

ISSN 1825-0211



**LABOUR REGULATION,
CORPORATE GOVERNANCE AND VARIETIES
OF CAPITALISM**

Mirella DAMIANI

Quaderno n. 76 — Settembre 2010

**QUADERNI DEL DIPARTIMENTO
DI ECONOMIA, FINANZA
E STATISTICA**

Labour regulation, corporate governance and varieties of capitalism

Mirella Damiani*

Abstract

The literature aimed at exploring labor regulation and cross-country comparisons has left partly unexplored two major points: the first is the influence of employees within managerial processes, through the channel of employee representation at firm level. The second point concerns potential complementarities or substitutions between patterns of ownership or shareholder protection *and* labour regulation. The paper offers a critical overview of some selected studies that have started at filling these gaps by considering labour institutions for their influence on the 'balance' of power *inside the firm*, between owners, management, and employees.

Firstly, it examines the literature which gives a central importance to the effects of *legal origins* on labour regulation and labour market outcomes. Secondly, it reviews the studies which focus on *informal rules* and de-facto practices and favour a stakeholder approach. A particular concern is paid to the overall consequences of the different institutional setups in the perspective of the "varieties of capitalism", in which systems of labour regulation exert their function by strategical interactions with other institutions.

Finally, it presents recent theoretical and empirical studies centring on employee investments in firm-specific human capital and on institutional devices which have the effect of tying the fortunes of the employee together with those of the firm.

In the varieties of capitalism characterised by general skills and patterns of radical innovation, it is emphasized the internal governance exerted by 'critical employees'. In economies with firm and industry specific skills, cooperation of employees with management in more shareholder value oriented firm ('negotiated shareholder system') are the more successful roads.

Keywords: Stakeholders, Corporate Governance, Varieties of Capitalism

*Department of Economics, Finance and Statistics

University of Perugia, Italy

mirella.damiani@gmail.com

damiani@unipg.it

1. Introduction¹

“The institutions of labor law and employment relations”- as Ahlring and Deakin write -“intersect with the mechanisms of corporate governance at two levels. One, the level of the firm, is concerned with the constitution and governance of the enterprise and with the influence of employees within managerial processes. The other, the level of the market, is concerned with how far basic employment conditions are regulated across the labor market as a whole or, alternatively, left up to individual or collective agreement in particular sectors or enterprises (Ahlring and Deakin, 2007, p. 874). Until now, the economics of labor protection, recently reviewed by Addison and Teixeira (2001), has paid limited attention to these critical linkages, which involve the enterprise governance and firm production regime. This literature has left unexplored two major points: the first is the influence of employees within managerial processes, through the channel of employee representation at firm level. Indeed, labor protection devices, offered by labor market institutions, are supplemented by a “second channel”, consisting of institutions for worker representation (Roger and Streeck, 1994): In this field, we may observe that provisions for the “rights and obligations” of employees in corporate governance decisions - which may be important in cross-country comparisons, belong to an area which is still relatively unexplored in most comparative studies on labor institutions. The second point concerns the limited attention paid to potential complementarities or substitutions between patterns of ownership or shareholder protection *and* labor regulation.

The following sections offer a critical overview of some selected studies which have started filling these gaps by considering labor institutions from the viewpoint of their influence on the ‘balance’ of power *inside the firm*, between owners, management and employees. The limitations and potentials of these studies, which still do not represent a coherent area of academic research, will be discussed.

The paper is organized as follows. Section 2 examines the literature which gives central importance to the effects of the *legal origins* of labor regulation and labor market outcomes. Section 3 reviews studies which focus on *informal rules* and *de facto* practices and favor a stakeholder approach. Section 4 reviews a more fragmentary vision originating from literature on the ‘varieties of capitalism’ approach, in which systems of labor regulation exert their function by strategical interactions with other institutions. Section 5 presents recent theoretical and empirical studies.

¹A first version of this paper was presented at the Eighth International Conference in Commemoration of Marco Biagi, Rethinking Corporate Governance: From Shareholder Value To Stakeholder Value”, at the Auditorium, Marco Biagi Foundation, Modena, Thursday 18 – Saturday 20 March 2010, The author thanks the discussants and participants to the conference for their useful comments. Special thanks to Valentina Tiecco and Marco Bellucci for their competent and useful assistance.

2. *Shareholder protection and labor regulation: the legal origin hypothesis*

Recent studies have been carried out by Botero et al. (2004), who examine the issue of labor regulation, comprehensive of both dimensions (worker representation and labor market regulation) and test the hypothesis that ‘law matters’. Their study represents a further step in the growing ‘law and finance’ literature, inaugurated by La Porta *et al.* (1997). In this area, many contributions by La Porta, Lopez-de-Silanes, Shleifer and Vishny - ‘LLSV’- show that protection and enforcement of shareholders’ rights are the main pre-conditions for the formation of corporate value (La Porta et al. 1997, 1998, 1999, 2000, Djankov et al., 2008). LLSV have also shown that limited protection of shareholders’ interests mainly involves countries with civil law codes and causes concentration of ownership and illiquid capital markets. Indeed, as the authors write: “Initial research in this area argues theoretically and shows empirically that differences in legal investor protection across countries shape the ability of insiders to expropriate outsiders, and thus determine investor confidence in markets and consequently market development” (Djankov et. 2008, p.431). In the same vein, the enriched law *and labor* literature emphasizes the fact that soft or strict work regulations, which arise from the original legal family of each country, influence the proper functioning (in case of common law countries) or the worse functioning (in case of civil law economies) of labor markets as well as financial institutions.

This thesis is advocated by Botero et al. (2004), who collected data, as of 1997, for a large sample of 85 countries, on the legal framework in three distinct ‘areas’ of labor regulation: employment laws; collective relations laws, and various measures which capture social security provisions². It should be noted that their comprehensive database contemplates, as mentioned above, not only employment-unemployment provisions and *payoff* rights, but also workers’ *decision* rights, which may have some influence on the balance of power inside the firm, and which are not included in other databases, like those sponsored by the OECD (Nicoletti, Scarpetta and Boylaud, 1999) and the World Bank (Forteza and Rama, 2000). For instance, Botero et al. (2004) account for the presence of employees in work councils or on boards of directors in order to obtain some evaluation of arrangements that give a ‘voice’ to employees and represent additional channels influencing the governance of the enterprise.³

²The employment laws index is the average of four different measures: 1) alternative employment contracts; 2) cost of increasing hours worked; 3) cost of firing workers; 4) dismissal procedures. The collective relations laws index is an average based on two indicators: 1) labor union power; 2) collective disputes. The Social Security laws index considers three different measures: 1) old age, disability and death benefits; 2) sickness and health benefits; 3) unemployment benefits.

³The index of Botero et al. (2004) includes rights to unionize and to collective bargaining, but these are not the same features computed by the OECD indicator (i.e., trade union density, coverage by collective agreements, centralization and co-ordination of wage bargaining). Conversely, the above

The authors test the hypothesis that, in imperfect labor markets, where the employment relationship is a source of rents, employers may try to extract these rents and labor regulation ensures forms of protection of workers from employers (*efficient hypothesis*). Under this hypothesis, there should not be *large* negative effects, even if, as the authors admit, “it is possible that the benefits of regulation to protected workers are higher than these distortions, making the overall welfare assessment indeterminate”(Botero et al. 2004, p.1343). But they also find, from econometric estimates, “no benefits, and some costs”. In particular, their estimates show that “more protective employment, collective relations, and social security laws lead to lower male (but not female) participation in the labor force, and that more protective employment laws lead to higher unemployment, especially of the young” (Botero et al. 2004, p. 1375 and p. 1378).

In addition, these negative effects are mainly explained by the legal origin of each country, more than by political power theories. These theories see regulations as outcomes of the political power of labor, and their proponents suggest that these provisions are mainly adopted by leftist governments to benefit their supporters (Roe, 2000, Pagano and Volpin, 2005⁴).

Botero et al. also find, from a database which contemplates 60 norms and 85 countries, as mentioned above, high and significant correlations between labor regulation indices and sub-indices, which tend to disprove substitution effects between different forms of regulation. These correlations, as well as econometric estimates, are consistent with their main claim: patterns of labor regulation follow the general style used by each legal system more generally.

The heavier labor regulation of civil law countries causes two main negative consequences: higher unemployment, and lower labor force participation. By estimating the effects of the three sets of worker protection indicators, the authors detect the significant negative effects of these indicators on male participation in the labor force, the highest detrimental effect being due to collective relations measures.

These findings are connected with the claim that more restricted protection of shareholders’ interests, which characterizes countries with civil law codes, causes illiquid and under-developed capital markets. In fact, in a typical civil law country, such as Germany, the stock market capitalization is only fifty per cent of GDP, whereas it is three times the value of GDP in two common law economies, the US and the UK.

Table 1 lists the main results for finance and labor regulation - collected by Djankov et al. (2006,

authors' index for union power takes into account information and decision rights of employees which are not included in the OECD indicator.

⁴Pagano and Volpin (2005) focus on the importance of proportional versus majoritarian electoral systems, and show that “proportional voting pushes political parties to cater more to the preferences of social groups with homogenous preferences, that is, entrepreneurs and employees”(p. 1007).

2008) and Botero et al. (2004). More specifically, the values for the various measures are grouped by legal families and include two new measures for investor protection. The first is the revised measure of the original index of shareholder rights, originally computed by La Porta et al. (1998) and later revised after criticisms on coding and ambiguities by some authors (including Spamann, 2005)⁵, but which still persist, even after revisions, since the data are sensitive to the way the indexes are constructed and the different components aggregated (Spamann, 2008).

The second value is a new index which takes into account the role of law in addressing various corporate self-dealings undertaken by managers and controlling shareholders (excessive compensation, transfer pricing, self-serving financial transaction, and similarities).

⁵Note that, in a further study, Spamann (2008, p.4) argues, referring to the revised indicators of Djankov et al. (2008), that: “none of these indices can revive the results linking poor investor protection to ownership concentration (LLSV 1998, LLS 1999)... “ In the same study, Spamann also proposes new indexes which should be preferred to those revised by Djankov et al. (2008) and created in response to his own earlier manuscript. “The most striking difference is that the Djankov et al index is on average significantly higher in common than civil law countries.”

Table 1: Finance-Labor Regulation and Development

	Common Law countries	Civil Law Countries			Common vs. Civil (t-stat.)
		German Civil Code	French Civil Code	Scandinavian Civil Code	
		Shareholder protection indexes			
Anti-director rights (a)	4.19	3.04	2.91	3.80	4.46***
Anti-self dealing index (aa)	0.66	0.38	0.33	0.39	6.29***
		Labor regulation Indexes			
Employment Protection (b)	0.2997	0.4529	0.5470	0.6838	
Collective Relations (b)	0.3313	0.4787	0.4914	0.4814	
Social Security (b)	0.4236	0.7110	0.5454	0.8324	
		Stock market developments, income per capita and ownership			
Stock market capital. To GDP 1999-2003(c)	85.5%	48.9%	42.0%	90.4%	2.33**
Log GNP per capita 1997 (d) (\$)	7.8445	10.0557	7.9434	10.3310	
Ownership concentration (e)	44%	34%	55%	37%	7.39***-

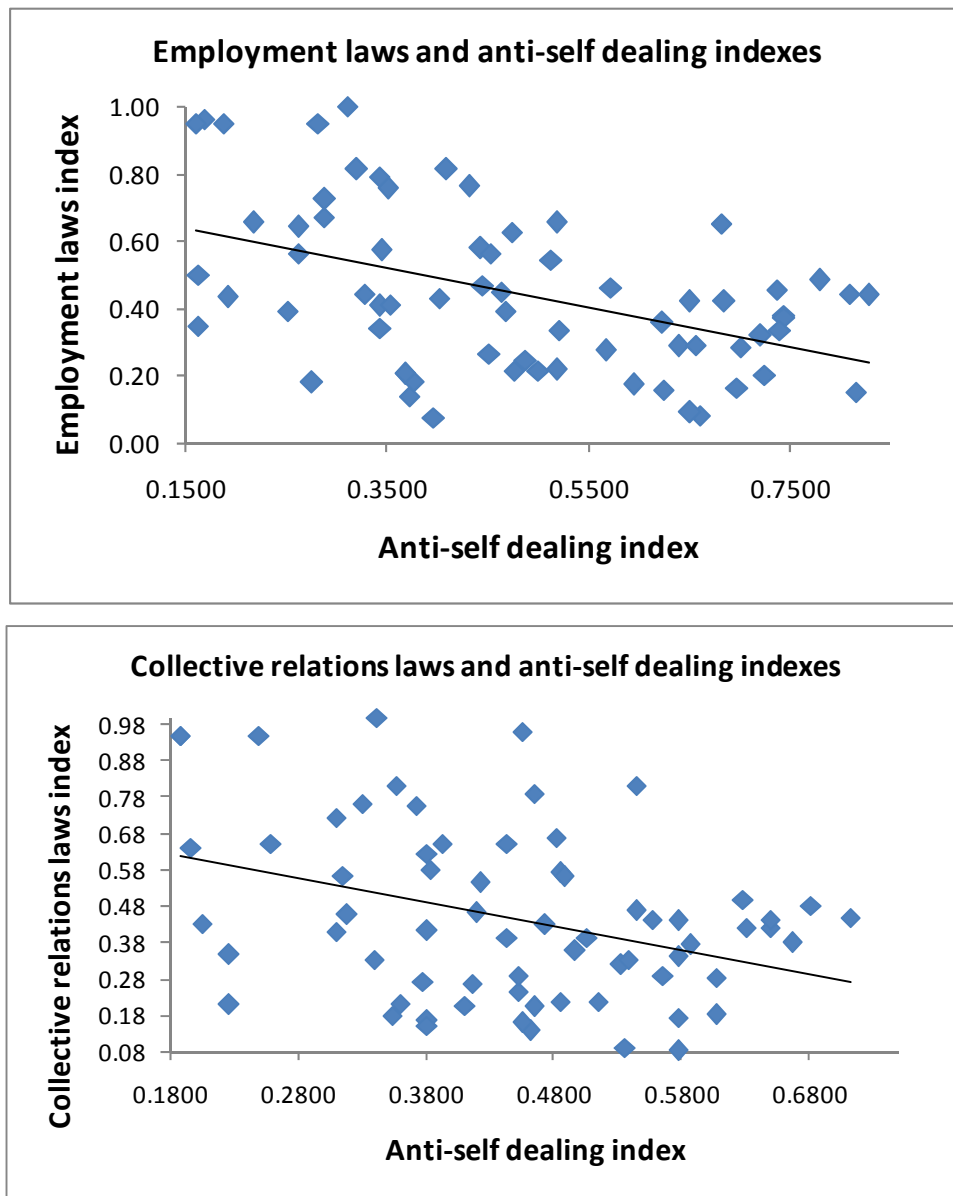
(a) The revised index of Djankov et al. (2006), Tab. XIII; (aa) Djankov et al. (2008), Tab. 3; (b) Labor regulation indexes, Botero et al. (2004), Table III; (c) Djankov et al. (2006), Table VI; (d) Botero et al. (2004), Table III, p. 1364; (e) Djankov et al. (2006), Table VI: average percentage of common shares owned by top 3 largest shareholders in 10 largest non-financial, privately-owned domestic firms. (*) significant at 10% level; (**) significant at 5% level; (***) significant at 1% level.

The descriptive statistics listed in Table 1 (obtained from a database of ample coverage) should prove that *law matters*: legal systems are the main determinants of both the *weak investor protection* and *greater labor regulation* of Continental Europe (German and French Civil law countries). In these economies, the stock market is bound to be underdeveloped, although we observe that no detrimental

effects on GDP per capita growth are obtained⁶. However, the latter result only proves that law - and not wealth - matters, as the authors write: “There is no evidence that employment laws or collective relations laws vary with the level of economic development. This result is inconsistent with the implication of the efficiency hypothesis that rich countries should regulate less because they have fewer market failures”(Botero et al. 2004, p. 1364).

The employment laws index and the anti-self dealing index by countries are shown in Figure 1.

Figure 1: Anti-self dealing protection and labor regulation indexes



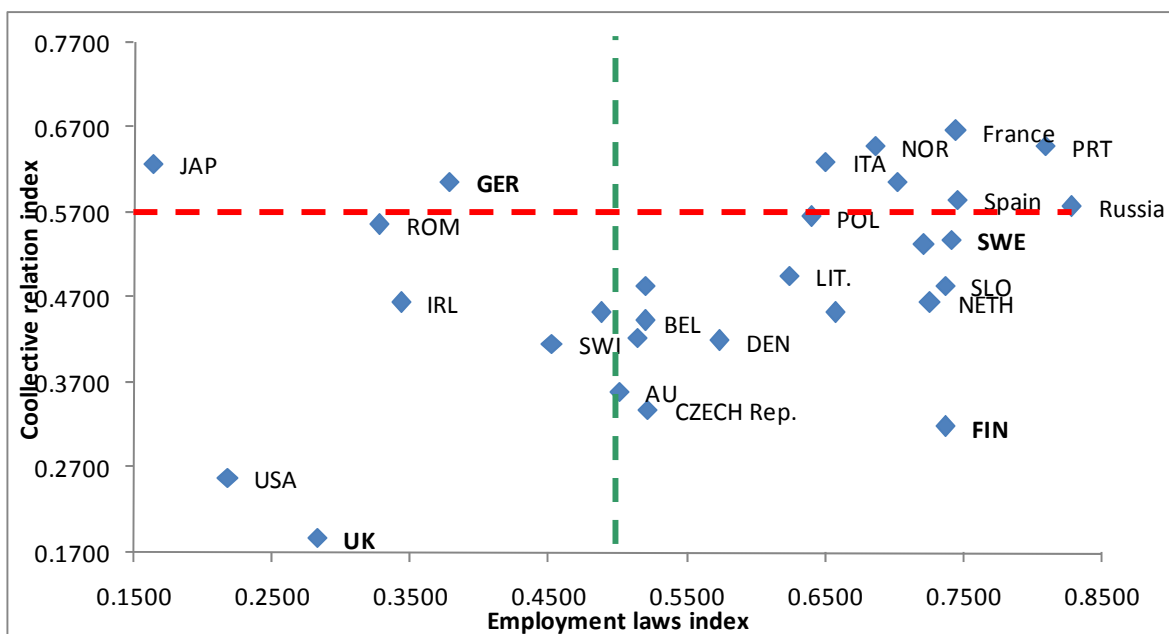
Source: Botero et al. (2004) and Djankov et al. (2006)

⁶Djankov et al. (2008) consider five indicators of stock market development: i) the average ratio of stock market capitalization to GDP; ii) the (median) premium paid for control in corporate control transactions; iii) the average number of domestic publicly traded firms; IV) the average value of initial public offerings; a proxy for ownership concentration.

LLSV maintain that the general style of regulation in different domains typifies each country and the distinct legal families to which they belong. But is this style homogenous, or are there significant differences, for instance in ranking countries by employment laws *and* collective bargaining indexes, or in rules *and* their enforcement? Some additional information in both directions gives a more variegated picture.

For a sub-sample of countries considered by Botero et al. (2004), i.e., European economies, Japan and the US, a rough overview of differences in employment and collective relations rule is offered by Figure 2, in which average values of employment laws and collective relations are shown by dashed lines.

Figure 2: Employment laws and Collective Relations laws indexes



Source: Botero et al. (2004)

As shown in Figure 2, European countries are characterized by different intensities of labor regulation in distinct areas, such as employment contracts and collective relations. Germany, for instance, shows strict regulation of collective relations rules (higher than the average value obtained for the full sample of 85 countries), but a softer degree of rigidity (lower than the average) for employment contracts. The opposite is true for Finland.

A second point is the relationship between finance and labor regulation and their enforcement. The importance of enforcement of investor protection has been stressed in the Italian case, for take-over regulatory measures (Barker and Rueda, 2007) and minority shareholder protection (Spaventa, 2004). As noted by Spaventa (2004), “The Italian case provides further anecdotal evidence: though after a reform enacted in 1998 Italy’s score in the anti-director index jumped from 1 to 5, out of maximum

of 6, nothing much changed in the following years in terms of ownership structure or the number of listed companies” (p.13).

In addition, note that the (private) anti-self dealing index is compounded by two groups of indicators: indexes of disclosures required before transactions are approved, and indexes which measure the ease in rescinding transactions⁷. In Italy, *ex-ante* control measures are less binding, but requirements to sue managers and controlling shareholders are less demanding, as groups of shareholders owning only 5% of equities can sue the board. However, the efficacy of *ex-post* self-dealing control is conditioned by the real interests and incentives of minority shareholders and by public enforcement, the additional measure that Djankov et al. compute to evaluate rule of law.

To sum up, indexes of disclosures required before and after transactions determine, respectively, *ex-ante* and *ex-post* private control of self dealing. These two groups of indicators, which compound the (private) anti-self dealing index, must be considered along a public enforcement index, which measures the real effectiveness of all the provisions⁸. For the sample of 72 countries covered by both studies, Botero et al.(2004) and Djankov et al. (2006, 2008), a description of correlations between institutional variables is given in Table 2.:

⁷ Indeed, the regulation of self-dealing may be accomplished by approval requirements and disclosure *before* the transaction (‘private *ex-ante* control of self-dealing’) and by disclosure and period filings *after* the transaction, which measure the ease with which minority shareholders can prove wrongdoing (‘private *ex-post* control of self-dealing’).

⁸For a methodological explanation of these new indicators, see Djankov et al. (2008) Tab. I.

Table 2: Correlations of labor regulations protection and corporate governance indexes

	<i>Ex-ante</i>	<i>Ex-post</i>	Anti-self	Public
	private	private	dealing	enforcement
	control	of control	of index	index
	self dealing	self dealing		
Employment				
laws index	-0.3564*	-0.4416*	-0.4685*	0.2248
Collective				
relations laws index	-0.2571*	-0.3836*	-0.3687*	0.1099
Social Security index	-0.0652	-0.0119	-0.0497	0.2464*

Source: our elaborations on Djankov et al. (2008) and Botero et al. (2004; the correlations are computed for a sample of 69 countries; * significant at 5% level.

Table 2 shows that stronger labor protection is associated with different degrees of correlation with *ex-ante* and *ex-post* self-dealing rules and, first of all, that the consideration of the additional dimension, i.e., public enforcement, reveals that labor regulation does not necessarily lead to worse enforcement of investor protection rules.

These findings open the road to other critical points. The first, as shown below, is that not only *formal* norms but also *informal* rules and labor practices are important.

3. Informal norms and labor practices

Botero et al. (2004) claim that their measures should reflect, in their words, “actual economic costs and not just statutory language” (p. 1347). But the problem still remains. For instance, let us consider norms for collective bargaining. As stressed by Ahlring and Deakin (2007, pp. 884-885), “the mandatory requirement that companies bargain with unions or work councils shapes a great deal about the labor environment in Germany, while the lack of this particular written law may be less significant in shaping the labor environment in Japan, where a different style of consensual company politics prevails, making it less necessary for the formal law to intervene”. But the evaluation of labor protection outcomes calls for regulation ‘in practice’, rather than ‘law on the book’.

A different database, which collects *de facto* practices, is the 2004 Global Labor Survey (GLS), performed for 33 countries and aimed at surveying practitioners and experts who have direct knowledge of both regulations and their actual implementation (Chor and Freeman, 2005, p. 4). The GLS survey is an Internet-based survey aimed at gathering information from labor experts and practitioners of 33 countries and addressed to evaluation of labor regulations. Chor and Freeman explicitly compare the GLS measures with data on the legal provisions from Botero et al. (2004). What they find is an insignificant correlation between formal and informal regulation. For instance, by considering *de facto* measures which strictly parallel the *de jure* provisions of Botero et al. (2004), Chor and Freeman obtain the results shown in Table 3.

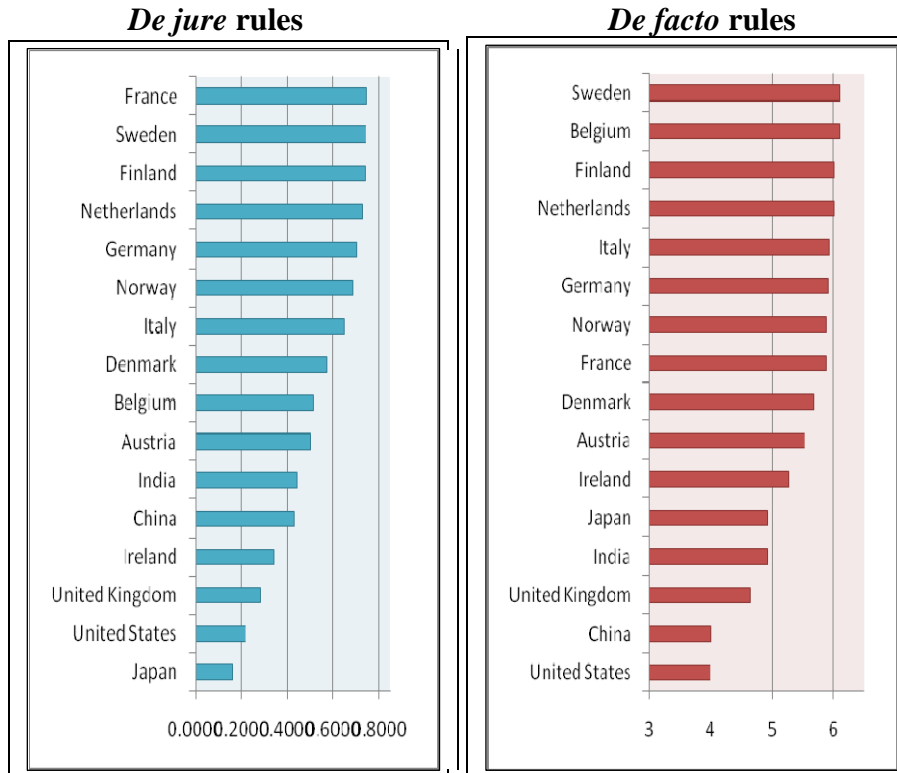
Table 3: Correlations among formal and informal measures of Regulation of labor

	<i>Ex-ante</i> private control of self dealing	<i>Ex-post</i> private control of self dealing	Anti-self dealing index	Public enforcement index
Employment laws index	-0.3564*	-0.4416*	-0.4685*	0.2248
Collective relations laws index	-0.2571*	-0.3836*	-0.3687*	0.1099
Social Security index	-0.0652	-0.0119	-0.0497	0.2464*

Source: Figures are correlation coefficients, *, **, *** denote *p*-values significant at 10%, 5% and 1% levels. See Chor and Freeman (2005, Table 8, p. 42);

Indeed, when *de jure* regulations of labor, like those discussed by Botero et al. (2004) and reviewed in the above section, are complemented with the new GLS indices of *de facto* labor practices, some additional insights can be reached. On employment regulations, for instance, a comparison in the ranking of countries according to the strictness of *de jure* and *de facto* norms (see Figure 3) highlights the significant change in the Japanese position, which confirms the indications of Ahlering and Deakin (2007) mentioned above for this country and its bargaining system.

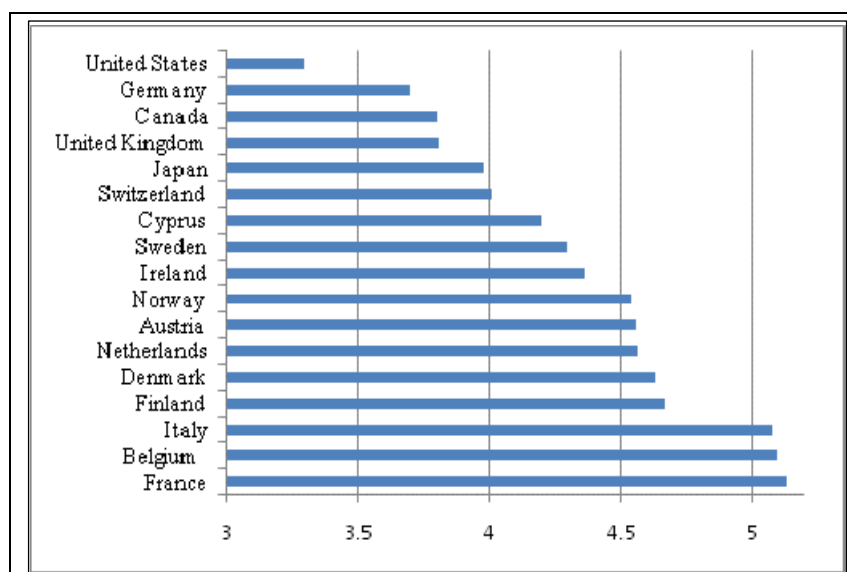
Figure 3: Employment regulations in a sample of developed economies



Sources: Botero et al. (2004) and Chor and Freeman (2005)

Another important indicator for the balance of power inside the firm is the frequency of labor unrest and conflicts. According to this index, the frequency of labor disputes has the lowest score in a shareholder country, such as the US. By contrast, in countries where unions and labor organizations are more powerful, such as France, Belgium and Italy, the indicator for employer-employee conflicts reaches the highest levels. But an interesting and unexpected result arises: the frequency of labor strikes and the nature of labor conflicts qualify the German case as one of the less ‘confrontational’ environments in terms of labor management, as shown in Figure 4.

Figure 4: Labor disputes in some industrialized countries, 2000



Source: Chor and Freeman (2005, Tab. 5, p. 37). Indicator scores from 1 to 7 and was obtained from responses to 12 questions related to threats, frequency and features of strikes. See Chor and Freeman (2005, Module 4, pp. 49-50).

In any case, what all the data tell us is that the US is last in terms of *formal* and *informal* labor rules. Freeman (2007) suggests that the American flexible labor practices are among the main causes of the great dispersion of earnings and income inequality recorded in this economy, whereas the beneficial effects in terms of other aggregate outcomes, such as employment and unemployment rates, remain equivocal⁹. The author, a convinced supporter of the stakeholder economy, strongly supports the need for a political perspective that calls attention to historical trends: he writes: “the second possible interpretation of empirical results is that the effects of institutions on outcomes changes *over time* due to changes in the economic environment or to changes in institutional responses to particular economic stimuli” (Freeman, 2007, p. 24). These dynamic considerations will be discussed in a following section. But first we analyze a central question posed by comparative studies on labor and finance regulation: the role of institutional complementarities.

⁹The author shows, according to OECD data, that around the year 2000 the US had the highest dispersion of wages (measured by the ratio of the pay of persons in the 90th percentile of wages and salaries relative to wages and salaries of persons in the 10th percentile). The US had also the highest level of overall income inequality (measured by the Gini coefficient). Freeman documents the ambiguous effects of labor institutions on unemployment and employment by considering various studies. See among others, Nickell, Nunziata and Ochel (2005).

4. Institutional complementarities and “varieties of capitalism” approach

A prominent view to evaluating institutional complementarities and their interactions with labor regulation is offered by the “varieties of capitalism” approach. This does not contrast but in some way extends the ‘efficient’ hypothesis advanced by North (1981), according to which the adoption of specific institutions may be seen as a proper and convenient choice capable of improving welfare and curing endemic failures.

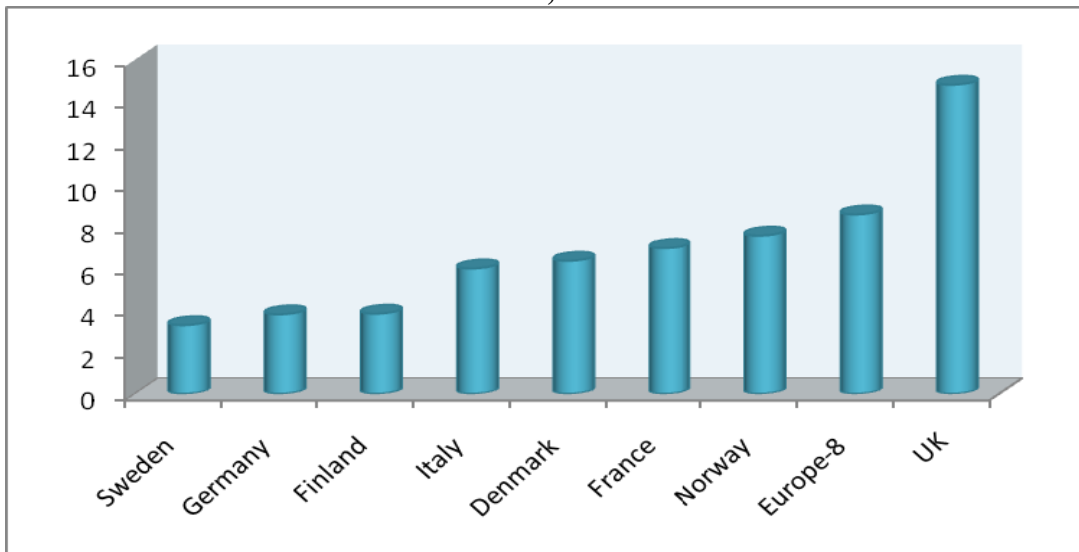
For instance, the German and Japanese economies represent models of a ‘patient capitalism’ assured via long-term labor contracts, and thus longer-term jobs and higher employment tenures; in addition, wage agreements at sectoral level can contribute to lowering intra-firm conflicts related to selection and retaining policies for skilled employees.

In addition, in a coordinated market economy such as Germany, employee involvement may fit well with concentrated share-ownership: employee representatives participate in decision-making with block-holders and cooperate with them in monitoring managers. At the same time, moderate wage differentials across firms and industries reduce the propensity of employees to change jobs, and are consistent with cross-shareholdings and investments of employees in firm and industry-specific skills.

Also, in this type of system, where enduring relations are pervasive, take-overs and hostility are quite rare - a common fact usually explained by the specificities of its governance system, in which insider protection is higher and corporate relations, as mentioned above, foster long-term cooperation and encourage firm-specific investments by lenders, employees and large shareholders (Schmidt, 2003, Damiani, 2009).

Confirmation of the lower propensity of coordinated systems to utilise the market for the corporate control has recently been found by Damiani and Pompei (2008): recent figures on the incidence of take-overs in Europe show that a liberal market economy, such as that prevailing in the UK, is the most active player in the market for corporate control, with a proportion of more than 17% of firms targeted in M&A deals, whereas Germany, totalling only a proportion of 4.59% of firms, is last (see Figure 5).

Figure 5: The market for corporate control in Europe: proportion of listed firms targeted in M&A deals, 1995-2005

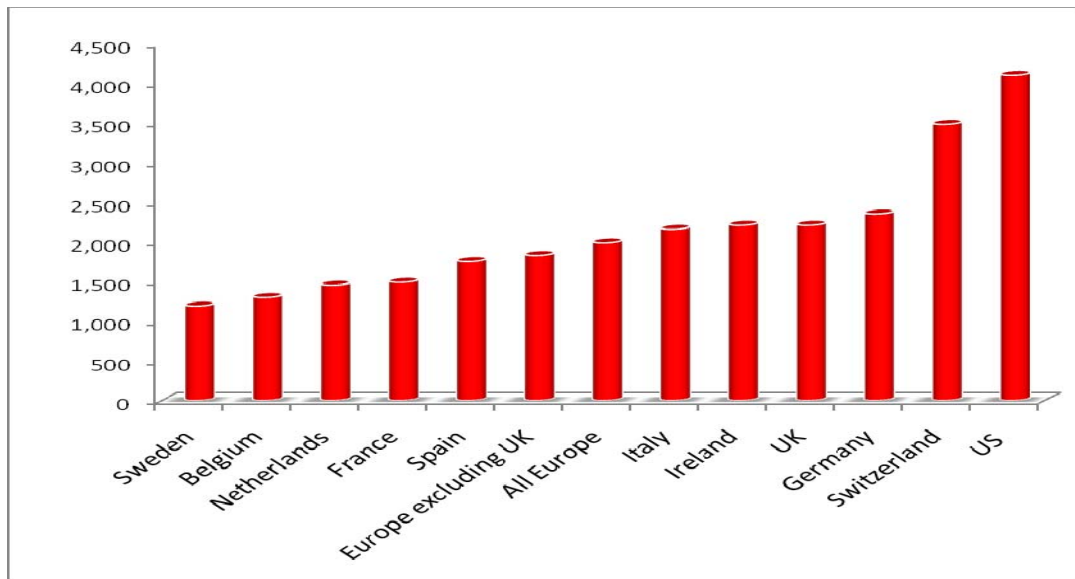


Source: Damiani and Pompei (2008).

A different variety of capitalism is represented by the Anglo-Saxon system. In this context, characterized by dispersed ownership, individual investors have little incentive for active governance. Such features are parallel to market relations and arm's-length exchanges of labor services: the distinctive features of labor relationships are wage patterns linked to labor market conditions, decentralized company-level bargaining, and, lastly, no restrictions on labor adjustment.

However, in these economies, in which the single agent does not have sufficient power or incentive to detect and contrast inefficient management, alternative forces may play a disciplinary role. Managerial incentives, as well as take-over threats, as seen above, may mitigate the moral hazard problems affecting corporations (Shleifer and Vishny, 1997). Recent data on CEO compensations provide some confirmation.

Figure 6: CEO compensations in Europe and US-2008 (€)



Source: Conyon et al. (2010); the sample excludes firms with less than €100m in 2008 revenues

The potential drawback (in opposition to North's efficient hypothesis) is represented by the malfunctioning of the Anglo-Saxon incentive system, which leaves too much space to *entrenchment* and managerial misconduct (Bebchuk and Fried, 2003) and income inequalities (Freeman, 2007)¹⁰.

A distinctive feature of coordinated and liberal market economies concerns the varieties of production regimes and their different skill profiles. Estevez-Abe et al. (2001) show that diverse types of worker protection prevailing in various types of capitalism are associated with different types of skills: i) firm-specific skills, acquired through on-the-job training, are valuable to the employer who carried out the training but not to other employers; ii) industry-specific skills, acquired through apprenticeship and vocational schools, may be valuable to other employers in specific sectors, especially when certified, iii) general skills, more transferable, have a value independent of the type of firm or industry. The authors show that, on one hand, Coordinated Market Economies (CMEs) provide institutional support for forms of industry-specific training (adopted in environments of collaborative research and development between firms) or promote support for the acquisition of firm-specific competences.

The high unemployment protection of Denmark is a good case in point for the first kind of skill equilibrium. As Estevez-Abe et al. (2001, p) argue: "A high replacement ratio also eliminates the downward pressure on specific skilled wages, as unemployed skilled workers do not have to take job offers at discounted wages". In addition, "A longer benefit duration permits the unemployed

¹⁰See Bebchuk and Fried (2003), to examine the view of "Executive Compensation as an Agency Problem".

industry-specific skill holders enough time to find another job that matches their skills, especially if they are permitted to turn down jobs that are outside their core competences”.

A different case is that of the high employment protection (accompanied by a low degree of unemployment protection) which characterizes Japan, a typical example of firm-specific skill equilibrium. In Japanese companies, loyalties in labor relations and high length of job tenure are forms of insurance for workers to acquire those company-specific skills which the enterprise needs.

Conversely, Liberal Market Economies (LMEs) provide economic agents with greater opportunities to acquire general skills, adoptable to multi-purpose technologies. In LMEs, such as the US, individuals without employment and unemployment protection are encouraged to develop general, rather than specific, skills, as the corporate strategies in LMEs tend to require.

Table 4 lists some country data for employment and unemployment protection indexes and skill profiles. The first indicator, developed by Estevez-Abe et al. (2001), is a composite measure obtained as the average of three different indicators: the OECD relative stringency of legislation on individual hiring and firing rules; the OECD restrictiveness of collective dismissal rules; and company-based protection computed by the authors by taking into account firm-level protection (such as the presence of employees in company bodies with manpower decisions). Unemployment protection is the unemployment replacement rate, the share of a worker’s previous wage which is replaced by unemployment benefits. Table 4 gives some support to the thesis that “employment protection increases the propensity of workers to invest in firm-specific skills, whereas unemployment protection facilitates investment in industry-specific skills. The absence of both gives people strong incentives to invest in general skills”. (Estevez-Abe et al., 2001).

Table 4: Labor protection, tenure and training profiles

A: Index of Employment protection (EP)

	Low	High
Index of Unemployment protection (UP)	Industry-specific skills: Example: Denmark UP=.0.91 EP= 0.53	Industry- and firm-specific skills Example: Germany UP=0.86 EP= 0.77
	General skills Example: US UP=0.10 - EP=0.14	Firm-specific skills Example: Japan UP=0.33- EP=0.76

B: Tenure and Training profiles

	Median Length of tenure	Vocational training share (a)	Vocational training system (b)
Denmark	4.4.	31	Mixed
Germany	10.7	34	Dual apprenticeship
USA	4.2	3	Weak
Japan	8.3	16	Company based

Source: Index of employment protection is obtained (see Estevez-Abe, 2001), Tables 4.1 and 4.2, Figure 4.1. (b) Share of age cohort in either secondary or post-secondary vocational training.

Source: UNESCO (1999). (c) Character of vocational training system according to whether most training occurs at company level (as in Japan), through a dual apprenticeship system (as in Germany), or through some mixture of the latter two.

For the German case, one can note that the combination of industry- and firm-specific skills renders the country's companies vulnerable to two different problems: the hold-up between employers and their workers for firm-specific skills, and 'poaching' of trained workers from other enterprises for industry-specific skills. The employee channel of representation at company level and industry-level bargaining are addressed toward solving these problems and ensure that employees invest in company- and industry-specific skills. Conversely, the US, is "an archetypical case of a country with a weak company and vocational training system, but a very advanced higher education system. Indeed, a college education in this country is widely considered the only effective insurance against an otherwise highly volatile and uncertain labor market."(Estevez-Abe et al. 2001, p.)

A related topic concerns the industrial fields of specialization, clearly distinct between one country and another. Germany mainly specializes in sectors characterized by incremental innovation, as data from the European Patent Office suggest (Hall and Soskice, 2001a), whereas the USA shows the prevalence of sectors of radical innovation. But the introduction of the sectoral dimension and innovation patterns has direct implications for labor protection requirements, as shown by Bassanini

and Ernst (2002). As is known, two different regimes of innovation may be distinguished. In the first, called Schumpeter Mark I (characterizing sectors such as precision instruments, standardized software and household appliances), innovation is radical, investment projects are short-lived, capital depreciation is rapid, and knowledge and competences are general. In this type of regime, featuring *creative destruction*, firms rely on the *external* labor market, requiring low hiring and firing costs and fast worker turnover. As Ernst and Bassanini (2002, p. 15) clarify, “in these industries, newly hired personnel brings in new ideas and allows substituting for older organizational routines, while the use of a standardized knowledge base allows newly hired staff to quickly learn specific applications” .

The opposite is true for the other, routinized regime (electronic components, aircraft and spacecraft), also known as Schumpeter Mark II, in which technological change is by *creative accumulation*. In this case, investments are long-term oriented and human capital and skills are firm-specific. Firms rely on the *internal* labor market, since “the best available competences for this type of innovations can be often found inside the firm itself” (p.15).

These considerations have immediate implications for market regulation. By considering the logarithm of patent per capita and the indicator of stringency of product regulation and employment protection, Bassanini and Ernst (2002) obtain an unequivocal sign for the first indicator for 26 OECD countries, suggesting that enhancing competition in the product market contributes to improving the innovation performance of a country. However, the effects for employment protection are ambiguous. By distinguishing countries by regimes of coordination, the above authors find negative and significant correlations only in countries with low or intermediate levels of co-ordination of the wage bargain; conversely, in other economies, characterized by high coordination, no significant relationships are obtained.

Table 5: Innovation and regulation: Patents per million inhabitants and product/market regulation

Product market regulation		Employment Protection	
		Countries with high levels of coordination	Countries with low and intermediate levels of coordination
Patents per million of inhabitants	Corr. coefficient 0.23 t-statistic 3,27	Corr. coefficient -0.23 t-statistic -0.68	Corr. coefficient -0.48 t-statistic -2.06

Source: Bassanini and Ernst (2002).

These results may reflect differing sectoral specialization. As observed by Bassanini and Ernst (2002, pp. 15-16), countries with uncoordinated industrial relations have a comparative technological advantage in industries characterized by an entrepreneurial technological regime, in turn associated with a flexible labor market; countries characterized by industries with a population of large and well-established firms make more use of the firm's internal labor market and need high and stringent employment protection.

To sum up, the importance of institutional complementarities is confirmed by a whole set of information. In Germany, many labor institutions which secure "long employment tenures, industry-based wages, and protective works councils" are feasible, because firms have access to finance, independently of downward fluctuations in profitability; they are also well integrated in a corporate governance system characterized by limited recourse to poaching of skilled workers, inter-firm collaboration, technology transfer, and cross-shareholdings.(Hall and Soskice, 2001a, p. 27).

Table 6 offers some comparative features which support the thesis of institutional complementarities.

Table 6: Complementarities in corporate governance institutions
Coordinated Market Economies (CME) and Liberal Market Economies (LME)

	CME		LME	
Industrial relations	Germany	Japan	US	UK
Bargaining level (a)	Sectoral	Sectoral	Company	Company
Job Tenure (b)	10.7	8.3	5.0	4.2
Corporate Governance				
Ownership concentration (c)	41.5	33.1	2.0	10.9
Cross-shareholdings (d)	42	22	0	1
Employee participation in monitoring function (e)	Yes	No	No	No
Compensation				
CEO Compensation (f)	47.1	44.2	100	54.4
CEO earnings to manual worker earnings (f)	10.2	7.8	25.8	15.5
Earning dispersion (g)	2.87	2.99	3.45	4.59

Sources: (a) OECD (2004);(b) OECD 1997; (c) average percentage of common stocks owned by five top largest shareholders, Prowse (1995); (d) Prowse (1995); (e) Employees appoint some board members, OECD (2003, pp. 47-50);OECD (2003), (f) Towers Perrin (2005), US=100, 2003; (g) manufacturing; 90-10 percentile ratios for gross earnings of full-time employees, Towers Perrin (2005).

In terms of outcomes, both group of economies, CMEs and LMEs, are capable of assuring similar results, at least when distributional aspects are excluded from the comparison, as confirmed by the

econometric estimates of Hall and Gingerich (2004). This implies a confutation of the LLSV thesis: if one restricts analysis to developed countries, as Hall and Soskice do, Coordinated Market Economies, which are also civil law countries, do not deliver inferior results to Liberal Market Economies, as national indicators confirm, although high differentials are recorded *within* each group - as seen, for instance, in the unemployment rates of US and Ireland (see Table 7). In any case, Hall and Soskice do not argue that one group is superior to another, but that the two types of economies are characterized by different production regimes and different 'capacities for innovation'.

**Table 7: Coordinated Market Economies (CME) and Liberal Market Economies-(LME)-
Economic performances**

	Growth rate of GDP		GDP per capita		Unemployment rate	
	74-84	85-98	74-84	85-98	74-84	85-98
Austria	2.3	2.5	7852	17414	2.2	5.3
Belgium	2.0	2.2	8007	17576	8.2	11.3
Denmark	1.8	2.2	8354	18618	7.1	9.3
Finland	2.7	2.2	7219	15619	4.8	9.4
Iceland	4.1	2.7	8319	18285	0.6	2.5
Germany	1.8	2.2	7542	16933	4.6	8.5
Japan	3.3	2.6	7437	18475	2.1	2.8
Netherlands	1.9	2.8	7872	16579	5.6	6.8
Norway	4.0	2.9	8181	19325	2.1	4.3
Sweden	1.8	1.5	8450	16710	2.3	4.8
Switzerland	0.58	1.3	10680	21398	0.4	2.5
CME	2.4	2.3	8174	17902	3.6	6.1
Australia	2.8	3.3	7932	16701	6.2	8.5
Canada	3.0	2.3	9160	18835	8.4	9.5
Ireland	3.9	6.5	4751	12830	9.1	14.1
New Zeland	1.8	1.7	7378	14172	2.2	6.9
UK	1.3	2.4	7359	15942	6.7	8.7
US	2.2	2.9	11055	22862	7.5	6.0
LME	2.5	3.2	7939	16890	6.7	8.9

Source: Hall and Soskice (2001a, Table 1.1, p.20).

It is not by chance that Botero et al. (2004) are careful to not use differences in GDP growth as outcomes of different regulatory frameworks, but solely as an exogenous control variable¹¹.

¹¹This point was clearly made by Ahlring and Deakin (2007, p. 889).

5. New developments and recent evidence

Various additional critical points have been raised in the last few years. Some interesting issues, focused on labor regulation, are briefly reviewed below.

Historical patterns of worker protection

A critical look at the LLSV literature is given by Ahlering and Deakin (2007) and Armour and Deakin (2009). The ‘legal family’ hypothesis was already rebutted by analysis of historical patterns by Rajan and Zingales (2003) in their description of the evolution of financial development over the last hundred years. The authors found historical changes and “great reversals”, to paraphrase the title of their study. In contrast to the findings of LLSV, the authors showed that “countries with Common Law systems were not more financially developed in 1913... In 1913, France’s stock market capitalization (as a fraction of GDP) was almost twice that of the United States (0.78 vs. 0.39) even though the French Civil Code has never been friendly to investors...” (Rajan and Zingales, 2003, p.7).

There is some indication that worker regulation differences have also occurred in the last few decades. This is what Armour and Deakin (2009) document in a recent research, with the main intention of examining the patterns of evolution of various legal systems in terms of production of *changes in substantive rules*. But the discovery of these *dynamic* effects calls for the construction of *time series* data, whereas previous researches focused on static cross-country comparisons¹².

Armour and Deakin (2009) examine a group of five countries and consider the parallel evolution of investor and labor protection over a 35-year period. They compute a longitudinal labor regulation index, which consists of 40 single variables and covers five aspects of regulation: i) labor contracts; ii) working time; iii) dismissal; iv) employee representation; v) industrial action¹³.

What they find is that the “crystallization” of a particular legal structure is not the main driver of ‘substantive differences’ among countries, where by substantive differences they mean that the norm is not *functionally* equivalent to other similar norms (Deakin, Lele and Siems, 2009).

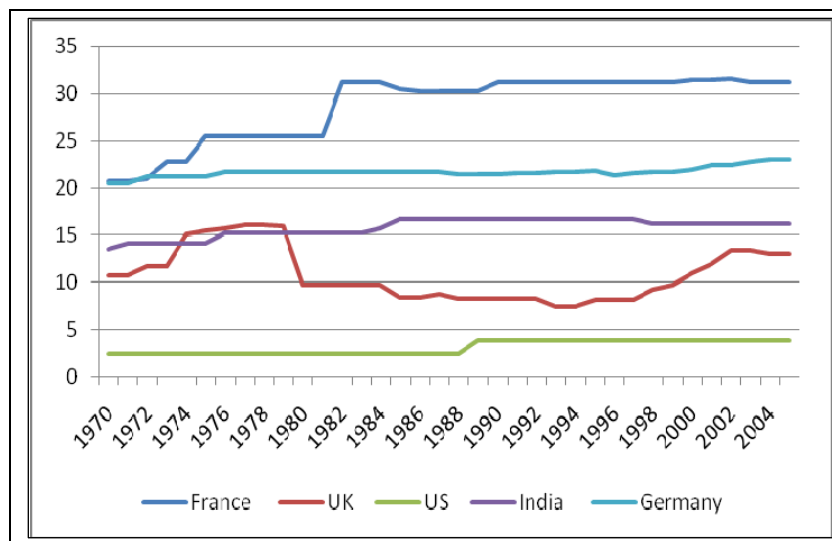
Their other main result is that the close parallelism between weak shareholder protection and strong labor protection, maintained by the law-finance-labor literature, does not hold. As the authors note: “the pattern of change differs depending on the area of law under examination, with creditor rights and labor rights demonstrating much more divergence and heterogeneity than shareholder rights. We interpret this as casting doubt on the plausibility of the mechanisms that have been said to underpin

¹²For a description of the methodology used by the authors, see Section 4 in Armour and Deakin (2009).

¹³ For a detailed description, see Deakin, Lele and Siems (2009, sections 4.2 and 4.3).

the links posited between legal origins and financial development ” (Armour and Deakin, 2009, p. 2). They also show the importance not of *two* legal families, but of *three* ‘parent’ systems: i) the UK, France and Germany; ii) the world’s most developed economy, the US; iii) the largest democracy, India. According to the data they collect, here shown in Figure 7, the authors suggest a divide *within* legal families, between France and Germany (civil law countries), on one hand, and the US, the UK and India (common law economies), on the other.

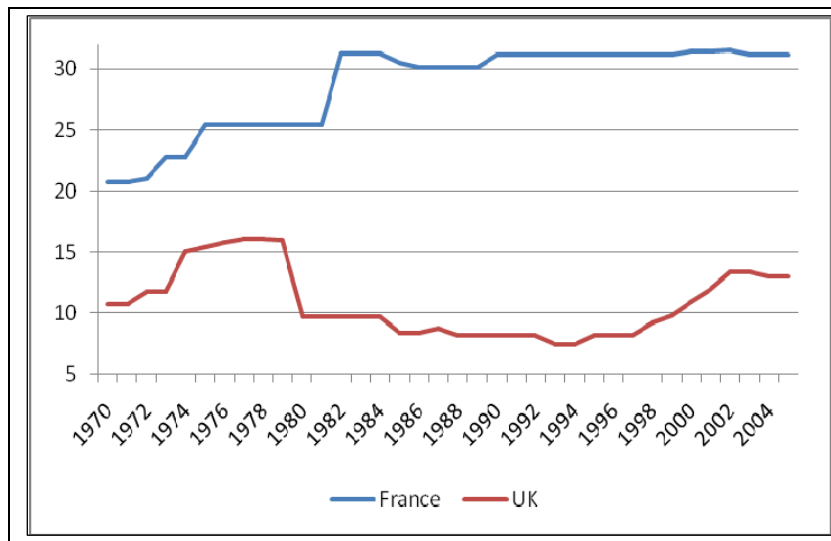
Figure 7: Worker protection in five economies



Source: our elaboration of data from <http://www.cbr.cam.ac.uk/pdf/WP352.pdf>

In addition, cross-country comparison of shareholder, creditor and worker protection reveals that legal rules do evolve but at different paces, and that political changes are good predictors of the most significant changes. For worker regulation, three of the systems - Germany, the US and India - have recorded fewer transformations, whereas the UK and France have undergone more pronounced changes, but in opposite directions. The evolution of aggregate worker protection for the UK and France is shown in Figure 8.

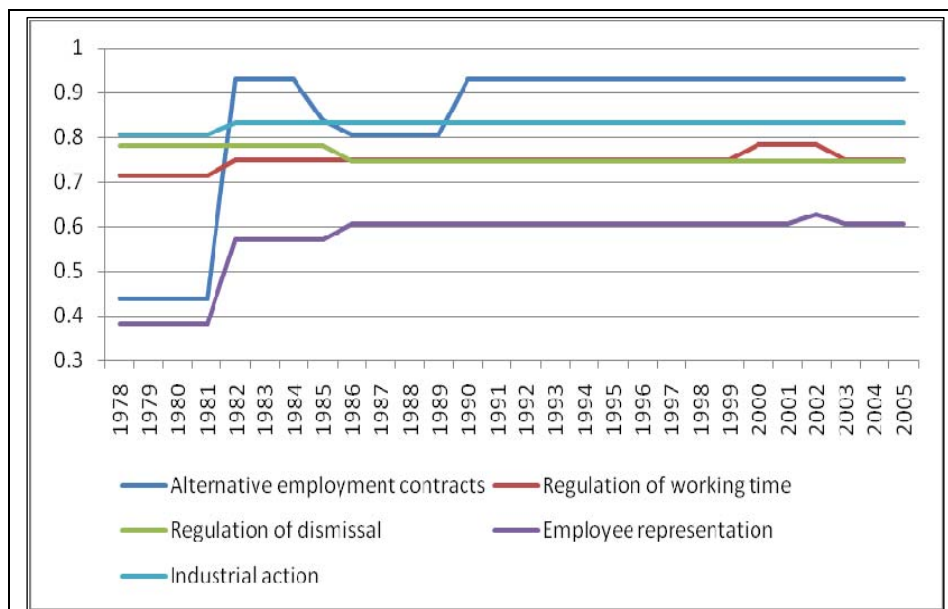
Figure 8: Worker protection in the UK and France



Source: our elaboration of database used by Armour and Deakin (2009), see <http://www.cbr.cam.ac.uk/pdf/WP352.pdf>

Disaggregated analysis for France also shows that the most important changes have been those related to employment contract regulations, which include provisions for temporary and part-time contracts, but we will consider this issue in the last section below.

Figure 9: Worker protection in France by components



Source: our elaboration of database used by Armour and Deakin (2009), see <http://www.cbr.cam.ac.uk/pdf/WP352.pdf>

A plausible interpretation offered by Armour and Deakin is that the UK, after the election of a conservative government, “underwent a rapid decline in the intensity of regulation during the 1980s and early 1990s, with a small revival from the late 1990s.” (Armour and Deakin, 2009, p. 30). In

France, instead, the election of a socialist government in 1981 led to a series of ‘worker-oriented’ labor reforms.

In any case, the dynamic evolution of labor norms calls attention to the driving forces behind them. The role of complementarities between *legal* and *economic* institutions, left unexplored by the LLSV literature, seems a promising field of research. But even this perspective presents some limitations: “The varieties of capitalism literature, notwithstanding its emphasis on diversity and the institutional richness of its accounts, suffer from some of the same limitations as the legal origin hypothesis” (Ahlering and Deakin, 2007, p. 903).

The ‘efficient’ hypothesis may also be confuted by arguing that institutional complementarities reinforce each other and cause collusive alliances which destroy shareholder value (Hansmann and Kraakman, 2001). This line of reasoning has recently been proposed by the ‘insiderness’ hypothesis, reviewed below.

Insider capital, insider labor

‘Insiderness’ is the central aspect which determines outcomes in corporate governance. The idea is that equity orientation opens markets to business competition which damages incumbent positions. *Insider labor*, i.e. workers with protected jobs, and *insider finance*, owners with significant control of corporate assets, share a common interest in preventing competition by new entrants, thus preserving their rents. The financial data collected by Barker and Rueda are gathered for a sample of 18 OECD countries between 1976 and 2004.

Table 8 presents a selection for 2004 of a sub-sample of countries, which includes those categorized as coordinated economies and liberal market economies in the work of Hall and Soskice (2001).

TABLE 8: Financial indicators by country, 2004

	CME		LME	
	Germany	Japan	US	UK
International equity issuance/GDP (%)	0.6189	0.1709	0.0128	0.9949
Equity market capitalization/GDP (%)	44.006	76.949	86.366	131.530
Value of equity traded/GDP (%)	56.80	69.646	82.140	241.776
Shareholder protection index (a) (6= highest, 0=lowest)	3	5	5	5

Source: Barker and Rueda (2007, Table 1); (a) 2002 and 2003.

In addition, Barker and Rueda (2007) test their hypothesis by econometric estimates over the period 1976-2004. Their results suggest that measures of power of incumbent labor (wage growth, lower increase in hours worked) as well as of incumbent capital (low international trade openness and measures to discourage the entry of other competitors) are the main drivers of limited orientation towards ‘outsider’ finance. Hence, international equity issuance, equity market capitalization, value of equity traded and minority shareholder protection are found to be negatively associated with ‘insiderness’.

The emphasis on product market competition and on interests of insider labor (as stakeholders) is also central in another recent study (Allen, Carletti and Marquez, 2009), focusing on the firm objective function and its orientation toward stakeholder governance. The authors propose a theoretical model which formalizes corporate strategies into two different scenarios dominated, respectively, by cost or demand uncertainty. In the first, concern for stakeholders induces firms to charge higher prices in order to face cost pressures, thus benefiting stakeholders and softening competition. In this case, the authors demonstrate that shareholder and stakeholder interests end by being aligned. Conversely, when demand uncertainty affects future profitability, concern for stakeholders leads to lower prices relative to the case of shareholder companies, increasing competition.¹⁴ In sum, demand uncertainty leads to a reversal of the insider labor anti-competitive attitude, thus qualifying the hypothesis of Barker and Rueda.

Internal governance

Insider labor may also also a crucial role in the internal operation of a firm, as argued by Acharya, Myers and Rajan (2009). The authors start their analysis by critically evaluating the system of checks and balances that monitor the decisions of corporate managers. They observe that CEOs are often self-interested (Shleifer and Vishny, 1997); the market for corporate control plays an insufficient role, as disciplinary devices and shareholders exert poor control over institutional mechanisms like boards (Monks, 2008).

However, they argue “that there are important *stakeholders* in the firm, such as *critical employees*, who care about its future even if the CEO has short horizons and is self-interested and shareholders

¹⁴The authors consider a duopoly two-period model, in which decisions adopted in the first period influence the survival of the firm and hence the second period results. They show that, in the case of cost uncertainty, the survival probability increases by the fact that higher prices are charged (to offset higher costs); in this case, the shareholder and stakeholder approaches are equivalent. This is not true in the case of demand uncertainty, when competition is intensified and incentives firms to reduce their prices; however, these incentives are lower in stakeholder firms.

are dispersed and powerless. These stakeholders, because of their power to withdraw their contributions to the firm, can force a self-interested myopic CEO to act in a more public-spirited and far-sighted way (Acharya, Myers and Rajan, 2009, p. 1). This process can be called ‘internal governance’.

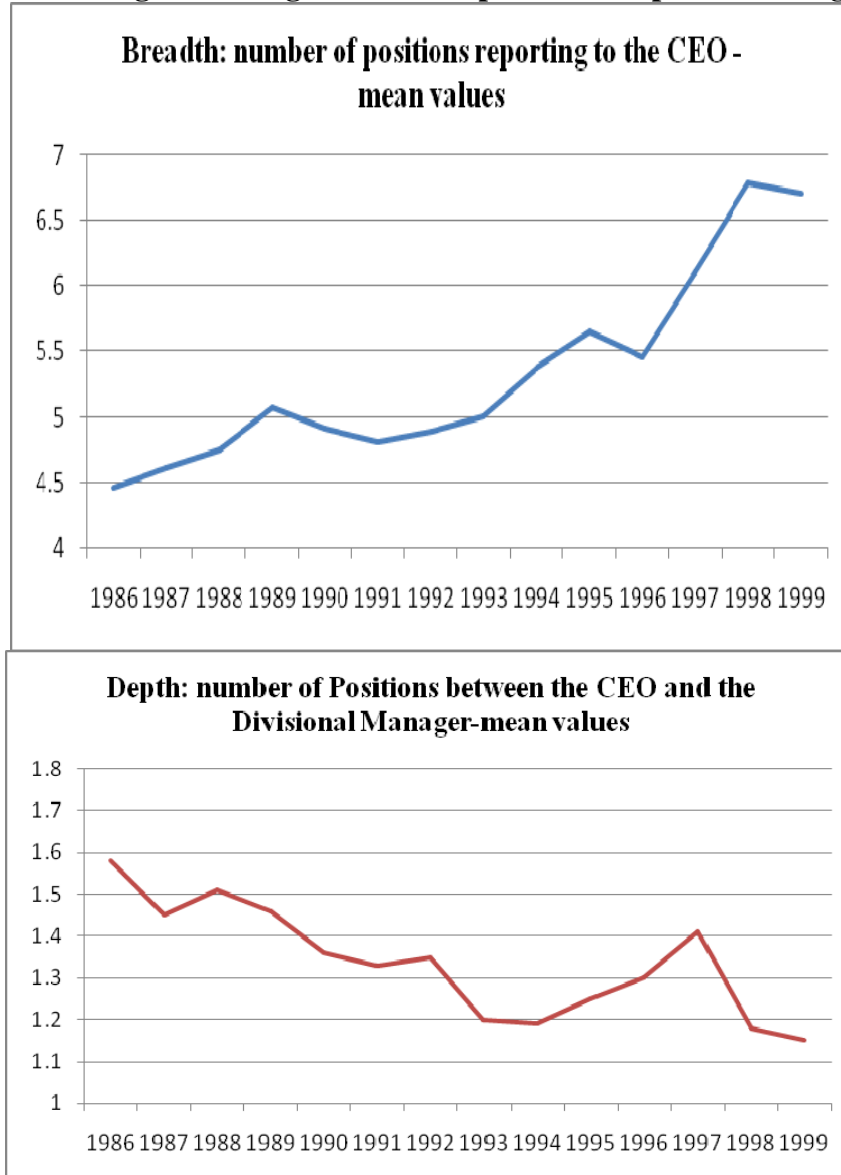
Three points qualify this new mechanism of governance. First, there is a *bottom-up* influence exercised by those employees who have no formal control, but who may affect the firm’s rents. Second, there are also non-financial investors, such as employees, who make firm-specific investments, as already shown by Blair (1999). Third, the presence of different parties as different claimers and with different time-horizons introduces the need “to pay attention to others’ residual claims in order to elicit co-operation” (Acharya, Myers and Rajan, 2009, p. 1).

Internal governance has a natural premise in the new concept of firms advanced by others, including Rajan and Zingales (1998, 2000), in which the availability of financing has given investments in intangible assets such as human capital more importance. In the new firm, which qualifies as a nexus of *explicit* and *implicit-relational contracts*, i.e., informal agreements sustained by the value of future relationships (Baker, Gibbons and Murphy, 2002), top executives develop closer contacts with lower-level but talented employees; middle managers are eliminated, and “the firm bifurcates into top management who are owners/partners ...and worker/managers who cannot be trusted till they have served *time* in the firm” (Rajan and Wulf, 2003, p. 32).

In terms of internal organization, a trend towards delayering seems to emerge. Two specific dimensions of the firm’s hierarchy must be considered: breadth (number of positions reporting to the CEO) and depth (number of positions between the CEO and the divisional manager). An examination of both dimensions, like that performed by Rajan and Wulf (2003) for the 1990s in over 300 large U.S. industrial firms, reveals organizational changes toward a new *flattening firm*¹⁵. For instance, in terms of breadth, “the number of managers reporting to the Chief Executive Officer (CEO) has increased steadily over time, from an average (median) of 4.4 (4) in 1986 to 7.2 (7) in 1999”. In terms of depth, “the number of positions between the CEO and the lowest managers with profit responsibility (division heads), has decreased steadily by more than 25% over the period” (Rajan and Wulf, 2003, pp. 1-2).

¹⁵Rajan and Wulf use “a detailed database of job descriptions of top managers, reporting relationships, and compensation structures in over 300 large U.S. firms tracked over a period of up to 14 years” (Rajan and Wulf (2003, p. 1).

Figure 10: The Flattening Firm- Organizational Span in a sample of 300 large US companies



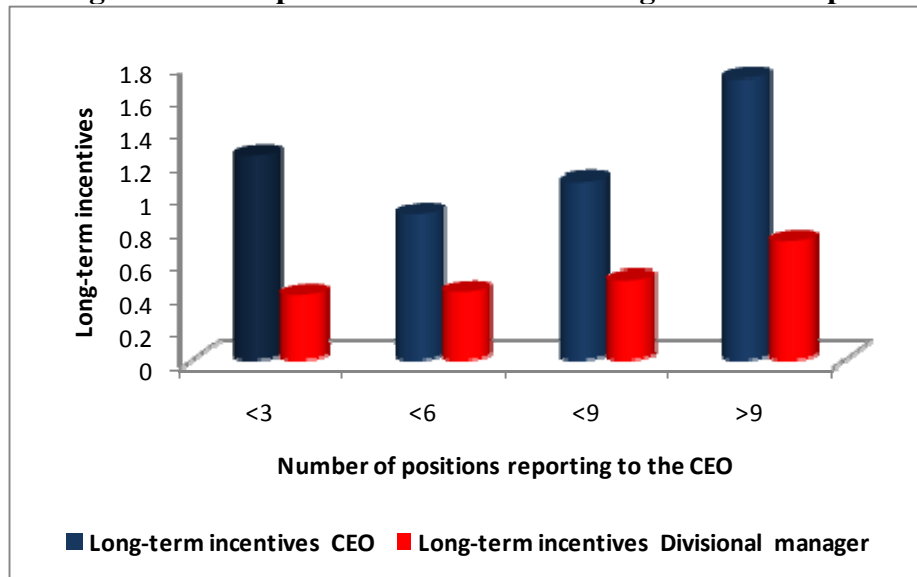
Source: Rajan and Wulf (2003, Tab.2, p.41; Tab. 4, p. 43)

In the new firm, incentives must promote specialization of human capital but also avert competition from talented and key employees who can exit from the firm. For instance, Rajan and Zingales (2000, p. 28) offer some examples which show the importance of human capital and encourage the search for new foundations for corporate finance, such as that of the advertising agency Saatchi and Saatchi:

“In 1994, .S. fund managers, who controlled 30 per cent of the shares, opposed the award of a generous option package to Maurice Saatchi, the charismatic chairman of Saatchi and Saatchi...The opposition of the fund managers led to the departure of Maurice Saatchi, and was quickly followed by the resignation of several key senior executives. These executives, together with the Saatchi brothers, started a rival agency (M&C Saatchi), that in a short period of time captured some of the most important accounts of the original Saatchi & Saatchi, including British Airways, Mars, Dixons, and Gallagher. Interestingly, one of the executives who left, wrote in his resignation letter: “I am not leaving the company. The company has left me”.’

The process of empowerment thus needs a higher proportion of the value of incentive - long-term pay to the value of salary and bonus, as shown in Figure 11, which demonstrates that, as the number of the positions reporting to the CEO increases, the importance of long-term rewards also increases.

Figure 11: Compensation structure and organizational span



Source: Rajan and Wulf (2003, Tab 7, p. 46). Long-term incentives are defined as the ratio of the value of incentive pay to the sum of salary and bonus.

In sum, the modern corporation profile, which emerges from the American scenario depicted in the studies mentioned above, shows an intrinsic need for *lengthening* its governance devices: *short-run* fixed rewards are partially substituted by *long-run* incentive payments; top executives develop closer contacts with ‘critical’ employees, as signaled by recent trends in breadth and depth changes in the firm.

Recent evidence and recent divides in European economies

The last section concerns the most important changes in labor regulation (and deregulation) which have characterized the European economies and influenced their performance in terms of innovation and productivity.

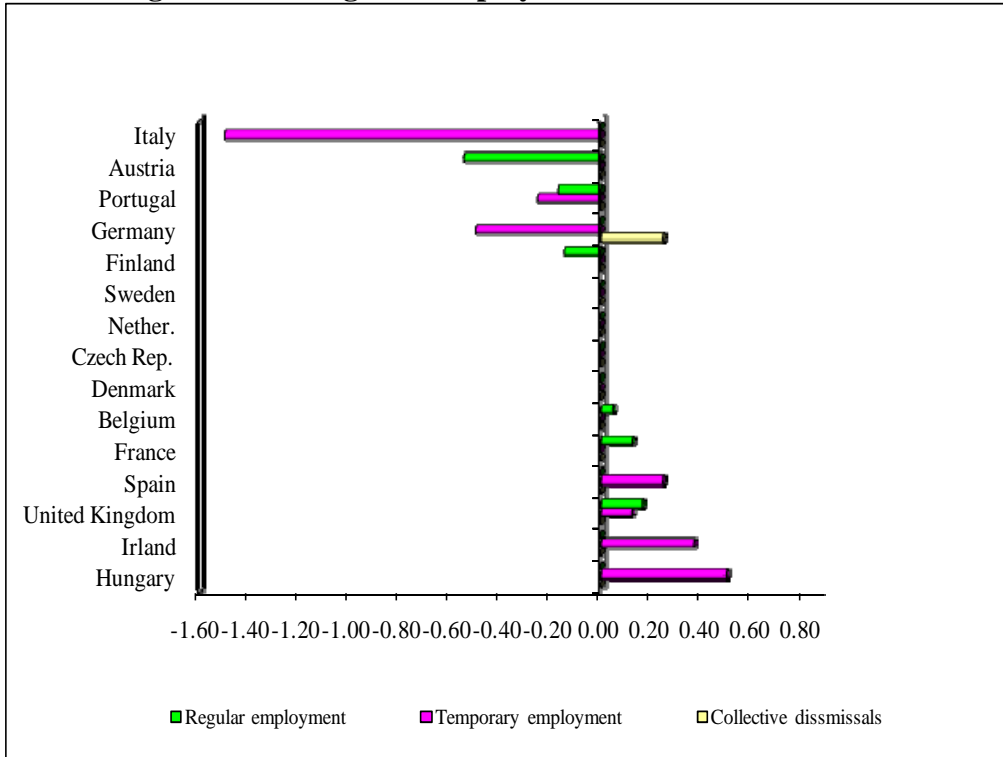
One main channel which secures flexibility is *numerical flexibility*, represented by the use of temporary and part-time contracts. It is known that the most important rules for the protection of labor contracts are measured by the OECD Employment Protection Legislation index (EPL), which covers two different areas: regular jobs or temporary works. In the first area, job protection is represented by firing restrictions. In this case, negative effects are expected, since opportunistic

behavior is encouraged under lower threat of dismissal (Boeri and Jimeno, 2005). In the second area, we find deregulation of employment contracts, which allows firms to use fixed-term contracts or temporary work agencies. Usually, in the case of rigid regulations for permanent employees, fixed-term contracts play the role of ‘buffer stock’; their importance is thus conditioned by several crucial factors such as the role of firing and hiring costs, elasticity of substitution between permanent and temporary workers, and relative wages of permanent and fixed-term employees.

Other arguments show that there is a trade-off: employment protection raises the costs at separation, but also encourages specific investments and efficiency. In this vein, Belot, Boone and van Ours (2007), using a theoretical model and empirical estimates for 17 OECD countries, highlight the existence of an inverse U-shaped relationship between employment protection and economic growth. They show that the exact optimal level of employment protection depends on other labor market features, such as the bargaining power of workers and other wage rigidities (e.g., minimum wages). They found that, when effort and investments in human capital are non-contractible, employment protection solves hold-up problems. Protection of this kind encourages employees to invest in firm-specific human capital and this beneficial effect is stronger in those sectors in which firm specialization in competences is more important.

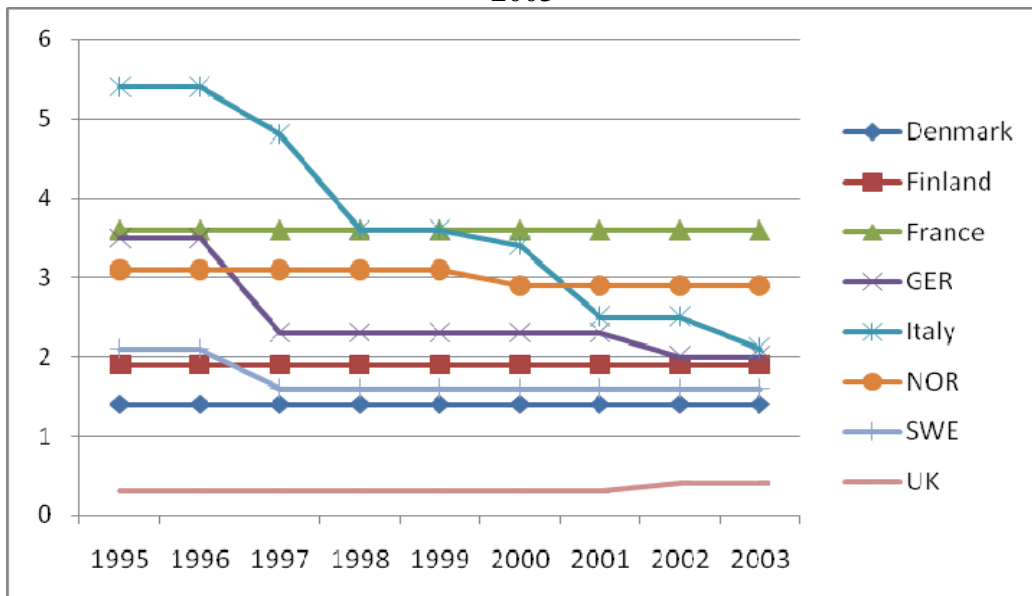
Note that temporary contracts may have important effects. On one hand, under the assumption that temporary workers intend to obtain permanent positions, these arrangements may be screen devices to select new employees, and are thus “potential ‘stepping stones’ to generally preferable permanent jobs” (Engellandt and Riphahn, 2004, p. 2). On the other hand, fixed-term contracts reduce the training motivation for workers and firms and discourage investments in firm-specific human capital. The European scenario is an ideal case to test these competing hypotheses, since reforms in temporary contracts have characterized various countries and have been more important than changes in rules for regular contracts. Indeed, three main components are included in the OECD indicator for EPL strictness: protection of regular workers against individual dismissals, requirements for collective dismissals, and regulation of temporary employment (OECD, 1994, p.65). The changes recorded by the OECD, shown in Figure 12, show that the greatest relaxation in the strictness of rules has been recorded for temporary contracts.

Figure 12: Changes in Employment Protection 1998-2003



We also examine the strictness of rules on temporary work agencies and fixed-term contracts, computed by Brandt et al. (2007) for a subset of European economies, and by considering time-varying cross-country data (Figure 13):

Figure 13: Development of employment protection legislation of temporary contracts - 1995-2003



Source: Brandt et al. (2007). F figure shows evolution of indicator computed by authors; scale is 0-6, and falling values mean less restriction on temporary contracts.

Figure 13 shows that there has been considerable diversity in the dynamic patterns of the stringency of temporary contracts, and Italy has made the most significant change toward deregulation. Additional evidence shows that changes in *formal* rules have been accompanied by changes in *de facto* practices, as Italian companies have recorded drastic increases in employment flexibility (see Figure 14).

These changes were recorded in a period which witnessed the re-emergence of a divide between Europe and the US. In the words of Trichet (2007):

“Faster output growth and slower labour input growth have jointly contributed to increase measured labour productivity growth in the US. These recent developments are in stark contrast to the rest of the post-WWII experience. First, they represent a break in the process of European catching-up and a resumed widening of the productivity gap with the US. Second, the broad tendencies across the Atlantic are no longer aligned, so we cannot explain them with the occurrence of a worldwide adverse shock, such as oil in the 1970s. The roots of the European productivity slowdown must be found within Europe”.

One of the hypotheses suggested by Trichet “is that the aggregate euro area picture is misleading, because important differences exist across countries”. Among these differences, the main divide, as in the EU-US comparison, is attributable to Total Factor Productivity. Indeed, in the intra-European context, the main disparity in labor productivity growth between individual European economies is to be found not in differences in the intensity of the production factors, but in the multifactor productivity component, the residual measure which captures not only unmeasured inputs but also effects due to organizational and institutional changes.

Table 9: GDP growth, Labor Productivity, Total Factor Productivity, 1995-2005

	GDP	Labor	TFP
	growth	Productivity	growth
	growth	growth	growth
Austria	2.19	1.74	0.6
Belgium	2.04	1.46	-0.26
Denmark	1.81	1.28	-0.17
Finland	3.42	2.63	1.43
France	2.09	1.84	0.6
Germany	1.32	1.55	0.46
Ireland	7.26	5.31	0.82
Italy	1.18	0.64	-0.46
Neth.	2.51	1.87	0.45
Portugal	2.18	1.72	-0.8
Spain	3.44	1.48	-0.78
Sweden	2.87	2.67	0.91
UK	2.72	2.15	0.31
EU13	2.69	2.3	0.24

Source: EU-Klems, Damiani and Pompei (2008).

One explanation is that reforms ‘at the margin’, which enlarge recourse to fixed-term contracts, allow firms to exploit hiring flexibility in favorable business conditions, but not to obtain downward flexibility in adverse conditions; possible employment gains due to the reforms are offset by productivity losses due to decreasing marginal returns (Boeri and Garibaldi, 2007).

An examination of recent studies which test the role of labor protection shows fluctuating results. Some contributions, through econometric estimates and samples of ample coverage, have found that union density, unemployment benefits and product market regulation generally contribute toward increasing joblessness, but that high degrees of employment protection may exert opposite and beneficial effects, since higher job security increases effort and reduces wage bonuses; they also found substitutive effects of product and labor market regulation, since an increase in product market competition, increasing labor turnover, lowers job security (Amable et al. 2007)¹⁶. Others separate the role of temporary contract legislations and document the (negative) influence of lower temporary

¹⁶The authors, reviewing a large body of literature, observe that: “The evidence supporting the standard view that labour deregulation yields a positive impact on employment is, however, seemingly not conclusive” (p. 5).

contract regulation on productivity growth (Dew-Becker and Gordon, 2008; Damiani and Pompei, 2009)¹⁷. By country-sectoral comparisons, they found that shorter-term jobs and lower employment tenures may discourage investments in skills and have negative effects on multifactor productivity growth; conversely, forms of employee involvement in corporate governance, such as co-determination, mitigate these perverse effects on efficiency patterns. Other authors have found negative effects only for protection of regular jobs but not for temporary ones (see Bassanini, Nunziata and Venn, 2009)¹⁸. A brief array of the selected empirical contributions which test the comparative performances of corporate governance and labor institutions is given in Table 10.

¹⁷The study examines cross-national and sectoral differences in multifactor productivity growth in 16 European countries from 1995 to 2005.

¹⁸For calculation of OECD indicators for regular and temporary contracts used by authors, see OECD (2004, Annex 2.A1).

Table 10: Comparative capitalism and labor protection: some selected econometric studies

Study	Sample	Institutional indicator(s)	Dependent variables	Findings
Botero et al. (2004)	85 countries	(i) Employment laws, (ii) collective relations laws, (iii) social security laws	Unempl. rate, labor force participation, size of unofficial economy	More severe labor regulation is associated with lower labor force participation and higher unemployment, especially of the young.
Barker and Rueda (2007)	18 OECD countries 1976-2004	Insider labor power: I) employment protection; ii) wage growth in manufacturing; iii) hours worked in manufacturing	International equity issuance, equity market capitalization, value of equity traded, shareholder protection	Higher levels of employment protection for insider labor, limited liberalization of capital markets and low degree of minority shareholder protection promote a more block-holder dominated system of corporate governance.
Hall and Gingerich (2004)	20 OECD countries 1971-1984 and 1985-1997	Indices for labor relations and corporate governance	Economic growth	Institutional complementarities are confirmed; labor market deregulation is influential only in nations where financial markets are similarly fluid.
Amable, Demmou, Gatti (2007)	18 OECD countries 1980-2004	OECD indicator for labor-product market regulation (EPL and PMR) and finance (credit to economy and financial assets to GDP)	Unemployment, joblessness and inactivity	Positive effect of EPL on employment performance; substitutability relationship across product and labor market regulation policies
Damiani and Pompei (2009)	16 European countries 1995-2005.	(i) Employment laws, (ii) collective relations laws (Botero et al. 2004 source)	Total Factor Productivity (TFP) growth	Low protection of fixed-term contracts has negative effects on TFP; collective relations measures (including co-determination) have positive effects

As mentioned above, various labor market regulations offer remedies for hold-up by employers, as regards provision for insurance, job-seeking and training incentives, and many studies on macro-economic frameworks have analyzed the impact of these policies on employment and unemployment rates, or on unemployment inflows and outflows, as reviewed by OECD (2007), but have reserved

less space to evaluation of corporate success. However, some recent contributions have addressed this issue, although empirical evidence calls for further examination of the conditions which support employment tenure, investment in skills, and organizational improvements which outperform short-term oriented arrangements.

6. Conclusions

Recent research has started to remove two major limitations of the economics of labor protection: first, the scarce attention paid to potential complementarities between patterns of ownership and shareholder protection *and* labor regulation; second, the influence of employees within managerial processes, through the channel of employee representation at firm level, mainly unexplored in the majority of comparative studies.

We have examined several studies which have started to fill these gaps. The first, oriented to a shareholder perspective, sees access to finance as the major condition for firm success and considers more severe labor regulation, as well as lower shareholder protection, as serious obstacles to this access. The second study, more favorable to a stakeholder view, supports the importance of *de facto* labor rules which improve the climate of corporate governability and do not degenerate into excessive income inequalities. The third - more fragmentary - view calls attention to the importance of institutional complementarities by showing that systems of labor regulation exert their function in strategic interactions with other institutions. We should also note that these *competing views*, as seen above, have been supported by *competing databases*: the first is represented by *legal families*; the second by *labor practices*, and the third by measures which change over *time* and which include a whole array of *complementary institutions*.

These studies, which have tried to overcome the limitations mentioned above by estimating the joint effects of various institutions on corporate governance and labor relations, are still insufficient with respect to examination of the productivity effects of institutional devices.

This perspective is made necessary by recent developments focusing on the firm and its organization. Here, as emphasized by Blair (1999, p.63) “The lesson from labour has been that employee investments in firm-specific human capital cannot be well protected by explicit and complete contracts. Other institutional arrangements are needed and these institutional arrangements have the effect of tying the fortunes of the employee together with those of the firm.” But the pathways by means of which each variety of capitalism ties these fortunes together still differ among themselves.

The internal governance exerted by ‘critical employees’ (in the varieties of capitalism characterized by general skills and patterns of radical innovation) and work councils (cooperating with management in more shareholder-value oriented firms (adopted in economies with firm- and industry-specific skills and cumulative innovation) seem to be two of the more successful pathways.

References

Addison J. T. and Teixeira P. (2001), The Economics of Employment Protection, IZA Working Paper, NO. 381.

Acharya V.V., Myers S. and Rajan R. (2009), The Internal Governance of the Firm, [*ECGI - Finance Working Paper No. 239/2009*](#).

Ahlering B. and Deakin S. (2007), *Labour Regulation, Corporate Governance and Legal Origin: A Case Of Institutional Complementarity?*, [*Law & Society Review*](#), Vol. 41, n. 4, pp. 865-908.

Allen, F. Carletti E. and Marquez R. (2009), “Stakeholder Capitalism, Corporate Governance and Firm Value”, Wharton Financial Institutions Center Working Paper #09-28, September, <http://ssrn.com/abstract=968141>.

Amable B, Demmou L. and Gatti D. (2007) Employment Performance and Institutions: New Answers to an Old Question, IZA DP No. 2731.

Armour J. and Deakin S. (2009), How Do Legal Rules Evolve? Evidence From A Cross-Country Comparison Of Shareholder, Creditor And Worker Protection, Centre for Business Research, University Of Cambridge, Working Paper No. 382 European Corporate Governance Institute Law Working Paper No. 129/2009.

Baker G.P., Gibbons R., Murphy K. (2002), “Relational Contracts and the Theory of the Firm”, *Quarterly Journal of Economics*, Vol. 117, n. 1, pp. 39-84.

Barker R. and Rueda D. (2007),” The Labor Market Determinants of Corporate Governance Reform”, CLPE Research Paper n. 5. Comparative Research in Law and Political Economy, York University, Toronto.

Bassanini A. and Ekkehard E. (2002), Labour Market Institutions, Product Market Regulation, and Innovation: Cross-Country Evidence, Economics Department Working Papers No. 316.

Bassanini A., Nunziata L. and Venn D. (2009), ‘Job Protection Legislation and Productivity Growth in OECD Countries’, *Economic Policy*, Vol. 24, 349-402.

Bebchuk L.A., Fried J.M. (2003), “Executive Compensation as an Agency Problem”, *Journal of Economic Perspectives*, Vol. 17, n. 3, pp. 71-92

- Belot, M., J. Boone and van Ours J.C. (2007), ‘Welfare-Improving Employment Protection’, *Economica*, Vol. 74, 381-396.
- Blair M. (1999), “Firm-Specific Human Capital and Theories of the Firm”, in Blair M. and Roe M. (eds.) 1999.
- Boeri T. and Jimeno J. (2005), ‘The effects of employment protection: Learning from variable enforcement’, *European Economic Review*, 49, 2057-77.
- Boeri T. and Garibaldi P. (2007), “Two Tier Reforms Of Employment Protection: A Honeymoon Effect?”, *The Economic Journal*, F357–F385.
- Botero J. C., Djankov S., La Porta R., Lopez-de-Silanes F., Shleifer A. (2004), “The Regulation of Labor”, *Quarterly Journal of Economics*, Vol. 119, n. 4 , pp. 1339-1382.
- Brandt N., Burniaux M. and Duval R. (2007), *Assessing The Oecd Jobs Strategy: Past Developments and Reforms*, OECD Economics Department Working Paper No. 429.
- Chor D. and Freeman R. (2005), *The 2004 Global Labor Survey: Workplace Institutions and Practices around the World*, NBER Working Paper, n. 11598.
- Conyon M.J. et al. (2010), *The Executive Compensation Controversy: A Transatlantic Analysis*, Annual FRDB conference.
- Damiani M. (2009), The Stakeholder Corporate Governance View Revisited, In Morroni M. (Ed.) *Corporate Governance, Organisation Design And Inter-Firm Relations*, EDWARD ELGAR, 2009, PP. 19-47.
- Damiani M, and Pompei F. (2008), “The market for corporate control: do countries and technological regimes matter?”, MRPA working paper.
- Damiani M. and Pompei (2009), *Labour protection and productivity in the European economies: 1995-2005*, mimeo.
- Deakin S., Lele P. and Siems M. (2009), *How Do Legal Rules Evolve? Evidence from a Cross-Country Comparison of Shareholder, Creditor and Worker Protection*, European Corporate Governance Institute, Law Working Paper No. 129.
- Dew-Becker I. and Gordon R.J. (2008), ‘The Role of Labor Market Changes in the Slowdown of European Productivity Growth’, NBER Working Paper 13840.
- Djankov, S., La Porta R., López-de-Silanes F. and Shleifer A. (2006), *The Law and Economics of Self-Dealing*, mimeo.
- Djankov, S., La Porta R., López-de-Silanes F. and Shleifer A. (2008), *The Law and Economics of Self-Dealing*, *Journal of Financial Economics*, Vol. 88, pp. 430–465.
- Engellandt, A. and Riphahn R. (2004), ‘Temporary Contracts and Employee Effort’, CEPR Discussion Paper no. 4178.

- Estevez-Abe M., Iversen T. and Soskice D. (2001), “Social Protection and the Formation of Skills: a Reinterpretation of the Welfare State, in Hall P.A., Soskice, D., (2001b), pp. 145-183.
- Forteza A. and Martin Rama (2000), “Labor Market ‘Rigidity’ and the Success of Economic Reforms: Across More than One Hundred Countries,” mimeo, World Bank.
- Freeman R. E. (2007), *Labor Market Institutions around the World*, NBER, Working Paper n. 13242.
- Hall P.A. and Gingerich D.W. (2004), Varieties of Capitalism and Institutional Complementarities in the Macroeconomy, MPIfG Discussion Paper 04/5.
- Hall P.A. and Soskice D. (2001a), “Introduction”, in Hall P.A., Soskice D. (eds.) (2001b), pp.1- 68.
- Hall P.A., Soskice, D., (2001b), *Varieties of Capitalism*, Oxford, Oxford University Press.
- Hansmann, H. and Kraakman, R. (2001) ‘The end of history for corporate law’, *Georgetown Law Journal*, Vol. 89, pp. 439-468.
- La Porta R., Lopez-de-Silanes F., Shleifer A. and Vishny R. (1997) ‘Legal determinants of external finance,’ *Journal of Finance*, Vol. 52, pp. 1131-1150.
- La Porta R., Lopez-de Silanes F. Shleifer A., Vishny R. (1998), “Law and Finance”, *Journal of Political Economy*, Vol. 106, n. 6, pp. 1113-1155
- La Porta R., Lopez-de-Silanes F. and Shleifer A. (1999) ‘Corporate ownership around the world’ *Journal of Finance*, Vol. 54, pp. 471-51.
- La Porta R., De Silanes F.L., Shleifer A., Vishny R. (2000), “Investor Protection and Corporate Governance”, *Journal of Financial Economics*, Vol. 58, n. 1-2, pp. 3-27.
- Monks, Robert A. G. (2008), *Corpocracy: How CEOs and the Business Roundtable Hijacked the World’s Greatest Wealth Machine – And How to Get It Back*, John Wiley & Sons, New York.
- Nicoletti G., Scarpetta S. and Boylaud O., “Summary Indicators of Product Market Regulation with and Extension to Employment Protection Legislation,” OECD Working Paper No. 226, 1999.
- Nickell S., Nunziata L. and Ochel W. (2005), “Unemployment in the OECD since the 1960s. What Do We Know?”, *The Economic Journal*, Vol. 115, n.1 ,pp. 1–27.
- North, D. (1981), *Growth and Structural Change in Economic History*, New York, NY, Norton.
- OECD, *Employment Outlook*, Paris, various years.
- OECD (2003), *Survey of Corporate Governance Developments in OECD Countries*, Paris.
- Pagano, M. and Volpin P. (2005), “The Political Economy of Corporate Governance,” *American Economic Review*, [Vol. 95, n. 3](#), pp.1005-1030.
- Prowse, S. (1995), ‘Corporate Governance in an International Perspective: A Survey of Corporate Control Mechanisms Among Large Firms in the U.S., U.K., Japan and Germany’, *Financial Markets, Institutions and Instruments*, Vol. 4, n. 1, pp. 1-63.

Rajan R.G., Zingales L. (1998), “Power in a Theory of the Firm”, *Quarterly Journal of Economics*, Vol. 113, n. 2, pp. 387-432.

Rajan R.G. and Zingales L. (2000), “The Governance of the New Enterprise”, *NBER Working Paper*, n. 7958, republished in X. Vives (ed.), (2000), *Corporate Governance, Theoretical & Empirical Perspectives*, Cambridge University Press.

Rajan R.G., Zingales L. (2003), *The Great Reversals: The Politics of Financial Development in the 20th Century*, *Journal of Financial Economics*, Vol. 69, n. 1, pp.5-50.

Rajan R.G., Wulf J. (2003), “The Flattening Firm: Evidence from Panel Data on the Changing Nature of Corporate Hierarchies”, *NBER Working Paper*, n. 9633.

Roe M. (2000), “Political Preconditions to Separating Ownership from Corporate Control,” *Stanford Law Review*, Vol. LIII, pp. 539–606.

Rogers J. and Streeck W. (1994), “Worker Representation Overseas: the Works Council Story”, in Freeman R. B. (ed.), *Working Under Different Rules*, Washington, DC, National Bureau of Economic Research.

Schmidt, R.H. (2003), ‘Corporate Governance in Germany: an Economic Perspective’, Center of Financial Studies, CFS Working Paper no. 36 and [Oxford Scholarship Online Monographs](#), pp. 386-425.

Shleifer, A., Vishny, R., (1997), “A Survey of Corporate Governance”, *Journal of Finance*, Vol. 52, n. 2, pp. 737-783.

Spamann H., (2006), “On The Insignificance and/or Endogeneity Of La Porta Et Al.’S ‘Anti-Director Rights Index’ under Consistent Coding, Harvard Law School, Discussion Paper No. 7,

Spamann H. (2010), ‘Law And Finance’ Revisited”, *Review of Financial. Studies*, Vol. 23, pp. 467-486.

Spaventa L. (2004), “Investor Protection: Theory and Practice”, paper prepared for the Conference on Chinese Economic and Security, 14-15 June

Trichet J. C: (2007), Productivity in the euro area and monetary policy, Special lecture, 22nd Annual Congress of the European Economic Association, Budapest, 27 August 2007.

UNESCO. 1999. *UNESCO Statistical Yearbook*. New York: UNESCO.

Zingales, L. (2000). ‘In Search of New Foundations’, *Journal of Finance*. Vol. LV, No. 4, pp. 1623-1653.

**QUADERNI DEL DIPARTIMENTO DI ECONOMIA, FINANZA E
STATISTICA**

Università degli Studi di Perugia

1	Gennaio 2005	Giuseppe CALZONI Valentina BACCHETTINI	Il concetto di competitività tra approccio classico e teorie evolutive. Caratteristiche e aspetti della sua determinazione
2	Marzo 2005	Fabrizio LUCIANI Marilena MIRONIUC	Ambiental policies in Romania. Tendencies and perspectives
3	Aprile 2005	Mirella DAMIANI	Costi di agenzia e diritti di proprietà: una premessa al problema del governo societario
4	Aprile 2005	Mirella DAMIANI	Proprietà, accesso e controllo: nuovi sviluppi nella teoria dell'impresa ed implicazioni di corporate governance
5	Aprile 2005	Marcello SIGNORELLI	Employment and policies in Europe: a regional perspective
6	Maggio 2005	Cristiano PERUGINI Paolo POLINORI Marcello SIGNORELLI	An empirical analysis of employment and growth dynamics in the italian and polish regions
7	Maggio 2005	Cristiano PERUGINI Marcello SIGNORELLI	Employment differences, convergences and similarities in italian provinces
8	Maggio 2005	Marcello SIGNORELLI	Growth and employment: comparative performance, convergences and co-movements
9	Maggio 2005	Flavio ANGELINI Stefano HERZEL	Implied volatilities of caps: a gaussian approach
10	Giugno 2005	Slawomir BUKOWSKI	EMU – Fiscal challenges: conclusions for the new EU members
11	Giugno 2005	Luca PIERONI Matteo RICCIARELLI	Modelling dynamic storage function in commodity markets: theory and evidence
12	Giugno 2005	Luca PIERONI Fabrizio POMPEI	Innovations and labour market institutions: an empirical analysis of the Italian case in the middle 90's
13	Giugno 2005	David ARISTEI Luca PIERONI	Estimating the role of government expenditure in long-run consumption
14	Giugno 2005	Luca PIERONI Fabrizio POMPEI	Investimenti diretti esteri e innovazione in Umbria
15	Giugno 2005	Carlo Andrea BOLLINO Paolo POLINORI	Il valore aggiunto su scala comunale: la Regione Umbria 2001-2003
16	Giugno 2005	Carlo Andrea BOLLINO Paolo POLINORI	Gli incentivi agli investimenti: un'analisi dell'efficienza industriale su scala geografica regionale e sub regionale

17	Giugno 2005	Antonella FINIZIA Riccardo MAGNANI Federico PERALI Paolo POLINORI Cristina SALVIONI	Construction and simulation of the general economic equilibrium model Meg-Ismea for the Italian economy
18	Agosto 2005	Elżbieta KOMOSA	Problems of financing small and medium-sized enterprises. Selected methods of financing innovative ventures
19	Settembre 2005	Barbara MROCZKOWSKA	Regional policy of supporting small and medium-sized businesses
20	Ottobre 2005	Luca SCRULLA	Clustering multivariate spatial data based on local measures of spatial autocorrelation
21	Febbraio 2006	Marco BOCCACCIO	Crisi del welfare e nuove proposte: il caso dell'unconditional basic income
22	Settembre 2006	Mirko ABBRITTI Andrea BOITANI Mirella DAMIANI	Unemployment, inflation and monetary policy in a dynamic New Keynesian model with hiring costs
23	Settembre 2006	Luca SCRULLA	Subset selection in dimension reduction methods
24	Ottobre 2006	Sławomir I. BUKOWSKI	The Maastricht convergence criteria and economic growth in the EMU
25	Ottobre 2006	Jan L. BEDNARCZYK	The concept of neutral inflation and its application to the EU economic growth analyses
26	Dicembre 2006	Fabrizio LUCIANI	Sinossi dell'approccio teorico alle problematiche ambientali in campo agricolo e naturalistico; il progetto di ricerca nazionale F.I.S.R. – M.I.C.E.N.A.
27	Dicembre 2006	Elvira LUSSANA	Mediterraneo: una storia incompleta
28	Marzo 2007	Luca PIERONI Fabrizio POMPEI	Evaluating innovation and labour market relationships: the case of Italy
29	Marzo 2007	David ARISTEI Luca PIERONI	A double-hurdle approach to modelling tobacco consumption in Italy
30	Aprile 2007	David ARISTEI Federico PERALI Luca PIERONI	Cohort, age and time effects in alcohol consumption by Italian households: a double-hurdle approach
31	Luglio 2007	Roberto BASILE	Productivity polarization across regions in Europe
32	Luglio 2007	Roberto BASILE Davide CASTELLANI Antonello ZANFEI	Location choices of multinational firms in Europe: the role of EU cohesion policy
33	Agosto 2007	Flavio ANGELINI Stefano HERZEL	Measuring the error of dynamic hedging: a Laplace transform approach

34	Agosto 2007	Stefano HERZEL Cătălin STĂRICĂ Thomas NORD	The IGARCH effect: consequences on volatility forecasting and option trading
35	Agosto 2007	Flavio ANGELINI Stefano HERZEL	Explicit formulas for the minimal variance hedging strategy in a martingale case
36	Agosto 2007	Giovanni BIGAZZI	The role of agriculture in the development of the people's Republic of China
37	Settembre 2007	Enrico MARELLI Marcello SIGNORELLI	Institutional change, regional features and aggregate performance in eight EU's transition countries
38	Ottobre 2007	Paolo NATICCHIONI Andrea RICCI Emiliano RUSTICHELLI	Wage structure, inequality and skill-biased change: is Italy an outlier?
39	Novembre 2007	The International Study Group on Exports and Productivity	Exports and productivity. Comparable evidence for 14 countries
40	Dicembre 2007	Gaetano MARTINO Paolo POLINORI	Contracting food safety strategies in hybrid governance structures
41	Dicembre 2007	Floro Ernesto CAROLEO Francesco PASTORE	The youth experience gap: explaining differences across EU countries
42	Gennaio 2008	Melisso BOSCHI Luca PIERONI	Aluminium market and the macroeconomy
43	Febbraio 2008	Flavio ANGELINI Marco NICOLOSI	Hedging error in Lévy models with a fast Fourier Transform approach
44	Febbraio 2008	Luca PIERONI Giorgio d'AGOSTINO Marco LORUSSO	Can we declare military Keynesianism dead?
45	Febbraio 2008	Pierluigi GRASSELLI Cristina MONTESI Paola IANNONE	Mediterranean models of Welfare towards families and women
46	Marzo 2008	Mirella DAMIANI Fabrizio POMPEI	Mergers, acquisitions and technological regimes: the European experience over the period 2002-2005
47	Marzo 2008	Bruno BRACALENTE Cristiano PERUGINI	The Components of Regional Disparities in Europe
48	Marzo 2008	Cristiano PERUGINI Fabrizio POMPEI Marcello SIGNORELLI	FDI, R&D and Human Capital in Central and Eastern European Countries
49	Marzo 2008	Cristiano PERUGINI	Employment and Unemployment in the Italian Provinces
50	Marzo 2008	Sławomir I. BUKOWSKI	On the road to the euro zone. Currency rate stabilization: experiences of the selected EU countries
51	Aprile 2008	Bruno BRACALENTE Cristiano PERUGINI Fabrizio POMPEI	Homogeneous, Urban Heterogeneous, or both? External Economies and Regional Manufacturing Productivity in Europe

52	Aprile 2008	Gaetano MARTINO Cristiano PERUGINI	Income inequality within European regions: determinants and effects on growth
53	Aprile 2008	Jan L. BEDNARCZYK	Controversy over the interest rate theory and policy. Classical approach to interest rate and its continuations
54	Aprile 2008	Bruno BRACALENTE Cristiano PERUGINI	Factor decomposition of cross-country income inequality with interaction effects
55	Aprile 2008	Cristiano PERUGINI	Employment Intensity of Growth in Italy. A Note Using Regional Data
56	Aprile 2008	Cristiano PERUGINI Fabrizio POMPEI	Technological Change, Labour Demand and Income Distribution in European Union Countries
57	Aprile 2008	Simona BIGERNA Paolo POLINORI	L'analisi delle determinanti della domanda di trasporto pubblico nella città di Perugia
58	Maggio 2008	Simona BIGERNA Paolo POLINORI	The willingness to pay for Renewable Energy Sources (RES): the case of Italy with different survey approaches and under different EU "climate vision". First results
59	Giugno 2008	Simona BIGERNA Paolo POLINORI	Ambiente operativo ed efficienza nel settore del Trasporto Pubblico Locale in Italia
60	Ottobre 2008	Pierluigi GRASSELLI Cristina MONTESI Roberto VIRDI	L'interpretazione dello spirito del dono
61	Novembre 2008	Antonio BOGGIA Fabrizio LUCIANI Gianluca MASSEI Luisa PAOLOTTI	L'impatto ambientale ed economico del cambiamento climatico sull'agricoltura
62	Novembre 2008	Elena STANGHELLINI Francesco Claudio STINGO Rosa CAPOBIANCO	On the estimation of a binary response model in a selected population
63	Dicembre 2008	Gianna FIGÀ-TALAMANCA	Limit results for discretely observed stochastic volatility models with leverage effect
64	Maggio 2009	Mirella DAMIANI Andrea RICCI	Factors behind performance-related pay: evidence from Italy
65	Giugno 2009	Alessandra RIGHI Dario SCIULLI	The Timing of the School-to-Permanent Work Transition: a Comparison across Ten European Countries
66	Settembre 2009	Fabrizio LUCIANI	Economia agraria e pianificazione economica territoriale nel Parco nazionale del Sagarmatha (Everest, Nepal)
67	Settembre 2009	Valentina TIECCO	I regimi di protezione dell'impiego

68	Ottobre 2009	Gianna FIGÀ-TALAMANCA	Path properties of simulation schemes for the Heston stochastic volatility model
69	Ottobre 2009	Cristina MONTESI	A comparative analysis of different business ethics in the perspective of the Common Good
70	Ottobre 2009	Luisa FRANZINI Margherita GIANNONI	Determinants of Health Disparities in Italian Regions
71	Novembre 2009	Flavio ANGELINI Stefano HERZEL	Evaluating Discrete Dynamic Strategies in Affine Models
72	Novembre 2009	Giuseppe ARBIA Michele BATTISTI Gianfranco DI VAIO	Institutions and geography: Empirical test of spatial growth models for European regions
73	Gennaio 2010	Mirella DAMIANI Andrea RICCI	Performance-Related Pay, Unions and Productivity in Italy: evidence from quantile regressions
74	Febbraio 2010	Davide CASTELLANI Fabio PIERI	The Effect of Foreign Investments on European Regional Productivity
75	Luglio 2010	Guglielmo M. CAPORALE Davide CIFERRI Alessandro GIRARDI	Time-varying spot and futures oil price dynamics
76	Settembre 2010	Mirella DAMIANI	Labour regulation, corporate governance and varieties of capitalism

I QUADERNI DEL DIPARTIMENTO DI ECONOMIA
Università degli Studi di Perugia

1	Dicembre 2002	Luca PIERONI:	Further evidence of dynamic demand systems in three european countries
2	Dicembre 2002	Luca PIERONI Paolo POLINORI:	Il valore economico del paesaggio: un'indagine microeconomica
3	Dicembre 2002	Luca PIERONI Paolo POLINORI:	A note on internal rate of return
4	Marzo 2004	Sara BIAGINI:	A new class of strategies and application to utility maximization for unbounded processes
5	Aprile 2004	Cristiano PERUGINI:	La dipendenza dell'agricoltura italiana dal sostegno pubblico: un'analisi a livello regionale
6	Maggio 2004	Mirella DAMIANI:	Nuova macroeconomia keynesiana e quasi razionalità
7	Maggio 2004	Mauro VISAGGIO:	Dimensione e persistenza degli aggiustamenti fiscali in presenza di debito pubblico elevato
8	Maggio 2004	Mauro VISAGGIO:	Does the growth stability pact provide an adequate and consistent fiscal rule?
9	Giugno 2004	Elisabetta CROCI ANGELINI Francesco FARINA:	Redistribution and labour market institutions in OECD countries
10	Giugno 2004	Marco BOCCACCIO:	Tra regolamentazione settoriale e antitrust: il caso delle telecomunicazioni
11	Giugno 2004	Cristiano PERUGINI Marcello SIGNORELLI:	Labour market performance in central european countries
12	Luglio 2004	Cristiano PERUGINI Marcello SIGNORELLI:	Labour market structure in the italian provinces: a cluster analysis
13	Luglio 2004	Cristiano PERUGINI Marcello SIGNORELLI:	I flussi in entrata nei mercati del lavoro umbri: un'analisi di cluster
14	Ottobre 2004	Cristiano PERUGINI:	Una valutazione a livello microeconomico del sostegno pubblico di breve periodo all'agricoltura. Il caso dell'Umbria attraverso i dati RICA-INEA
15	Novembre 2004	Gaetano MARTINO Cristiano PERUGINI	Economic inequality and rural systems: empirical evidence and interpretative attempts
16	Dicembre 2004	Federico PERALI Paolo POLINORI Cristina SALVIONI Nicola TOMMASI Marcella VERONESI	Bilancio ambientale delle imprese agricole italiane: stima dell'inquinamento effettivo