 2004). (2) *Log GDP* that is the logarithm of gross domestic product per capita (in US dollars) averaged over the 1993–2002 period (source: World Bank, 2004). (3) *Gov consumption* that is government consumption expenditure expressed as percentage of GDP averaged over the 1993–2002 period. General government final consumption expenditure includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defence and security, but excludes government military expenditures (source: World Bank, 2004). (4) *Mkt cap* that is the ratio of stock market capitalization held by small shareholders to GDP averaged over the 1996–2000 period (source: La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1999; La Porta et al., 2006). Table 2 reports descriptive statistics.

3.3. Estimation results

We consider the following cross-country two-equation model:

$$Epl_i = \beta_0 + \beta_1 British_i + \beta_2 French_i + \beta_3 Gov_i + \beta_4 Prop_i + \beta_5 Union_i + \beta_6 Ownership_i + \varepsilon_i \qquad (3)$$

$$Ownership_i = \gamma_0 + \gamma_1 British_i + \gamma_2 French_i + \gamma_3 Gov + \gamma_4 Prop_i + \gamma_5 Antidirector_i + \gamma_6 Left_i + \varsigma_i \qquad (4)$$

where variables' definitions are given in the previous subsection. As one can notice, according to our institutional equilibria argument, we allow employment protection to react to corporate ownership structure (in the hypothesis that economic forces were able to anticipate political action) and, simultaneously, corporate ownership structure to react to the "political ideology" proxy (in the event politics was able to anticipate economic forces). As a consequence, except very special assumptions, ε_i will be correlated with *Ownership*. Thus, we jointly estimate the two equations using a three-stage least squares procedure (3SLS thereafter). First (Ist stage), endogenous variables are regressed on the instruments. Second (IInd stage), the error covariance matrix of each equation is estimated. Finally (IIIrd stage), the covariance matrix obtained in the previous stage is used in a generalized least square (GLS) estimation. The last two steps are iterated up to convergence. According to our hypothesis, we treat *Ownership* as an endogenous regressor in the first equation, allowing it to covariate with ε_i; all the other regressors are used as instrumental variables in the first stage. From a statistical point of view a "good" instrument must have two fundamental properties:

(i) Relevance. The instruments must be significantly correlated with the instrumented variables. To statistically verify this condition, we implement the following two control checks: the first-stage *F*-statistics must be highly statistically significant (Staiger & Stock, 1997), and the first stage *R*-sq, as a rule of thumb, must be greater than 30% (Shea, 1997).
(ii) Exogeneity. The instruments must be exogenous. The validity of this hypothesis is verified by implementing the Hansen J-test and Sargan tests for overidentifying restrictions.

Table 3 shows our estimation results. The second and the third columns of the table report the output related to the full model. As one can notice our institutional equilibria argument finds strong support in the data. Indeed, employment protection turns out to be associated negatively and in a statistically significant way to the measure of dispersion of corporate ownership, whereas, in turn, dispersion of widely held firms negatively respond to the "political ideology" measure suggested by Roe (2003). Nonetheless, we also verify the effects of the other variables included in the system in the light of the previous literature. As one can notice, the effect of British (French) legal origin is negative (positive) in the first equation and positive (negative) in the second one, and turns out always statistically significant (at least at the 15% level). This conclusion is consistent with the results obtained by Botero et al. (2004), La Porta et al. (2006) and Pagano and Volpin (2005). Consistently with Botero et al. (2004), we also find that union density does not exert a statistically significant influence on employment protection legislation. While the proportionality of the voting system enters the two equations with the sign suggested by Pagano and Volpin (2005)'s argument, the associated coefficient is statistically significant only in the first equation regression.[16] Furthermore, consistently with La Porta et al. (2006) shareholder protection exerts a positive and statistically significant effect on ownership dispersion. Finally, the control variable for government effectiveness negatively affects employment protection, while influences positively the ownership dispersion index (coherently with what found by La Porta et al., 2006).

Given the small number of observations, we also consider an abridged version of the model specified according to a general-to-specific procedure: starting from the full model which includes the all list of candidate independent variables, we drop (one-by-one) explanatory variables that result not statistically significant according to the Student's *t*-test (adopting the 10% significance level as a criterion), and estimate the resulting abridged model. Results, which do not alter our main conclusions, are reported in the forth and fifth columns of Table 3.

To validate our strategy we need to check relevance and exogeneity of the instruments used in the system estimation. Results are reported in Table 3. As one can notice the requirements on the *F*-statistics and on the *R*-sq are always largely satisfied, indicating that the instruments are sufficiently correlated with the instrumented variables. Furthermore, the Hansen J-test and the Sargan test support the validity of our instruments, suggesting that instrumental variables are not significantly correlated with the error terms in Eqs. (3) and (4).

[16] Notice that this variable is likely to be endogenous to other variables of the political system (see, for instance, Alesina, Glaeser, & Sacerdote, 2001). It is dropped in the abridged version of the model as explained in the text.

Table 3
Cross-country regressions—3SLS: main results.

	Full model		Abridged model	
Dependent var.	Employment protection	Ownership dispersion	Employment protection	Ownership dispersion
British	−0.4167 (0.138)	0.2116 (0.020)	−0.6899 (0.034)	0.2558 (0.004)
French	0.4148 (0.037)	−0.1713 (0.009)	0.5642 (0.005)	−0.2078 (0.001)
Gov effectiveness	−0.5872 (0.045)	0.1106 (0.120)	−0.3905 (0.030)	
Prop	0.1694 (0.045)	−0.0217 (0.448)		
Union	−0.0043 (0.237)			
Ownership	−1.6177 (0.021)		−1.4695 (0.050)	
Shareholder prot		0.0517 (0.094)		0.0538 (0.079)
Left		−0.0129 (0.002)		−0.0127 (0.003)
Constant	3.2635 (0.000)	−0.0910 (0.577)	3.0885 (0.000)	0.2246 (0.021)
F-stat	52.25 (0.000)	19.09 (0.000)	59.36 (0.000)	24.71 (0.000)
R-sq	0.9401	0.8418	0.9227	0.8211
F-stat (Ist stage)	17.92 (0.000)	10.18 (0.000)	21.21 (0.000)	15.58 (0.000)
R-sq (Ist stage)	0.9061	0.8457	0.8761	0.8385
Hansen J-stat	1.08 (0.956)	0.51 (0.999)	0.72 (0.949)	0.45 (0.978)
Sargan stat	5.58 (0.349)	0.52 (0.991)	3.09 (0.542)	2.04 (0.728)

Note: Small sample correction implemented. *P*-values from White's heteroskedasticity-consistent S.E. in brackets.

3.4. Robustness checks

In this paragraph we extend our empirical model to include other factors possibly associated with employees' protection and ownership dispersion. This test is twofold. First, we gauge the strength of an independent link between employees' protection and ownership dispersion, and challenge the robustness of the assessed results to the influence of additional information channels. Second, we test the theoretical implication of our theory considering the possible role of variables that have been left out of our theoretical model. In Table 4 we report econometric output obtained including the unemployment index (IInd and IIIrd columns) and the log GDP per capita (IVth and Vth columns) in Eqs. (3) and (4). We notice that our main conclusions are robust, notwithstanding the small number of observations. Indeed, the measure of ownership dispersion turns out to affect negatively and in a statistically significant way the index of employment protection, while the left power variable has a negative and statistically significant effect on corporate ownership dispersion. The estimated coefficients on the other regressors included in the model maintain the same sign reported in Table 3. Finally, the unemployment index results to influence positively the dependent variable in the first equation, and to exert a negative effect in the second equation (both coefficients are significant at the 10% confidence level); the log GDP per capita is not statistically significant at any conventional level.

Table 4 also reports tests for exogeneity and relevance of the instrumental variables. Again we are induced to never reject the null hypothesis of instruments' validity.

In the remaining part of this paragraph we challenge the robustness of our results to the particular choice of the measures of social democracy and of ownership dispersion adopted so far. Accordingly, we first replicate the cross-country regression substituting the proxy for political ideology with government consumption as percentage of GDP (also used by Roe, 2003). Results are reported in Table 5 (IInd and IIIrd columns).

We can confirm our previous finding that the proxy for social democracy (now represented by the ratio between government consumption and GDP) has a negative and statistically significant impact (although at a smaller confidence level) on corporate ownership dispersion. All the other conclusions are also corroborated, in particular the estimated coefficient on *Ownership* in the first equation turns out negative and statistically significant at the 5% level. Finally, the results of the tests on the instruments are in favour of the validity of our choice.

Second, we substitute a measure of stock market capitalization held by small shareholders (*Mkt cap*) for the ownership dispersion

Table 4
Robustness checks—3SLS: additional control variables.

	Unemployment		GDP per capita	
Dependent var.	Employment protection	Ownership dispersion	Employment protection	Ownership dispersion
British	−0.5285 (0.057)	0.2127 (0.014)	−0.4311 (0.204)	0.2251 (0.045)
French	0.2671 (0.159)	−0.1102 (0.106)	0.4154 (0.037)	−0.1704 (0.010)
Gov effectiveness	−0.6948 (0.001)	0.1324 (0.055)	−0.5834 (0.004)	0.0502 (0.164)
Prop	0.2178 (0.015)	−0.0251 (0.352)	0.1627 (0.161)	−0.0138 (0.765)
Union	−0.0062 (0.094)		−0.0043 (0.239)	
Ownership	−1.3017 (0.055)		−1.6089 (0.025)	
Shareholder prot		0.0577 (0.052)		0.0515 (0.096)
Left		−0.0115 (0.003)		−0.0127 (0.002)
Unemployment	0.0368 (0.087)	−0.0134 (0.076)		
GDP per capita			−0.0057 (0.936)	0.0063 (0.831)
Constant	3.1320 (0.000)	0.1116 (0.468)	3.4235 (0.099)	−0.0886 (0.917)
F-stat	51.34 (0.000)	18.99 (0.000)	44.72 (0.000)	16.40 (0.000)
R-sq	0.9460	0.8612	0.9400	0.8521
F-stat (Ist stage)	18.17 (0.000)	10.14 (0.000)	14.51 (0.000)	8.25 (0.001)
R-sq (Ist stage)	0.9237	0.8711	0.9063	0.8462
Hansen J-stat	0.66 (0.995)	0.90 (0.999)	0.95 (0.987)	0.07 (0.999)
Sargan stat	4.20 (0.650)	1.47 (0.962)	5.46 (0.486)	0.63 (0.996)

Note: Small sample correction implemented. *P*-values from White's heteroskedasticity-consistent S.E. in brackets.

Table 5
Robustness checks—3SLS: alternative indicators.

	Social democracy		Dependent var.	Ownership dispersion	
Dependent var.	Employment protection	Ownership dispersion		Employment protection	Market capitalization
British	−0.2752 (0.449)	0.2776 (0.011)	*British*	−1.2565 (0.000)	−0.2952 (0.180)
French	0.3381 (0.134)	−0.1343 (0.070)	*French*	0.5878 (0.017)	−0.0776 (0.618)
Gov eff	−0.5479 (0.007)	0.1361 (0.117)	*Gov eff*	−0.0487 (0.917)	0.6146 (0.001)
Prop	0.1630 (0.057)	−0.0248 (0.470)	*Prop*	−0.0232 (0.905)	−0.1716 (0.023)
Union	−0.0050 (0.179)		*Union*	−0.0031 (0.559)	
Ownership	−2.0567 (0.046)		*Mkt cap*	−1.2708 (0.075)	
Sh prot		0.0068 (0.847)	*Sh prot*		0.0117 (0.869)
Gov cons		−0.0142 (0.105)	*Left*		−0.0161 (0.093)
Constant	3.3389 (0.000)	0.3103 (0.193)	*Constant*	3.1571 (0.000)	0.1060 (0.791)
F-stat	54.26 (0.000)	12.44 (0.000)	*F*-stat	24.64 (0.000)	3.89 (0.006)
R-sq	0.9429	0.7805	*R*-sq	0.8586	0.5139
F-stat (Ist stage)	16.95 (0.000)	7.10 (0.001)	*F*-stat (Ist stage)	50.61 (0.000)	12.37 (0.000)
R-sq (Ist stage)	0.9012	0.7926	*R*-sq (Ist stage)	0.9620	0.8608
Hansen J-stat	1.22 (0.943)	0.18 (0.999)	Hansen J-stat	0.74 (0.981)	0.34 (0.997)
Sargan stat	6.09 (0.198)	1.16 (0.949)	Sargan stat	4.15 (0.528)	2.15 (0.828)

Note: Small sample correction implemented. *P*-values from White's heteroskedasticity-consistent S.E. in brackets.

index. Results are shown in Table 5 (Vth and VIth columns). We obtain that, on the one side, a higher ratio of stock market capitalization held by small shareholders over GDP is associated with weaker employment protection, on the other, stronger social democracy (*Left*) is associated with smaller external capitalization. Again our main conclusions are not substantially altered.

4. Concluding remarks

American populism (keep capitalistic dynasties under control!) and European social democracy (create workers' counter-power to powerful capitalist families!) have been two very different political strategies by which the two societies have made the concentration of power associated to large-scale production compatible with democracy and safeguarded the human capital investment of non-owners.

According to some political views, the introduction of corporate legislation similar to that of the US has the advantage to anticipate an inevitable global prevalence of the American model of corporate governance on the European system. However, for some countries social democracy can better be seen as a consequence rather than a cause of a weak separation between ownership and control. A genuine shift to the "American model" should involve a disarmament of both workers' unions and capitalist family dynasties. A unilateral disarmament of unions and/or a decrease in the degree of "social democracy" would involve that Europe gives up its own way of checking the power of the capitalist dynasties. This may endanger the stability of the social and economic conditions of a reasonable political democracy and have negative consequences for the protection of the human capital investments of many stakeholders.

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