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Co-Evolution Paths of Politics, Technology and Corporate Governance

Marianna Belloc
University of Siena

Ugo Pagano
University of Siena and Central European University

european corporate governance institute

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Abstract

According to Mark Roe, politics influences corporate governance. The separation between control and ownership is only possible when there is a low "degree of social democracy". By contrast, systems, characterised by strong employees' rights, are necessarily balanced by strong and concentrated owners. However, causation may also run in the opposite direction: from strong concentrated ownership to strong employees' protection. We argue that this form of two-ways cumulative causation may imply the existence of multiple co-evolution paths of Politics, Technology and Corporate Governance.

We focus on two stylized alternative co-evolution paths. In the first, the representation of both owners and employees is divided among many agents ("dispersed equilibrium"), while, in the second, their interests are expressed by few concentrated agents ("concentrated equilibrium"). We argue that there is both theoretical and empirical support for the thesis that the direction of causation from politics to corporate governance form is more relevant in a "dispersed equilibrium" while the direction of causation from corporate governance to politics is more relevant in a "concentrated equilibrium". The paper is structured in three sections. In the first section, we consider the theoretical arguments for which we expect politics to have an important anticipatory role in a "dispersed equilibrium" and a less relevant reactive role in a "concentrated equilibrium", and we consider some stylized facts concerning American and European Histories that seem to support this view. In the second section, we provide cross-country and dynamic-panel econometric evidence, which is consistent with the arguments developed in the first section. Finally, we argue that each system may have a comparative institutional advantage in particular types of technologies and in certain productive sectors and that, in turn, this specialization may stabilize the related economic and political arrangements. We conclude considering some effects of globalization on the two systems and, in particular, the consequences of the reinforcement of international IPR protection

Marianna Belloc
University of Siena - Department of Economics
Piazza S. Francesco, 7
53100 Siena
Italy
e-mail: belloc@unisi.it

Ugo Pagano
University of Siena - Department of Economics
Piazza S. Francesco, 7
53100 Siena
Italy
phone: +39 0577 232614, fax: +39 0577 232661
e-mail: pagano@unisi.it

1. Introduction

According to Roe (2003) the separation of ownership and control that characterises many American large firms is not simply 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. "Social democracy" complicates the well-known agency problem that characterises even the standard American public company. In Roe's approach the direction of causation moves mainly from political ideology to corporate governance forms (even if he points out that also the opposite direction of causation may be important). In our paper we want to stress the importance of the second direction of causation and the circumstances under which it seems to be more relevant.

European countries may be converging to a system where a weaker degree of "social democracy" may allow more separation between ownership and control. However, if social democracy is more a consequence than a cause of a weak separation between ownership and control, a weaker degree of social democracy may simply imply that Europe will lack both the American populist way and its own typical way to tame the power of owners. This may be a serious problem not only for social justice and social peace but also for the efficiency of economic enterprises. On both sides of the Atlantic, efficiency requires that some non-owners make important investments in their enterprises and have some control of their policies.

The paper is structured in the following way. In Section 2 we consider the relation between politics, corporate governance and productive capabilities of the different countries. We argue that, in general, these relations can be better characterised in terms of institutional complementarities (involving also technological and productive specialization) than as one-way relations and we spell out the general conditions under which we believe that a direction of causation is more relevant. We argue that there is a general argument for which the initial shock is more likely to have come from politics in the case of the U.S. type "dispersed equilibria" and from corporate governance relations in case of the European type "concentrated equilibria".

In the Section 3, we consider the empirical relevance of the influence of corporate governance forms on politics in a sample of 20 OECD countries. To deal with problems stemming from endogeneity and co-determination of the variables, we employ two different econometric techniques: a cross-country regression analysis including instrumental variables and controls, and a country-year panel data study applying dynamic estimation methods. We find support for a strong and negative relationship between the degree of social democracy and that of corporate ownership dispersion even when the possible spurious influence of reverse causality effect is taken into account.

Finally, in the Section 4, we consider the economic policy implication 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 U.S. 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[1]. While Chandler distinguished between American "Competitive Managerial Capitalism" and "German Cooperative Managerial Capitalism" (where family control had a more important role than in the U.S.), in both countries 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.

As Roe and Chandler point out, the coordinating role of managerial hierarchies does 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 organised 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 rules. While small firms could easily work on the basis of a family allocation of control, this was much

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[1] Chandler argument shows how the pre-existence of an old "organizational species" (that was formed in Britain at the time of the first industrial revolution) can inhibit the formation of a new "organizational species" that was needed to deal with the second industrial organization. For the relation between Chandler thesis and the evolutionary theories of speciation see Pagano (2001).

harder for large firms and this was a reason for which, in spite of all the agency problems, managerial capitalism was bound to prevail.

The clash between dynastic and competence criteria to assign jobs is an old one and it has certainly 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.

In many respects, America with its competing Churches and its early deeply rooted passion for spontaneous rule making was ideally suited to develop institutions where jobs were assigned on a meritocratic basis. Since the beginning[2], 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 able (but poor) people could get economic power in spite that they were not wealthy. In this sense, the absence of social democracy has been not only due to the ideological tradition of American populism but also to the fact that (thanks to this ideology) the economic system and the economic opportunities were really different. 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. Politics influenced corporate governance but the opportunities offered by the corporate governance system did, in turn, influence politics.

The two-way causation between politics and corporate governance is also evident in those countries where, unlike America, there were more 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

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[2] "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.

connections, proper accents, social skills and even appropriate table manners have interfered with the assignment of jobs on the basis of the competence to fulfil a certain mission. 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 on the corporation, the system limits and, sometimes, challenges the exercise of their power (even if on the whole the exercise of this power is viewed as being legitimate). "Social democracy" may scare owners and make it impossible the separation of ownership and control that characterises 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 than that characterising American public companies. This closer system is, in turn, the product of a view of the world that, unlike America, had heavily compromised capitalism with the dynastic legacies of pre-capitalist societies. Political ideologies influence the actual way of organizing production and generate new ideologies that again, in a possibly endless process, influence the feasibility and the efficiency of corporate governance.

Thus, dispersed ownership and low degree of "social democracy" are institutional complements. Similarly, concentrated ownership and high degree of "social democracy", are also institutional complements[3]. One way of explaining these relations of institutional complementarity is in terms of reciprocal disarmament and armament. Each group can achieve a higher capacity of exercising power[4] by concentrating dispersed interests. As Marcur Olson (1971) has pointed out, dispersed interests are bound to do worse than concentrated interests. The balance of power can stay the same if both owners and workers stay dispersed or if both are concentrated defining the two following possible equilibria:

$$\text{Dispersed ownership} \longleftrightarrow \text{Low degree of "social democracy"}$$
$$\text{(Dispersed Equilibrium)}$$
$$\text{Concentrated ownership} \longleftrightarrow \text{High degree of "social democracy"}$$
$$\text{(Concentrated Equilibrium)}$$

The (dis)armament of one party is a condition for allowing the dis(armament) of the other, and politics can play a role in pushing the institutions of corporate governance towards one equilibrium or the other.

However, this fundamentally symmetric view of the role of politics must be qualified by referring to the fundamental asymmetry of capital and labour. 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 diffusion of the workers' interests. Spontaneous economic forces (by

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[3] On the notion of institutional complementarity see Aoki (2001).

[4] For a view of power as positional good as case polar to that of public goods see Pagano (1999).

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).

Table 1.

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

The reason for the fundamental 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. Politics is required 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 tending to the concentration of ownership and strong block holders blocking a "concentration" arms race with labour.
The result is a "dispersed equilibrium".

b) Economic forces anticipate political action. The result is a strong asymmetry between concentrated capital and dispersed labour. Political action (and 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 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 not to have anticipated spontaneous capitalist concentration and is rather 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 social democracy".

The historical conditions under which a dispersed equilibrium is likely to arise are rather special and, perhaps, they were approximated only by the United States[5]. 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 (and still are!) the distaste for the type of concentrated dynastic interests that had characterised the old continent. Social admiration was moved from people who are born wealthy to the individuals who are "self-made". Thus, the meritocracy, related to the climbing of the managerial ladder of a "Berle and Means Corporation", was far more compatible with American ideology than any deferential, or even just passive, acceptance of dynastic concentrated interests of the capitalist families. Managers did not even 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 was (more than dynastic succession) consistent with American ideology. The very special conditions of American history allowed American politics to anticipate the concentration of the owners' interests. In the U.S., in a way predicted by the 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 enterprises, and family dynasties had either an involvement in the management of firms or an important role in the appointment of managers. Financial institutions helped the compatibility of the exercise of this power with the needs of large scale enterprises (often, exactly by putting in the hands of the "economic royalists" the availability of "other people's money"). This allowed only limited diversification of risks but the costs of this limits were (partially) compensated by the capture of many important management jobs by the ruling families and by a decrease of the agency problems (due to the separation between ownership and control) that characterised the "Berle and Means" corporation. The inability of politics to anticipate the "armament of capitalism" implied a corporate governance model that induced later a political reaction to arm labour by concentrating and organising its interests.

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[5] Again a reference to Tocqueville (1994, p.44) shows the early roots of the problem: "In most European nations political existence started in the higher ranks of society and has been gradually, but always incompletely, communicated to the various members of the body social. Contrariwise, in America one may say that the local community was organized before the country, the country before the state, and the state before the Union".

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.

3 The Empirical Relation Between Politics and Corporate Governance Systems

In this section we implement a rigorous econometric strategy in order to gauge the effects of national Corporate governance structure on Politics. Since some previous works find that the causality relation can also run in the opposite direction (from politics to corporate governance; Roe, 2003) and that the two variables can be jointly determined (employees' and shareholders' protection; Pagano and Volpin, 2005), we need to carefully deal with the issue of the endogeneity of corporate governance with respect to politics and its determinants. To this aim, we employ two different econometric techniques: a cross-country regression analysis including instrumental variables and controls, and a country-year panel data study applying dynamic estimation procedures. Our sample consists of 20 OECD countries[6] and covers a period from 1993 to 2002. The strategy is explained more in details in the following two subsections. Data sources and definitions are reported in the Appendix.

3.1 Cross-Country Analysis

A. Methodology and Data Analysis

We estimate the following regression model:

$$Social\ democracy_i = \alpha + \beta \cdot Corporate\ governance_i + \gamma \cdot Controls_i + \varepsilon_i \quad (1)$$

In our first specification, Social democracy is proxied by the index of Employment Protection Legislation (hereafter EPL) normalised to range from zero to six, with higher scores representing stricter regulation. Then, in the sensitivity analysis, we substitute EPL for some alternative measures such as the Gini index of income inequality, the Government consumption expenditure and the Social government expenditure both as a percentage of GDP. Corporate governance is represented by the Ownership concentration index that equals one if there is no controlling shareholder and zero otherwise. In our main specification we use 20% as criterion for (direct plus indirect) control and medium-sized firms. In the sensitivity analysis we replicate the estimation results for both large and

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

mid-sized firms with either 10% or 20% cut-off levels. Finally, Controls is a set of variables representing conditioning information that controls for other factors that may be associated with Social democracy. We use a conditioning information set that includes the policy information (union density; cumulative number of years from 1975 to the time of observation that the political orientation of the executive is Left, Center, or Right), the macro-economy information (unemployment rate; logarithm of total GDP[7]; inflation; openness to trade[8]), and the institutional information (creditors' protection; law enforcement). All the data are averaged over the period 1993-2002[9]. Table 2 reports descriptive statistics.

Table 2. Descriptive statistics – Cross-country data

	Obs	Mean	Std. Dev.	Min	Max
EPL	20	2.085	1.017	0.200	3.745
Medium pub. (20%)	20	0.252	0.265	0.000	0.900
Medium pub. (10%)	20	0.135	0.173	0.000	0.500
Large pub. (20%)	20	0.435	0.283	0.500	1.000
Large pub. (10%)	20	0.293	0.270	0.000	0.900
Union	20	37.971	21.622	9.822	84.056
Left cum. years	20	10.650	6.823	0.000	26.000
Center cum. years	20	1.850	4.344	0.000	18.000
Right cum. years	20	11.350	8.100	0.000	26.000
Unemployment	20	7.861	3.577	3.350	18.160
Log GDP	20	26.925	1.284	25.174	29.722
Inflation	20	104.728	1.964	100.839	107.050
Openness	20	69.884	34.605	18.708	152.414
Creditor	20	1.750	0.967	0.000	4.000
Law	20	9.228	1.066	6.180	10.000
Gov. cons./GDP	20	31.120	4.568	24.700	40.800
Gov. soc. exp./GDP	20	23.800	5.542	13.500	33.000
Gini	20	31.120	4.568	24.700	40.800

Since, as we have argued in the previous section, the relation of causality may plausibly run in either direction (from concentrated ownership to strong social democracy or the reverse), the

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[7] Total GDP is a proxy for country size.

[8] The degree of international openness is proxy for market competition. It may be argued that it works as a force that reduces the power of the incumbents to protect their own interests (although with a different focus see Rajan and Zingales, 2003). We refer to Rodrik (1998) for the relation between openness to trade and the size of the government.

[9] The only exceptions are the Ownership indexes that are available only for the year 1995.

endogeneity of the explanatory variable (Ownership concentration index) is likely to affect the estimation results of regression (1). To address possible biases due to reverse causality, omitted variables, and measurement errors, we implement an instrumental variable procedure (two stage least square[10]).

From a statistical point of view a "good" instrument must have two fundamental properties: (*i*) Exogeneity: The instrument must not be influenced by the dependent variable during the considered sample period. (*ii*) Relevance: The instrument must be significantly correlated with the (endogenous) regressor. In this paragraph, we use cross-country differences in legal systems (e.g. creditor rights, contract enforcement, and accounting standards) as instruments for Ownership to capture the exogenous source of cross-country variation in the Corporate governance that influences the degree of Social democracy. We motivate our choice as follows.

(*i*) Exogeneity. It is well established that the legal origin is an "exogenous endowment" as discussed in particular by Levine et al. (2000). To assess the exogeneity requirement to be satisfied we have to rely mostly on this theoretical assumption. From an econometric point of view, calling Z_i the matrix of instrumental variables, this condition may be expressed as $E(Z_i \cdot \varepsilon_i) = 0$, where ε_i is the residual term from equation (1). The Hansen test of the overidentifying restrictions verifies whether the instrumental variables are associated with the dependent through any other channel beyond the considered one (i.e. the endogenous regressor). The results of this test will be reported to investigate the validity of the exogeneity hypothesis for each specification presented below.

(*ii*) Relevance. As shown by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998), cross-country differences in legal origin is correlated with cross-country differences in legal protections of investors. In particular, laws in English legal tradition countries turn out to have the highest degree of protection of shareholders' rights; French legal tradition countries the least; while countries with either German or Scandinavian legal origin are located in the middle. Since stronger minority shareholders' protection is likely to be associated with larger ownership dispersion, we expect a similar classification to work for the ownership structure as well. Our predictions are empirically confirmed by the data as shown in Table 3. In columns (I) through (IV), we report the average value of each of the four measures of Ownership dispersion used in the paper for the 20 countries included in our sample grouped by legal tradition.

As one can observe (with the only exception of the 10% cut-off level for large firms) English legal origin countries always show the largest index of ownership dispersion, while those with French legal tradition have the least. This finding is consistent also with La Porta et al. (1999) and Beck et al. (2003a, 2003b).

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[10] Hereafter 2SLS.

Table 3. Means by legal family

Legal origin[*]	Widely held large		Widely held mid-sized	
	(I) 20% cut-off	(II) 10% cut-off	(III) 20% cut-off	(IV) 10% cut-off
English	0.740	0.640	0.606	0.320
French	0.240	0.100	0.040	0.020
German	0.513	0.350	0.225	0.175
Scandinavian	0.313	0.075	0.200	0.050

[*]English: Australia, Canada, Ireland, United Kingdom, United States. French: Belgium, France, Greece, Italy, Netherlands, Portugal, Spain. German: Austria, Germany, Japan, Switzerland. Scandinavian: Denmark, Finland, Norway, Sweden.

Accordingly, to identify model (1), we adopt two dummy variables for English and French legal origin relative to either German or Scandinavian legal family (that is captured in the constant term). Table 4 illustrates pairwise correlations between our main measure of Social democracy (EPL), the indexes of Ownership dispersion and the dummies representing the Legal origin.

Table 4. Pairwise correlations – Cross-country data

	EPL	Med.20%	Med.10%	Lar.20%	Lar.10%	British	French
EPL	1						
Med.Pub.20%	-0.921 (0.000)	1					
Med.Pub.10%	-0.743 (0.000)	0.860 (0.000)	1				
Lar.Pub.20%	-0.727 (0.000)	0.717 (0.000)	0.550 (0.000)	1			
Lar.Pub.10%	-0.794 (0.000)	0.791 (0.000)	0.623 (0.003)	0.920 (0.000)	1		
British	-0.792 (0.000)	0.793 (0.000)	0.635 (0.002)	0.638 (0.003)	0.763 (0.000)	1	
French	0.718 (0.000)	-0.593 (0.000)	-0.464 (0.039)	-0.511 (0.021)	-0.438 (0.054)	-0.424 (0.063)	1

P-values are reported in brackets.

As testified by the p-values, the correlation between the Ownership dispersion measures and the Legal origin is always significant at the traditional levels. Nonetheless, we want to be sure that the instruments have an economically significant role in explaining the cross-country variation in Corporate governance. If not, the instruments are called "weak". In presence of weak instruments the estimated coefficients from the identification test turn out non-standard and tests are misleading (Staiger and Stock, 1997). Then, we run the first stage regressions and implement the following control checks:

(*i*) The first stage coefficients associated with the instrumental variable(s) must be significantly different from zero.

(*ii*) The first-stage F-statistic as a rule of thumb must be larger than 10 (Staiger and Stock, 1997; Stock, Wright and Yogo, 2002; Stock and Yogo, 2002).

(*iii*) The first stage R^2, as a rule of thumb, must be greater than 30% (Shea, 1997).

B. Results

In Table 5, we show our results from the first stage regressions with (column - III) and without (column - I) control information sets. Legal origin turns out to be a robust determinant of the incidence of widely held firms. As one can notice, British and French legal origin strongly affect, respectively in a positive and in a negative way, the measure of Ownership dispersion. Furthermore, the requirements on the F-statistic and the R^2 are always largely satisfied.

Table 5. Cross-country regressions

Dependent var.	(I) Ownership	(II) EPL	(III) Ownership	(IV) EPL
	OLS – I° stage	2SLS – II° stage	OLS – I° stage	2SLS – II° stage
Ownership		-4.047*** (0.000)		-4.561*** (0.000)
British	0.394*** (0.000)		0.255** (0.016)	
French	-0.170** (0.044)		-0.211** (0.040)	
Constant	0.213*** (0.001)	3.104*** (0.000)	-11.890*** (0.002)	-26.661 (0.198)
Controls	NO	NO	YES	YES
Observations	20	20	20	20
R^2	0.710	0.832	0.964	0.935
F stat	20.780 (0.000)	67.040 (0.000)	15.390 (0.001)	37.910 (0.000)
F stat (Excluded IV)	20.780 (0.000)		32.030 (0.000)	
Hansen J stat		2.238 (0.135)		1.899 (0.168)

Small sample correction implemented. Ownership is medium sized firms (20%). Significance levels denoted by: *** = 1%; ** = 5%; * = 10%. P-values from White's heteroskedasticity-consistent s.e. in brackets. The null hp. of the F-test for the excluded IV is that the joint significant of the excluded IV from the second stage is zero. The null hp. of the Hansen J-test is that the IV are not correlated with the residuals. Under the null hp. the J statistics has chi-squared distribution with (m-k) d.f. (m = # number of instruments; k = # of regressors).

Once established the reliability of the Legal origin as instrumental variable, we can estimate regression (1) using the 2SLS procedure with heteroskedasticity-robust error terms. Table 5 - column (II) lists the econometric output in absence of control variables. We obtain that the measure of ownership dispersion exerts a significant and negative effect on the strictness of employment protection legislation. Even after controlling for the possible spurious influence of the reverse

causality effect and endogeneity of the independent variable, we find that the more the ownership is concentrated in a certain country (smaller value of Ownership) the more likely it is to find in that country a high degree of employees' protection (higher EPL). This result empirically supports our theoretical hypothesis that a high degree of social democracy may follow as a reaction to a highly concentrated ownership structure. As Column (IV) illustrates, such a conclusion is robust to the inclusion of a set of controls that may affect the dependent variable[11], either through political or economic channels (*i*- Union density; *ii*- Political orientation of the executive; *iii*- Unemployment rate; *iv*- log GDP; *v*- Inflation; *vi*- Openness to international trade; *vii*- Creditors' protection; *viii*- Degree of law enforcement)[12]. Table 5 also reports the Hansen J-statistic for overidentifying restrictions. The null hypothesis of instruments' exogeneity can never be rejected at the 10% level. Figure 1 shows the fit of the model.

Figure 1

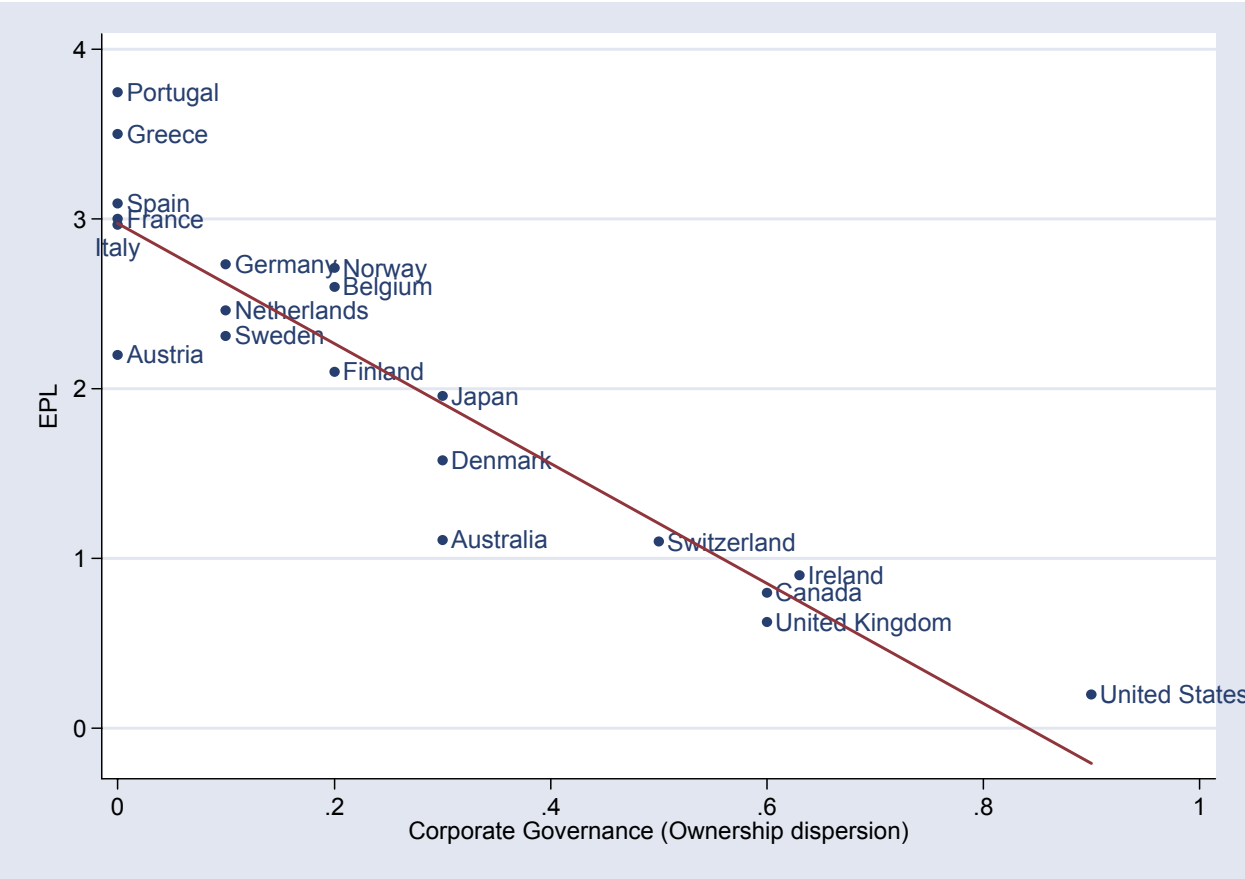[11] For the sensitivity analysis strategy applied to cross-section econometric studies we refer to Levine and Renelt (1992).

[12] The estimated values of the parameters associated to the control variables are not reported for reasons of space.

In Section 2 we have claimed that in most European countries the causation is likely to work from corporate governance to politics, while the special historical conditions that may have favoured the achievement of the "dispersed equilibrium" in the U.S. support the opposite direction of causality. Then, if the U.S. is not included in the sample, we expect the negative effect of Corporate governance on EPL to become stronger in our model.

To test this prediction, we replicate the above results using an alternative sample of 19 countries not including the U.S. We find that the estimated cross-country coefficient is indeed smaller, and equal to -4.278 (p-val = 0.000), than it was when we used the entire sample (-4.047; p-val = 0.000). Clearly, the last test does not answer the question on which direction of causality is the most likely to be. But it gives us the following pieces of information:

If the causality direction is from politics to corporate governance, then the inclusion of the U.S. in the sample strengthens the cross-country correlation effect. This is due to the fact that the value of the Ownership dispersion index for the U.S. (relatively to the U.S. value of the EPL index) is above the value that would be predicted with the data from the rest of the sample (as Figure 1 clearly shows). Therefore, if we look at this direction of causality, the effect turns out greater in the U.S. than in the other countries (i.e. in the U.S. some further conditions - not included in the regression – appear likely to have favored the diffusion of the public company)[13].

If the causality direction is from corporate governance to politics, then the inclusion of the U.S. in the sample weakens the cross-country correlation relation. This is due to the fact that the value of EPL for the U.S. (given the U.S. value of the Ownership index) is above the value that would be predicted with the rest of the sample. Therefore, if we instead look at this direction of causality, the effect appears smaller in the U.S. than in the other countries (so there must be further factors - not in the regression - that have prevented the value of EPL from being even smaller, proportionally to the value of the Ownership dispersion index).

C. Sensitivity Analysis

In the remaining part of this paragraph we want to test if our basic results depend on the particular choice of the measures of either Social democracy or Corporate governance adopted so far. With regard to the former, we replicate the cross-country regression substituting the EPL index alternatively for the Gini index of income inequality, and the levels of Government consumption and Social expenditure both as a percentage of GDP. Results are reported in Table 6. We obtain that the effect of Corporate governance works exactly in the same direction as before on the three alternative proxies of

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[13] Empirical evidence on this direction of causality is provided by Roe (2003).

Social democracy here considered (notice that a higher score of the Gini index means larger inequality), even in presence of the controls.

Table 6. Sensitivity analysis (Social democracy)

Dependent var.	(I) Gov. Cons. 2SLS	(II) Social. Exp. 2SLS	(III) Gini 2SLS
Ownership	-9.464[*] (0.056)	-15.295[***] (0.006)	10.421[**] (0.035)
Constant	-145.610 (0.209)	-243.796[**] (0.046)	NO
Controls	YES	YES	YES
Observations	20	20	20
R^2	0.773	0.850	0.762
F test	12.430 (0.001)	21.680 (0.000)	384.60 (0.000)
Hansen J stat	2.666 (0.103)	0.064 (0.801)	3.608 (0.057)

Small sample correction implemented. Ownership is medium sized firms (20%). Significance levels denoted by: [***] = 1%; [**] = 5%; [*] = 10%. P-values from White's heteroskedasticity-consistent s.e. in brackets. The null hp. of the Hansen J-test is that the IV are not correlated with the residuals. Under the null hp. the J statistics has chi-squared distribution with (m-k) d.f. (m = # number of instruments; k = # of regressors).

Secondly, the index for the diffusion of widely-held companies previously used (mid-sized firms with 20% as a cut-off level) is substituted for three alternative measures: first, maintaining the focus on medium-sized firms, the cut-off level is fixed at 10%;

Table 7. – Sensitivity analysis (Ownership)

Dependent var.	(I) EPL 2SLS	(II) EPL 2SLS	(III) EPL 2SLS
Ownership (med–10%)	-6.848[***] (0.002)		
Ownership (large–20%)		-4.579[***] (0.007)	
Ownership (large–10%)			-4.348[***] (0.000)
Constant	2.004 (0.922)	28.426 (0.157)	13.800 (0.298)
Controls	YES	YES	YES
Observation	20	20	20
R^2 (II° stage)	0.769	0.810	0.912
R^2 (I° stage)	0.928	0.860	0.923
F test	9.160 (0.002)	15.070 (0.000)	37.020 (0.000)
F test (Excluded IV)	15.220 (0.003)	7.120 (0.020)	16.230 (0.002)
Hansen J stat	2.759 (0.097)	1.493 (0.222)	0.405 (0.525)

Small sample correction implemented. Ownership is medium sized firms (20%). Significance levels denoted by: [***] = 1%; [**] = 5%; [*] = 10%. P-values from White's heteroskedasticity-consistent s.e. in brackets. The null hp. of the F-test for the excluded IV is that the joint significant of the excluded IV from the second stage is zero. The null hp. of the Hansen J-test is that the IV are not correlated with the residuals. Under the null hp. the J statistics has chi-squared distribution with (m-k) d.f. (m = # number of instruments; k = # of regressors).

second, large firms are instead considered and either the 20% or the 10% level is used as control criterion. Table 7 summarizes the estimation output.

As one can observe, the previous results prove to be robust, being the negative effect of the Ownership dispersion on the index of EPL still very statistically significant.

3.2 Panel Data Analysis

A. Motivation and Data Analysis

In the previous paragraph we obtain that the cross-country variation in the corporate governance systems can help explain the cross-country variation in the indexes of "social democracy" even after controlling for endogenous sources of correlation and additional external channels of causation. However, three issues still remain that cannot be addressed in a cross-country estimation. First, in the previous regressions we have not exploited the time-series dimension of our variables. Second, model (1) does not take explicitly into account possible cross-country unobservable effects that are instead incorporated in the residual term. This implies that our previous estimates do not allow for the possible correlation between this component and the explanatory variables. As a consequence the estimation coefficients may turn out biased. Finally, until now we have only stressed the possibility of endogenous determination of corporate governance with politics, but have not discussed the case that other variables included in the model may be endogenous as well. In this section we face these issues with proper panel data techniques. In Table 8 we report descriptive statistics for the panel data counterpart of our sample.

Since time-series for the Ownership dispersion index are not available, in some of the following specifications we use an additional proxy for Corporate governance that is the degree of Shareholders' protection (originally defined and collected by La Porta et. al., 1998, and updated by Pagano and Volpin, 2005). As discussed by La Porta et al. (1998, 1999), if we classify countries in two subsamples with respectively a high and a low degree of shareholders' protection, we observe that widely held firms are more common in the former, while family-controlled and state-controlled firms are more numerous in the latter. Moreover, the first subsample is dominated by British law countries, whereas the second by French law countries. This suggests, on the one side, that the two proxies for Corporate governance are highly and positively correlated, and, on the other, that Legal origin is a good candidate for an important determinant of Shareholders' protections as well.

Table 8. Descriptive statistics – Panel data

	Obs	Country	Mean	Std. Dev. Overall	Std. Dev. Between	Std. Dev. Within
EPL	200	20	2.086	1.019	1.016	0.228
Sh. protection	200	20	3.300	1.121	1.034	0.486
Union	182	20	37.555	21.261	21.622	1.984
Left	200	20	0.415	0.494	0.274	0.415
Center	200	20	0.045	0.208	0.115	0.175
Right	200	20	0.300	0.459	0.258	0.384
Unemployment	199	20	7.880	4.004	3.577	1.958
Log GDP	200	20	26.920	1.261	1.286	0.100
Inflation	200	20	104.728	7.090	1.964	6.825
Openness	197	20	69.442	34.504	34.605	8.057

B. Random and Fixed Effects

We consider the following equation regression:

$$Social\ democracy_{it} = \alpha_i + \beta \cdot Corporate\ governance_{it} + \gamma \cdot Controls_{it} + \zeta_{it} \quad (2)$$

where i refers to the country, t to the year, and α_i is the unobservable effect that is allowed to vary across countries to capture unmeasured or unobserved heterogeneity within the sample. In this subparagraph, regression (2) is estimated via random and fixed effects methods. The former is based on the hypothesis that α_i is not correlated with the other covariates, and can be implemented in presence of either time variant or time invariant series. By contrast, the latter allows us to relax the orthogonality assumption between α_i and the regressors, but requires that equation (2) only includes time-series/cross-country variables.

Table 9 reports the results. Our first specification is a 2SLS – random effects (RE) model where the Ownership concentration index is instrumented by Legal origin as before. The fact that we use a time-invariant regressor in a panel data specification is here justified by the fact that, while the measure of corporate ownership dispersion has a considerable degree of cross-country variation, it does not significantly change over short periods of time[14]. The full conditioning information set (Union, Left, Center, Right, Unemployment, log GDP, Inflation, Openness, Law and Creditor) and time dummies are also included (coefficients not shown for reasons of space). The first stage output is

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[14] Moreover, it is worth to remark that our panel of data is larger in the cross-sectional dimension than in the time-series one.

reproduced in Column (I). As one can notice Legal origin is still a significant determinant of the Ownership variable, and the F-statistics largely exceeds the Stock and Yogo (2002) critical value for instrument's relevance (9.08 at the 5% level).

In Column (II) we report the second stage, where we also control for the Shareholders' protection effect; whereas in Column (III) the Ownership index is substituted for its interaction with the Shareholders' protection measure (instrumented by Legal origin). We obtain that all the described proxies for a dispersed corporate governance structure negatively and significantly affect the index of Employees' protection. Finally, columns (IV) and (V) show the results for the comparison between random (RE) and fixed effects (FE) model. In this case the regressors are represented by the only time-variant covariates (Shareholders' protection, Union, Left, Center, Right, Unemployment, log GDP, Inflation, Openness).

Table 9. Panel data regressions – Random and fixed effects

Dependent var.	Own. –I° stage (I) GLS – RE	EPL–II° stage (II) 2SLS – RE	EPL–II° stage (III) 2SLS – RE	EPL (IV) RE	EPL (V) FE
Ownership		-3.391*** (0.000)			
Sh. Protection	0.001 (0.882)	-0.196*** (0.000)		-0.235*** (0.000)	-0.197*** (0.000)
Owner*Sh. P.			-0.890*** (0.000)		
British	0.372*** (0.000)				
French	-0.172*** (0.000)				
Constant	-0.885*** (0.006)	4.258 (0.150)	2.694 (0.416)	10.660 (0.015)	-39.780 (0.009)
Controls	YES	YES	YES	YES	YES
Time dummies	YES	YES	YES	YES	YES
Obs [Countries]	181 [20]	181 [20]	181 [20]	181 [20]	181 [20]
F test	22.73 (0.000)	11.39 (0.000)	8.04 (0.000)	8.21 (0.000)	10.29 (0.000)
R^2 Within		0.496	0.347	0.505	0.564
R^2 Between		0.848	0.812	0.282	0.002
R^2 Overall		0.854	0.817	0.322	0.002
				Hausman = 16.78 (0.539)	

Significance levels denoted by: *** = 1%; ** = 5%; * = 10%. P-values from heteroskedasticity-consistent s.e. in brackets. The null hp. of the Hausman test is that there is not systematic difference in the coefficients reported in column (IV) and (V). Under the null hp. the Hausman statistics has chi-squared distribution with k d.f. (k = # of regressors).

Again, for both estimation procedures, we obtain that a corporate structure that is characterised by a higher degree of shareholders' rights protection is associated with a lower index of social democracy proxied by the EPL measure. The Hausman specification test leads us not to reject the null hypothesis

that the coefficients do not differ in a significant way. This finding supports the view that the unobservable effects are not significantly correlated with the explanatory variables and then the RE model is valid.

C. Dynamic Panel Analysis

In the previous paragraph B, we have addressed the two shortcomings of a cross-country analysis mentioned at the beginning of this section (time-series variation and unobservable effects) but not the third one (endogeneity of all the covariates). Indeed, while in the 2SLS – RE model we have only considered the endogeneity of the Corporate governance but not the one of the other explanatory variables, in the FE estimation we could not even control for the former due to the absence of time varying instruments. Furthermore, with random and fixed effects methods we are not able to account for time persistence in the dependent variable. As a consequence, we want here to gauge the robustness of the previous results adopting a panel estimation procedure that allows us to take into account all the above issues and are referred to in the literature as dynamic panel techniques.

The first approach is suggested by Arellano and Bond (1991). Consider the following regression model:

$$\Delta Social\ democracy_{it} = \Delta Social\ democracy_{it\text{-}1} + \beta \cdot \Delta Corp\ gov_{it} + \gamma \cdot \Delta Controls_{it} + \xi_{it} \quad (3)$$

where all the variables are expressed in first difference and the lagged first difference of the dependent is further included among the regressors. Since the unobserved effects have been differenced out we do not need to worry about the potential correlation between the explanatory variables and the country-specific component. Model (3) is estimated via Generalized Method of Moments (GMM) using lagged values of the explanatory variables as instruments. For this procedure to be valid we need to maintain the weak exogeneity hypothesis (the error term ξ_{it} is uncorrelated with current and past values of the explanatory variables), but can relax the assumption that ξ_{it} is uncorrelated with the future values of the regressors. If $X_{it} = [Corp.gov_{it}, Controls_{it}]$, this condition may be expressed as $E(X_{is\text{-}1} \cdot \xi_{it}) = 0$ where s ≥ 2 and t = 3, 4,...T. In addition, absence of second order serial correlation of the residual term is required.

The econometric results, which are reported in Table 10[15], show that the EPL index is characterized by a significant and positive time persistency and, furthermore, confirm the negative effect exerted by the measure of Shareholders' protection. To assess the validity of our findings, we implement two diagnostic tests suggested by Arellano and Bond (1991). The first is the Hansen test,

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[15] Following Arellano and Bond (1991), we use the one-step results for inference on the coefficients.

which suggests that the null hypothesis that the instrument are not correlated with the residuals cannot be rejected at any conventional level. The second is the Arellano-Bond test for the second order serial correlation of the differenced residuals, which leads us not to reject the null hypothesis of zero correlation.

Table 10. Arellano - Bond dynamic panel technique

Dependent var.	ΔEPL	Statistics	
ΔEPL lagged	0.532[***] (0.000)	Obs. [Countries]	141 [20]
ΔSh. Protect.	-0.106[***] (0.001)	F test	504.32 (0.000)
Constant	-0.033 (0.530)	Hansen test	0.07 (0.999)
ΔControls	YES	2nd order ser. corr.	-1.53 (0.127)
Time dummies	YES		

Significance levels denoted by: [***] = 1%; [**] = 5%; [*] = 10%. P-values from heteroskedasticity-consistent s.e. in brackets. The null hp. of the Hansen test is that the IV used are not correlated with the residuals. The null hp. of the Arellano-Bond serial correlation test is that the errors in the first-difference regression exhibit no second-order serial correlation.

The Arellano-Bond dynamic panel technique has the advantage of eliminating the potential correlation between the explanatory variables and the unobservable effects so to obtain consistent estimates. However, using first differences, and, as a consequence, eliminating the country-specific component, leads to the loss of the pure cross-sectional dimension of the data. Moreover, the instruments in the difference panel estimator can frequently be weak (Alonso-Borrego and Arellano, 1999; Blundell and Bond, 1997).

To address these shortcomings, it is recommended to perform an efficient estimator for the regression in levels whenever valid instruments not correlated with the country-effects are available. In this case, we are able to exploit more information on the parameters of interest and to identify the coefficients of time-invariant regressors even if potentially correlated with the unobserved cross-country effects. Arellano and Bover (1995) suggest to use lagged differences of the explanatory variables as instruments for the regressions in levels. These instruments are valid under the additional assumption that the correlation between the covariates and the cross-section unobservable effects is constant over time. In other terms, $E(X_{it+p} \cdot \alpha_i) = E(X_{it+q} \cdot \alpha_i) \forall$ p and q. A system composed of both regressions in differences and levels is then estimated via GMM. The procedure can be implemented by either the two-step or, under homoskedasticity of the residuals, the one-step estimator. Blundell and Bond (1998) show that this method produces significant improvements in terms of consistency and efficiency with respect to the one based on the first difference model.

A potential problem of the system GMM is that in the two-step procedure the number of instruments is frequently too large with respect to the number of groups, leading to an over-fitting bias. This is not a problem in the one-step estimator, which is however less efficient. Yet, a number of studies (Arellano and Bond, 1991; Blundell and Bond, 1998; and Blundell, Bond, and Windmeijer, 2000) have proved that the efficiency gains from using the two-step rather than the one-step estimator are very modest even in presence of substantial heteroskedasticity.

As a consequence of the above discussion, we implement the one-step GMM system estimator with robust standard errors[16]. Our econometric output is summarized in Table 11.

Table 11. Arellano - Bover dynamic panel technique

Dependent var.	(I) EPL	(II) EPL	(III) EPL
Ownership	-3.453*** (0.000)		
Sh. Protect.		-0.547** (0.012)	
Own.* Sh. Protection			-0.625*** (0.001)
Constant	6.600 (0.326)	17.248** (0.035)	9.129 (0.195)
Controls	YES	YES	YES
Time dummies	YES	YES	YES
Obs. [Countries]	181 [20]	181 [20]	181 [20]
F test	297.51 (0.000)	56.190 (0.000)	38.280 (0.000)
Hansen test	1.31 (0.999)	0.10 (0.999)	0.99 (0.999)
2nd order ser. corr.	-0.44 (0.662)	-0.61 (0.541)	0.11 (0.916)

Significance levels denoted by: *** = 1%; ** = 5%; * = 10%. P-values from heteroskedasticity-consistent s.e. in brackets. The null hp. of the Hansen test is that the IV used are not correlated with the residuals. The null hp. of the Arellano-Bond serial correlation test is that the errors in the first-difference regression exhibit no second-order serial correlation.

In the adopted specifications, we use alternatively the Ownership dispersion measure, the Shareholders' protection index and the Interaction term as proxies for Corporate governance. Our previous results that a stronger concentration of the ownership of the firm and of the capital interests has a positive and significant effect on the degree of "social democracy" are confirmed once again. The Hansen test for over-identifying restrictions and the second-order serial correlation test (which both suggest not to reject the null hypotheses at any conventional level) give support to the validity of the model. We can then conclude in favour of the robustness of our empirical finding for the considered sample of OECD countries and time period.

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[16] This estimator is consistent in the presence of any pattern of heteroskedasticity and autocorrelation within panels.

4. Comparative Institutional Advantage and Technological Specialization

Suppose that the U.S. and most European countries approximate the two different "concentrated" and "dispersed" equilibria considered in the first section. Can both systems survive in the age of globalization or, because of the pressure of an increasingly integrated economy, only the most efficient one will prevail?

According to some political views, the introduction of corporate legislation similar to that of the U.S. has the advantage to anticipate an inevitable global prevalence of the American model of corporate governance on the European system. However, these views can be challenged by observing that the American and the European systems are characterized by different comparative institutional advantages.

The American system encourages the investment in human skills of professional managers, the diversification of ownership and the concentration of large amounts of capital in the corporations. By contrast, it provides only very mild incentives for the human capital of owners and workers. Much specific knowledge concerning the company is concentrated in the hands of professional managers, phenomenon that in turn enhances the relative stability of managerial hierarchies in comparison to the frequent changes of firms' affiliation of both absentee owners and workers. While the figure of Taylor and of scientific management movement is often correctly associated to the de-skilling of workers, it can be equally seen as movement in favour of the skilling of professional managers that were asked to concentrate much of the knowledge that was traditionally dispersed among the workers (and some owners). The conditions of asymmetric information between managers and workers were not solved by aligning workers' incentives but rather by concentrating information and all sorts of capabilities in the hands of the managers. The American system became therefore a top-down system in the sense that much valuable information was heavily concentrated and a considerable flow of instruction was running from top management to workers. The fact that globalization implies that many workers may now be employed in foreign countries has not meant that the model has substantially been abandoned but rather successfully extended using the opportunities provided by the global economy. Thus, a counterpart of the American "dispersed equilibrium" is that, while owners and workers do not concentrate their interests, there is a the tendency to adopt technologies characterized by the concentration of much knowledge in the hands of managers and by a system of top-down instructions to the workers. Such a technology makes in turn "efficient" to attribute substantial powers to managers creating a self-sustaining path of interaction among politics, technology and corporate governance.

The diversity of the European systems makes it very difficult to find some common characteristics. However, they seem to share a tendency to a less pronounced diversification of ownership, a related limitation in the size of their firms and stronger incentive by owners (and

especially by their heirs) to invest in the human capital necessary to run the firms. At the same time, employment protection gives also some production workers the incentives to make firm-specific investment. By contrast, the investment in human capital of professional managers is discouraged and information, being more widely dispersed, has often to follow a bottom-up path. Like in the American case, the technology that is favoured by this form of corporate governance reinforces in turn the political interests that favour this form of political governance: "concentrated" owners and workers have a vested interest to find the political safeguards that protect their investment in physical and human capital. Thus, a counterpart of the European "concentrated equilibrium" is that, while owners and workers tend to concentrate more their interests, knowledge is more dispersed and a system of bottom-up transmission has a relatively more important role.

In each system the rights that are defined in the "concentrated" and "dispersed" equilibria tend to favour the adoption of technologies that in turn reinforce these rights. In both cases, the two systems tend to settle in institutionally stable "organizational equilibria"[17] characterised by a cumulative process of reinforcement between the "political" rights, the form of corporate governance and the technologies that are adopted. Thus, according to the arguments that we have considered, both "dispersed" and "concentrated" organizational equilibria tend to be fairly stable in the framework of a closed economy.

A limitation of these arguments is that we have developed them in the case of two closed economies. One may object that the same conclusion does not hold in the framework of a globalized economy. Under the pressure of increasing economic integration the least efficient systems will tend to become inevitably unstable and eventually be disrupted.

However, the tendency towards the elimination of the least efficient economic institutions and their convergence towards a single model of corporate governance should not be taken for granted. In the first place the two systems of corporate governance may have different absolute advantages in different sectors. In the second place, because of the substantial immobility of both the institutions and the factors, what may matter for the survival of the institutions is not their absolute advantage but their comparative advantage. Thus globalization may paradoxically imply that, even when institutions are characterized by an absolute institutional disadvantage, they may spread within a country. In a global economy each country will tend to specialize in those sectors where it enjoys a comparative institutional advantage[18] (even if it has no absolute institutional advantage). In this way, it may spread its institutions within the boundaries of its economy.

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[17] On the concept of "organizational equilibrium" see Pagano (1993) and Pagano and Rowthorn (1994).
[18] On the theory of comparative institutional advantage we refer to the essays contained in Hall and Soskice (2001). See also Bowles and Pagano (2005). Some empirical evidence for OECD countries is provided by Belloc (2004).

Suppose that a country (for instance Italy, which we have seen occupy such an extreme position in the preceding section, Figure 1) is mostly characterized by "concentrated equilibria" where capitalist dynasties do not diversify among different business and try to manage directly their firms in the presence of strong unions.

Suppose also that the country is not very integrated in the global economy and it has a tendency to be locked in this "concentrated equilibrium". In spite of this tendency, because of the low level of global integration, the country needs still to produce also in those sectors where the country-specific type of organization is difficult to apply. As a consequence, the country is forced to have some institutional diversity in the form of "dispersed" organizational equilibria and/or to adopt some institutional devices that enable it to run these sectors (typically, in the Italian case, state support for large private firms and nationalized investment were the ways that made it possible to run sectors where the scale of firms was incompatible with concentrated family ownership[19]).

However, assume now that the economy gets more integrated and that it can specialize in those sectors where it enjoys a comparative institutional advantage (and not necessarily a comparative traditional advantage[20]). In this case, the country by concentrating its production in these sectors will spread to the all economy the institutional arrangements that support them. Thus globalization, far from imposing a unique model of corporate governance to each country, may push them to specialise in those sectors where they have a comparative advantage. Even if a "concentrated organizational equilibrium" (or a dispersed one) had no absolute advantages in any sector, its diffusion, due to its comparative advantage, may increase as a result of globalization (sadly, Italy may eventually abandon all the sectors that require large firms such as the car industry).

Two objections can, however, be raised against the argument that we have developed. The first concerns the limits to the feasibility to the specialization path set by the institutional comparative advantage of a particular country while the second concerns its desirability.

Globalization is compatible with and does even favour growing institutional diversity only if we interpret "globalization" as "closer economic integration" and not also as the prevalence of "a global system of rights". Obviously, the legal imposition of rights, which are compatible with only one or few systems of corporate governance, would decrease institutional diversity. More subtlety, the acceptance of some rights at global level may indirectly make it less advantageous to run a certain system of corporate governance. One example, which, in our view, deserves special attention, is the change in the definition and the level of enforcement of intellectual property rights at global level[21].

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[19] The Italian case is considered in detail in Pagano and Trento (2003).

[20] By comparative traditional advantage we refer to advantages due to cross-country differences in technological levels and factor endowments that are usually considered by the standard international trade literature.

[21] For a more detailed analysis of IPR see Pagano and Rossi (2004).

A system of dispersed ownership and weak workers' rights that concentrates much information in the hands of the top managers is likely to entail a comparative institutional advantage in the acquisition and the production of codified knowledge that is applied with a top-down transmission mechanism to the production process. By contrast, a system of concentrated ownership and strong workers' rights is likely to entail a comparative advantage in the production of tacit knowledge that is often applied, thanks to some bottom-up transmission of information, to the improvement of the products. The argument that we have considered above would imply that, under the increased pressure of globalization, some countries will specialize in innovative processes requiring codified knowledge and other countries in innovative processes requiring tacit knowledge. However, the convenience of each governance system may crucially depend on the system of intellectual property rights that prevails in a global economy.

Suppose that (at least part of) the codified knowledge of the first type of countries is used in the production of the tacit knowledge of the second types of countries and consider the effects of two regimes: one characterised by weak intellectual property rights (which may approximate the situation of the eighties) and the other characterized by strong global intellectual property rights (which may resemble the situation of the nineties).

Under a regime of weak IPR, the "concentrated equilibria" countries that rely on tacit bottom-up knowledge can exploit and free ride on the countries that rely on top-down codified knowledge. By contrast, under a regime of strong and "up-streamed" intellectual property rights, the countries that rely on codified knowledge can easily patent this knowledge and enjoy monopoly profits with respect to the countries that use it as an input in the production of tacit knowledge. If globalization is interpreted as change from the first regime to the second regime characterized by the existence of strong and "up-streamed" global rights, then it may make it much less convenient and even unfeasible to run a system of corporate governance based on much information processed at the bottom.

5. Conclusions

A system of global rights may make it impossible for each country to specialize according to its institutional comparative advantage. But is it anyway desirable to specialize according to this path?

In order to give an (rather mixed) answer to this question it is convenient to reconsider briefly the main argument that we have proposed in this paper.

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. We have seen that, while one political strategy has somehow

anticipated capitalist concentration and the second has reacted to it, they have both created some form of control of the power of the owners of capital and contributed to social peace. However, these two political strategies are very different. They are characterized by synergies with different systems of corporate governance that are, in turn, associated to different complementary technologies and to different comparative institutional advantages.

Yet, while there can be a tendency of each country to specialize according to its comparative institutional advantage, these advantages are not associated to natural resources endowments but to human institutions. Thus, it is an important policy issue whether some countries should try to change their corporate governance systems and the associated institutional advantages. In particular, the prevalence of a global strong and "up-streamed" intellectual property rights may make this change desirable for some countries (but it is also perfectly legitimate to try, instead, to change the present global regime of IPR which is also not dictated by nature and has numerous disadvantages!).

However, while these changes are possible, one should never forget the complementarities between the politics, the technology and the model of corporate governance that characterize each country. Changes towards the American model may involve that countries based on more concentrated organizational equilibria lose their own way of acquiring skills. Moreover, one should not forget that a 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 and endangers the stability of the social and economic conditions of a reasonable political democracy[22].

References

Alonso-Borrego, C. and M. Arellano (1999). Symmetrically Normalized Instrumental-Variable Estimation Using Panel Data, *Journal of Business and Economic Statistics* 17: 36-49.

Arellano, M. and S. Bond (1991) Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations, *Review of Economic Studies* 58: 277-297.

Arellano, M. and O. Bover (1995) Another Look at the Instrumental-Variable Estimation of Error-Components Models*, Journal of Econometrics* 68: 29-52.

Aoki, M. (2001) *Towards a Comparative Institutional Analysis*. MIT Press, Cambridge.

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[22] Moreover, in the present political situation, one cannot exclude that, if American populism gets increasingly captured by the Republican right, then the U.S. may eventually need some "degree of social democracy" to make capitalism consistent with political democracy.

Beck, T., Demirgüç-Kunt A. and R. Levine (2003a) Law, Endowments, and Finance, *Journal of Financial Economics* 70: 137-181.

Beck, T., Demirgüç-Kunt A. and R. Levine (2003b) Law and Finance: Why Does Legal Origin Matter? *Journal of Comparative Economics* 31: 653-675.

Beck, T., Clarke, G., Groff, A., Keefer, P. and P. Walsh (2001) New Tools in Comparative Political Economy: The Database of Political Institutions, *World Bank Economic Review* 15(1): 165-176.

Belloc, M. (2004) Do Labor Market Institutions Affect Comparative Advantage? An Empirical Investigation, *Quaderni del Dipartimento di Economia Politica* 444, Università di Siena, Siena.

Berman, H. J. (1985) Law and Revolution. Harvard University Press, Harvard.

Blundell, R. and S. Bond (1998) Initial Conditions and Moment Restrictions in Dynamic Panel Data Models, *Journal of Econometrics* 87: 115-143.

Blundell, R., Bond, S. and F. Windmeijer (2000) Estimation in Dynamic Panel Data Models: Improving the Performance of the Standard GMM Estimator. In Baltagi B. *Nonstationary Panels, Panel Cointegration, and Dynamic Panels. Advances in Econometrics* 15, Elsevier Science, Amsterdam.

Bowles, S., Pagano U. (2005) Economic Integration, Cultural Standardisation, and the Policy of Social Insurance. In Bardhan P., Bowles S., Wallerstein M. *Globalization and Egalitarian Redistribution.* Princeton University Press, Princeton (*Quaderni del Dipartimento di Economia Politica* 408, Università di Siena, Siena).

Chandler, A. D. (1990) *Scale and Scope. The Dynamics of Industrial Capitalism*. Harvard University Press. Cambridge, Massachusetts.

Easterly W., and M. Sewadeh (2002) *Global Development Network Growth Database*. World Bank: Washington D. C.(http://www.worldbank.org/research/growth/GDNdata.htm)

Hall, P. A., and D. Soskice (2001) *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*. Oxford University Press, Oxford.

La Porta, R., Lopez-de-Silanes F., and A. Shleifer (1999) Corporate Ownership around the World, *Journal of Finance* 54: 471-517.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and R.W. Vishny (1998) Law and Finance, *Journal of Political Economy* 106(6): 1113-1155.

Levine, R., Loayza N., and T. Beck (2000) Financial Intermediation and Growth: Causality and Causes, *Journal of Monetary Economics* 46: 31-77.

Levine, R. and Renelt D. (1992) A Sensitivity Analysis of Cross-Country Growth Regressions, *American Economic Review* 82: 942-963.

OECD (2004a) *Labour Market Statistics - Indicators* – OECD Employment outlook.

OECD (2004b) *Social Expenditure Database* (www.oecd.org/els/social/expenditure).

OECD (2001) *OECD in Figures* - http://www1.oecd.org/publications/figures/.

Olson, M. (1971) *The Logic of Collective Action*. Harvard University Press, Cambridge.

Pagano, M. and P. Volpin (2005) The Political Economy of Corporate Governance, *American Economic Review*, forthcoming.

Pagano, U. (1993) Organisational Equilibria and Institutional Stability. In Bowles S., Gintis H., Gustafson B. eds. *Markets and Democracy*. Cambridge University Press, Cambridge.

Pagano, U. (1999) Is Power an Economic Good? Notes on Social Scarcity and the Economics of Positional Goods. In Bowles S., Franzini M., Pagano U. *The Politics and the Economics of Power*, Routledge, London: 63-85.

Pagano, U. (2001) The Origin of Organizational Species. In Nicita, U. Pagano, *The Evolution of Economic Diversity*. Routledge, London and New York: 21-47.

Pagano, U, and R. Rowthorn (1994) Ownership, Technology and Institutional Stability, Structural *Change and Economic Dynamics* 5(2): 221-241.

Pagano, U. and S. Trento (2003) Continuity and Change in Italian Corporate Governance. The Institutional Stability of One Variety of Capitalism. In M. Di Matteo M, Piacentini P. *The Italian Economy at the Dawn of the XXI Century*, Ashgate, Aldershot: 177-211.

Pagano, U., and M.A. Rossi (2004) Incomplete Contracts, Intellectual Property and Institutional Complementarities, *European Journal of Law and Economics* 18(1): 55-76.

Political Risk Services (various years) International Country Risk Guide, Syracuse, NY (http://www.prsgroup.com/icrg/icrg.html).

Rajan, R., and L. Zingales (2003) The Great Reversals. The Political Economy of Financial Development in the Twentieth Century, *Journal of Financial Economics* 69: 5-50.

Rodrik, D. (1998) Why Do More Open Economies Have Bigger Governments? *Journal of Political Economy* 106(5): 997-1032.

Roe, M. J (1994) *Strong Managers, Weak Owners. The Political Roots of American Corporate Finance*. Princeton University Press, Princeton, New Jersey.

Roe, M. J (2003) *Political Determinants of Corporate Governance.* Oxford University Press, Oxford and New York.

Shea, J. (1997) Instrument Relevance in Multivariate Linear Models: A Simple Measure, *Review of Economics and Statistics* 2(49): 348-352.

Staiger, D., and J.H. Stock (1997) Instrumental Variable Regression with Weak Instruments, *Econometrica* 5(65): 557-586.

Stock, J.H, and M. Yogo (2002) Testing for Weak Instruments in Linear IV Regression, *NBER Technical Working Papers* N. 284.

Stock, J.H, Wright, J.H, and M. Yogo (2002) A Survey of Weak Instruments and Weak Identification in Generalized Method of Moments, *Journal of Business and Economic Statistics* 20(4): 518-529.

Tocqueville, A. (1994) *Democracy in America.* Edited by Majer J. P. Fontana Press, London.

World Bank (2004) *World Bank Development Indicators*, http://devdata.worldbank.org/dataonline/

World Resource Institute (2003) *Economics, Business, and the Environment*, http://earthtrends.wri.org.

Data Appendix

Ownership: Given a sample of ten 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% (10%) as the criteria for (direct plus indirect) control. "A corporation has a controlling shareholder (ultimate owner) if this shareholder's direct and indirect voting rights in the firm exceed 20 percent. A shareholder has x percent indirect control over firm A if: (1) it directly controls firm B which, in turn, directly controls x percent of the votes in firm A; or (2) it directly controls firm C which in turn controls firm B (or a sequence of firms leading to firm B each of which has control over the next one, i.e., they form a control chain), which directly controls x percent of the votes in firm A." (La Porta et al., 1999: 476). Source: La Porta, Lopez-de-Silanes, and Shleifer (1999).

Employment protection legislation – EPL: The index reflects the overall strictness of employment protection legislation and is normalised to range from 0 to 6, with higher scores representing stricter regulation. Source: OECD (2004a).

Union: Net Union Density constructed as the ratio of Total Reported Union Members (gross minus retired and unemployed members). Source: OECD Employment Outlook (2004a).

Left – Center – Right: Dummy variables capturing political orientation of the executive as measured in the World Bank Database of Political Institutions. Source: Beck et al. (2001).

Total GDP: GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. Data are in constant 1995 U.S. dollars. Dollar figures for GDP are converted from domestic currencies using 1995 official exchange rates. Source: World Bank Development Indicators (World Bank, 2004).

Inflation: Consumer price index reflects changes in the cost to the average consumer of acquiring a fixed basket of goods and services that may be fixed or changed at specified intervals, such as

yearly. The Laspeyres formula is generally used. Source: World Bank Development Indicators (World Bank, 2004).

Openness: The index is equal to (Export + Imports)/Real GDP. Data are in constant U.S. dollars. Source: World Bank Development Indicators (World Bank, 2004).

Unemployment: Unemployment rate. Source: World Bank Development Indicators (World Bank, 2004).

Creditor: "The index is formed by adding one when: (1) the country imposes restrictions, such as creditors' consent or minimum dividends to file for reorganization; (2) secured conditions are able to gain possession of their security once the reorganization petition has been approved (no automatic stay); (3) secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of as bankrupt firm; (4) the debtor does not retain the administration of its property pending the resolution of the reorganization. The index ranges from zero to four." (La Porta, Lopez-de-Silanes, Shleifer, Vishny, 1998: 1124). Source: La Porta et al. (1998).

Law enforcement: "Assessment of the law and order tradition in the country produced by the country risk rating agency International Country Risk (ICR). [...] Scale from zero to 10, with the lower scores for less tradition for law and order." (La Porta, Lopez-de-Silanes, Shleifer, Vishny, 1998: 1124). Original source: International Country Risk Guide (Political Risk Services). Secondary source: La Porta et al. (1998).

Shareholder protection: "The index is formed by adding one when: (1) the country allows shareholders to mail their proxy vote to the firm; (2) shareholders are not required to deposit their shares prior to a General Shareholder's Meeting; (3) cumulative voting or proportional representation of minorities in the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call an Extraordinary Shareholders' Meeting is less than or equal to 10 percent; or (6) shareholders have preemptive rights that can only be waved by a shareholders' vote. The index ranges from zero to six" (La Porta, Lopez-de-Silanes, Shleifer, Vishny, 1998: 1123). The data used in this paper are updated by Pagano and Volpin (2005), to which we refer for further details.

Gini: The Gini index measures the extent to which the distribution of income (or in some cases consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. The Gini index ranges from zero to one (zero = perfect equality) and refers to the year 1992-2000. Source: World Resource Institute (2003).

Total social expenditure: Social expenditure is the provision by public (and private) institutions of benefits to, and financial contributions targeted at, households and individuals in order to provide

support during circumstances which adversely affect their welfare, provided that the provision of the benefits and financial contributions constitutes neither a direct payment for a particular good or service nor an individual contract or transfer. Such benefits can be cash transfers, or can be the direct (in-kind) provision of goods and services. Source: OECD (2004b).

Government consumption expenditure: General government final consumption expenditure (% of GDP) 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 that are part of government capital formation. Source: World Bank Development Indicators (World Bank, 2004).

Legal Origin: Dummy variables for British, French, German and Scandinavian legal origin. Source: World Bank (Easterly and Sewadeh, 2002).

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