

**HOW DO LEGAL RULES EVOLVE?  
EVIDENCE FROM A CROSS-COUNTRY COMPARISON OF  
SHAREHOLDER, CREDITOR AND WORKER PROTECTION**

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## Abstract

Much attention has been devoted in recent literature to the claim that a country's 'legal origin' may make a difference to its pattern of financial development and more generally to its economic growth path. Proponents of this view assert that the 'family' within which a country's legal system originated—be it common law, or one of the varieties of civil law—has a significant impact upon the quality of its legal protection of shareholders, which in turn impacts upon economic growth, through the channel of firms' access to external finance. Complementary studies of creditors' rights and labour regulation have buttressed the core claim that different legal families have different dynamic properties. Specifically, common law systems are thought to be better able to respond to the changing needs of a market economy than are civilian systems. This literature has, however, largely been based upon cross-sectional studies of the quality of corporate, insolvency and labour law at particular points in the late 1990s. In this paper, we report findings based on newly constructed indices which track legal change over time in the areas of shareholder, creditor and worker protection. The indices cover five systems for the period 1970-2005: three 'parent' systems, the UK, France and Germany; the world's most developed economy, the US; and its largest democracy, India. The results cast doubt on the legal origin hypothesis in so far as they show that civil law systems have seen substantial increases in shareholder protection over the period in question. The pattern of change differs depending on the area which is being examined, with the law on creditor and worker protection demonstrating more divergence and heterogeneity than that relating to shareholders. The results for worker protection are more consistent with the legal origin claim than in the other two cases, but this overall result conceals significant diversity within the two 'legal families', with different countries relying on different institutional mechanisms to regulate labour. Until the late 1980s the law of the five countries was diverging, but in the last 10-15 years there has been some convergence, particularly in relation to shareholder protection.

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## 1. Introduction

Much attention has been devoted in recent literature to the claim that a country's 'legal origin' may make a difference to its pattern of financial development and more generally to its economic growth path. Proponents of this view assert that the 'family' within which a country's legal system originated—be it common law, or one of the varieties of civil law—has a significant impact upon the quality of its legal protection of investors, which in turn impacts upon economic growth, through the channel of firms' access to external finance. Complementary studies of, amongst other things, creditors' rights and labour regulation have buttressed the core claim that different legal families have different dynamic properties. Specifically, common law systems are said to be better able to respond to the changing needs of a market economy than are civilian systems. This literature has, however, largely been based upon cross-sectional studies of the quality of various aspects of corporate and financial law at particular points in the late 1990s. Whilst some correlations between patterns of financial development and legal institutions have been established, the issue of causation remains contentious.

Given this background, at least two types of study can potentially contribute to our understanding of the links between law and financial development. One approach, which focuses on *outcomes*, would be to investigate the links between legal rules and indicia of financial market development, and economic development more widely, over time. This would call for the construction of time series data on legal variables of interest. Quantitative methodology could be used to test the hypothesis that changes in legal rules precede financial market development (or indeed the inverse). A related approach, focusing more on *mechanisms*, might examine the way in which the strength of the protection of particular types of constituency changes over time. Panel data comprising some civil and some common law countries would allow for examination of whether there are systematic differences in the pattern of evolution in different legal systems. If, as posited, the mechanisms of legal evolution are significantly different in common and civil law systems, we would expect to see change occurring at different speeds, and plausibly in different directions, in systems of each variety. Conversely, we might not expect to see as much variety between members of the same legal origin as between members of different legal origins.

This paper follows the second approach outlined above. Further, it uses a quantitative methodology, which may also be called 'numerical comparative law' or 'leximetrics' (Siems 2005a; Lele and Siems 2007a). We present new longitudinal indices of legal rules applicable to business enterprise—grouped

along the dimensions of shareholder protection, creditor protection, and labour regulation—for five countries, over a 35 year period. These are three ‘parent’ systems, the UK, France and Germany; the world’s most developed economy, the US; and its largest democracy, India.<sup>1</sup>

Our findings in this paper focus on the patterns of change within and between the indices we have constructed. We do not find that there are significant differences between the way in which legal change, as measured by our indices, occurs in civil and common law jurisdictions. Instead, our results also show that the pattern of change differs depending on the area of law under examination, with creditor rights and labour 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 the links posited between legal origins and financial development. The pattern of legal change in civil and common law countries implies that differences in the ‘adaptability’ of legal systems to changes in the wider economic context are unlikely to be a significant explanatory factor.

The rest of this paper is structured as follows. In section 2, we review the law and finance research programme and motivate our current enquiry by identifying gaps in our understanding. Section 3 explains the methodology employed in the construction of our new longitudinal indices of legal institutions. Sections 4, 5, and 6 present results relating to the development, respectively, of legal rules protecting shareholders, creditors, and employees. Section 7 synthesises the principal results and concludes.

## **2. The ‘law and finance’ research programme and its limitations**

### ***2.1 Principal claims***

Systematic research on the relationship between a country’s legal institutions and its corporate governance and financial systems began only in the late 1990s with the pioneering and highly influential work of La Porta, Lopez-de-Silanes, Shleifer and Vishny (‘LLSV’: see La Porta *et al.*, 1997, 1998, 1999a, 1999b, 2000, 2006, 2007, 2008; Johnson *et al.*, 2000; Djankov *et al.*, 2003, 2007, 2008; Glaeser and Shleifer, 2002, 2003; Botero *et al.*, 2004). This literature connects with other recent work on the relationship between financial system and economic development (see Levine, 1997; Beck *et al.*, 2003a, 2003b; Berkovitz *et al.*, 2003; Pistor *et al.*, 2003, Claessens and Laeven, 2003). Moreover, this research has a significant practical importance because the World Bank uses it in order to assess and promote a particular way of legal development (World Bank, various years).

The La Porta *et al* analysis is based on an empirical and theoretical evaluation of different legal systems, and has been conducted at two discrete levels of generality. The first, and more ‘micro’, hypothesis, is that the greater the protection afforded to minority shareholders and creditors by a country’s legal system, the more external financing firms in that jurisdiction will be able to obtain (the ‘quality of law’ claim). If good legal institutions can reduce the risk of investor expropriation *ex post*, then investors will be more willing to advance funds *ex ante*. The second, and more ‘macro’, hypothesis, is that the quality of legal institutions varies systematically with the ‘origin’ of a country’s legal system—that is, whether it falls into the Anglo-American ‘common law’, or Napoleonic (French-origin), German or Scandinavian ‘civil law’ systems (the ‘legal origins’ claim).<sup>2</sup> La Porta *et al* contend that legal origins thus determine the financing of corporate growth, and through that and other channels, the nature of the financial system and ultimately, perhaps, overall economic growth.

A key step in the empirical methodology has been to *quantify* variations, across countries, in the extent to which certain types of legal rule exist. The resulting indices allow the particular economic correlates of institutional persuasions to be discerned. The cross-sectional regression results accord with the predictions of both the quality of law and the legal origins claims. Specifically, countries using the French civil law system exhibit systematically less protection for minority shareholders, which is in turn correlated with concentrated share ownership; and corporations in common law countries (with stronger shareholder protection) pay out more dividends and have higher share prices than firms in civil law countries.

Whilst the intuition underlying the ‘quality of law’ claim seems straightforward, it is less obvious why ‘better’ quality law should tend to be associated with common law systems. Two mechanisms have been articulated which may underpin the common law’s alleged superiority (Beck *et al.*, 2003a, 2004; and Levine, 2003; Botero *et al.*, 2004). One hypothesis (the ‘adaptability’ claim) concerns the way in which new rules are produced. Civilian systems are characterised by wide-ranging codification of legal rules, whereas common law systems are distinguished by their reliance on incremental change through the accumulation of judicial precedent. It may be that this ability to shape the law on a case-by-case basis helps to render legal regulation more adaptable to changed circumstances. In contrast, civilian legal systems may suffer from excessive rigidity, as changes may only be made infrequently through legislation. Associated with this is a difference in ‘regulatory style’: common law systems, it is said, favour market solutions—contract and private

litigation—over ‘top down’ regulation and enforcement through government agencies in civilian systems.

A second hypothesis (the ‘political’ claim) focuses on the greater independence accorded to the judiciary under common law than civilian systems. The Napoleonic Code in particular seeks to enshrine constitutionally the primacy of the legislature over other branches of government; the legislature also controls judicial appointments and tenure. In contrast, the judiciary in common law systems typically have greater ability to review the legitimacy of executive acts, and the terms and processes of their appointments give them greater independence. These differences, it is thought, will make common law judges less susceptible to influence by the legislature, and better able to protect individual property rights from rent-seeking activity by the state (Mahoney, 2001; Rajan and Zingales, 2003).

## ***2.2 The ‘quality of law’ claim and its limitations***

Indices have been constructed by La Porta *et al* for a range of different aspects of the law relating to business organisation. In the approximate order in which these were published, they include:

- (i) Shareholder rights (as against company directors—‘antidirector rights’—and as against majority shareholders—‘minority protection’) and creditor rights (LLSV, 1997, 1998)
- (ii) Regulations governing firm start-up (Djankov *et al*, 2002)
- (iii) Contract enforcement (Djankov *et al*, 2003)
- (iv) Securities regulation (La Porta *et al*, 2006)
- (v) Labour regulation (Botero *et al*, 2004)
- (vi) Public creditor protection mechanisms (overlapping with the earlier ‘creditor rights’) (Djankov *et al.*, 2007).
- (vii) Self-dealing rules (overlapping with the earlier ‘antidirector rights’) (Djankov *et al*, 2008).
- (viii) Bankruptcy procedures (overlapping with the earlier ‘creditor rights’) (Djankov *et al*, 2007).

The methodology has evolved over time, so that a number of limitations in the earlier studies have been ameliorated. However, significant unresolved issues remain.

First, for any index to render a meaningful representation of the comparative qualities of underlying legal rules, it is essential that the coding should be *accurate* and *consistent*: that is, the numbers used to signify the presence or



absence of particular legal rules, and/or their strength, should be applied in a way that in fact corresponds to the underlying state of the law, and that is consistent across different legal systems. This desideratum would seem to be obvious, but the highly specific and textured nature of legal knowledge is such that it is often difficult for a non-specialist to achieve an accurate characterisation of legal rules. When the coding of LLSV's 'shareholder rights' indices were checked by independent experts, numerous coding errors were revealed (Spamann, 2006, 2008; Braendle 2006; Cools 2005), to the extent that the principal results are no longer regarded as being entirely robust, even by members of the LLSV research network (Djankov *et al*, 2005).

Secondly, the expansive nature of most countries' laws means that selectivity is called for: the factors coded to form the index must act as proxies for the quality of the underlying legal rules. A further potential source of bias concerns the *selection* of variables to be coded. It is desirable that variables should be selected in accordance with a functional theory about their likely impact on corporate finance practices. However, the more limited the selection, the greater the risk that they will fail to reflect the generality of the underlying legal rules, or that their choice may be subject to a (probably unconscious) 'home country bias' on the part of the researchers constructing the index, either of which will skew the resulting comparisons. LLSV's 'shareholder rights', 'creditor rights' and 'securities law' indices have been criticised on these bases (Berglof and von Thadden, 1999; Armour *et al*, 2002; Siems 2005b; Braendle, 2006; Cools, 2006; Lele and Siems, 2007a; Ahlering and Deakin, 2007). These problems have been ameliorated in some of the later indices through consideration of a wider range of variables: the Botero *et al*. (2004) index of labour regulation, for example, consists of 60 variables, and has been shown to produce outcomes which are consistent with indices drawn up using different methodologies, such as large-scale surveys of the opinion of lawyers and industrial relations practitioners (Chor and Freeman, 2005).

Thirdly, the empirical results supporting the quality of law claim are, by themselves, difficult to interpret. They rely primarily on cross-sectional analyses, using the various legal indices as independent variables regressed onto firm-level data about corporate finance and ownership structures. Whilst these establish correlations consistent with the theoretical predictions, their cross-sectional nature means they are ambiguous as to the direction of causality. Whilst 'good quality' legal rules could enhance investment, it is also plausible that financial structure influences the creation of legal norms.<sup>3</sup>

Reference to legal origin offers a potential resolution to this causal ambiguity. The various cross-sectional results based on the LLSV indices show that higher than average quality corporate, securities and labour laws are associated with common law systems; French civilian systems, on the other hand are associated with lower than average quality legal norms (in the sense defined here). As legal origin is, for most countries in the world, exogenous—deriving from whichever of the western powers colonized the country in question—this arguably supports the view that law drives financial development, rather than *vice versa* (La Porta *et al.*, 1997). It is appropriate therefore to consider the ‘legal origins’ claim in more detail.

### ***2.3 The ‘legal origin’ claim and its limitations***

By ‘legal origins’, La Porta *et al.* do not mean the legal rules themselves, but rather the ‘infrastructure’ of the legal system, ‘such as the legal codes, legal principles and ideologies, and elements of the organization of the judiciary’ (La Porta *et al.*, 2008: 288) in a given country. In the latest formulation of their claim, La Porta *et al.* suggest that legal origins include not just the formal institutions of the legal system but also ‘the human capital and beliefs of its participants’ (2008: 286). They also suggest that legal origin can be broadly conceived as ‘a style of social control of economic life’ (2008: 286). This is the context in which they argue for a bifurcation between the common law and civil law systems. Thus the ‘civil law is associated with a heavier hand of government ownership and regulation than common law . . . [and with] greater corruption, larger unofficial economy, and higher unemployment’, while the common law is ‘associated with lower formalism of judicial procedures and greater judicial independence than civil law’, indicators which are ‘in turn associated with better contract enforcement and greater security of property rights’ (2008: 286).

Legal origin was initially used as an instrumental variable in order to address the problem of endogeneity, or in other words, the possibility that economic factors were influencing the content of legal rules rather than the other way round (La Porta *et al.*, 1998; Beck *et al.*, 2003a).<sup>4</sup> In their more recent work, La Porta *et al.* suggest that legal origin cannot be regarded as a good instrument for the quality of legal rules because it is likely to affect economic outcome variables in a number of different ways. In particular, they suggest that legal origin, understood in the broad sense of ‘regulatory style’, could be influencing the economy not through the quality of legal rules alone, or even predominantly via this route, but through alternative aspects of the legal infrastructure, such as enforcement mechanisms (La Porta *et al.*, 2008: 299) or prevailing modes of legal interpretation (La Porta *et al.*, 2008; 300). However, even if legal origin is no longer regarded as a good instrument for verifying the quality of law claim, La

Porta et al. maintain that ‘legal origins are still exogenous’, since legal structures ‘cannot just be responding to market development’ (La Porta *et al.*, 2008: 298). The issue, they suggest, is not whether legal origin is shaping economic outcomes, but rather ‘the difficulty of identifying the channel’ through which it operates (La Porta *et al.*, 2008: 298).

Notwithstanding this recent and important clarification, the legal origin claim suffers from serious problems of conception and implementation. To start with, the practical application of the fourfold classification that forms the explanatory variable—namely, into common law and French, German, and Nordic civil law systems—is fraught with difficulties. Whilst one may clearly distinguish the legal systems of the ‘mother countries’—England,<sup>5</sup> France, and Germany—the appropriate characterisation of most of the countries included in the regression studies—that is, the legal systems of countries in Eastern Europe, Asia, Africa and Latin America—is anything but clear (Siems 2007).<sup>6</sup> These difficulties of classification call into question not only the particular specification of the regression studies, but more generally the possibility of drawing ‘bright line’ distinctions between different classes of ‘legal family’.

To be sure, classification by legal origin is really no more than a proxy for underlying differences. In order to avoid problems of classification, therefore, it would be better to seek to code these differences directly (suggested in Siems 2006b). However, as La Porta *et al.* (2008: 298) recognise, this prompts the question as to what the precise mechanisms are by which legal institutions are thought to influence the content of legal rules. Unfortunately, extant accounts of the mechanisms by which legal origins exert their influence—through the ‘political’ and ‘adaptability’ channels (see Beck and Levine, 2004, 2005)—are based upon an excessively reductionist (or, more simply, inaccurate) view of the distinction between common and civil law systems.

The ‘political’ channel posits that judges in common law systems have greater power (as lawmakers) and independence from the other branches of government, and consequently may be expected to do a better job in protecting private property rights from encroachment by the state. In contrast in civilian jurisdictions, the legislature has greater control over legal institutions, including judicial appointment, selection and tenure, which means that the judiciary are less able to protect individual property rights against rent-seeking by the state. This focuses on the protection of investors’ property rights, and the ability of a state or system to commit credibly to do this over time.

The so-called ‘adaptability’ channel is based on the idea that legal rules may need to change and be updated in response to developments in technology so as

to better track the needs of the real economy. Following the arguments of Hayek (1960), the common law, through its decentralised judicial decision making, is thought to be better able to respond quickly to incremental changes than is a more structured legal system, in which changes must come from the top, and within which a high degree of internal coherence must be maintained (Mahoney, 2001).

This overlooks the point that the adaptability of legal systems is not only about courts. Legal adaptability depends on a wide set of factors. Siems (2006b) provides a list of 35 criteria out of which only seven concern judicial decision making. The other criteria concern, for instance, swift law making, evaluation of existing law, feedback by interested parties, democratic structures, principled legislation, lawyers fees, innovative legal thinking of legal academics, openness towards foreign ideas, respect of scientific research etc. Here too, of course, there are differences between countries. However, there is no reason to assume that common law countries have a natural advantage over civil law countries.

Moreover, the idea that common law judges have discretion to shape rules to changing economic circumstances, while civilian judges are bound to apply, through rigid deductive logic, the strict legal text of the code, is, as Mattei (1997: 79) has shown, ‘dramatically misleading, being based on a superficial and outdated image of the differences between the common law and the civil law’. Arguments about whether judicial decisions are a formal ‘source’ of law in civilian systems aside, the prominent role of judicial decision-making in the civil law is now clearly established (see Markesinis, 2003). Notwithstanding the efforts of the drafters of the French civil code to limit judicial influence and curb the doctrine of judicial precedent, ‘neither before nor after the French codification could any of the civil law systems be fairly characterised as the one described by the French post-revolutionary scholars’ (Mattei, 1997: 83). Many of the doctrines which are thought to be most characteristic of a distinctive civilian approach to economic regulation, such as the application of the concept of good faith to commercial contracts, were judicial innovations (see Teubner, 2001; Pistor, 2005). Moreover, when the sources of company law, insolvency law, and labour regulation, specifically, are considered, the systems are closer together than the law and finance literature supposes (Funken, 2003; Siems 2005b; Ahlering and Deakin, 2007; Armour, 2008). If there is a conceptual difference, it may even be the case that civil law judges have more freedom than common law judges. As explained by Davies (1997: 8):

‘[in the UK] there are now few of those general principles which are not affected in some way by the extremely detailed provisions of the Act

whose bulk astonishes our partners in the European Community. Their legislation is expressed in relatively general terms which the courts are left to interpret purposefully. [...] Contrary to what an earlier generation was taught at Law School, in the Civil Law countries judges have greater freedom to make law (albeit on the basis of codified general principles) while in the United Kingdom it is increasingly made by statute and judges are inhibited from developing new principles....’

Thirdly, the legal origins hypothesis claims that the crystallization of a particular legal infrastructure or order, which in the case of most countries occurred at some point in the nineteenth century or at the latest in the early twentieth century (or even at some point in the twelfth and thirteenth century, as claimed by some law and finance scholars; see the references in Siems, 2006b) is still influencing the content of substantive rules together with their enforcement and interpretation, and thereby a range of economic outcomes, to this day. This implies a very strong form of path dependence. Thus while the content of legal rules may vary over time, legal infrastructure, it is suggested, does not: ‘the legal system provides the fundamental tools for addressing social concerns and it is that system, with its codes, modes of thought and even ideologies, which is very slow to change’ (La Porta et al., 2008: 307). This is the basis on which the inherited legal origin effect is said to influence even those areas of substantive regulation which have arisen comparatively recently: ‘both labour laws and securities laws are creatures of the twentieth century . . . yet . . . these laws took different forms in countries from different legal traditions, consistent with broad strategies of how the law intervenes’ (La Porta et al., 2008: 307).

Yet the basis on which the origin of a legal system should have such a powerful and long-lasting effect is far from clear. The assumption is that the legal infrastructure of a system is more or less fixed at the point of its transposition or reception. Economic developments or political forces may subsequently affect the content of legal rules, but the core of the legal system is, apparently, impervious to their influence. Thus a further strong and unexplained assumption is that of the unidirectional nature of the causal forces at play here. Without an explanation of why such strong path dependencies might have arisen, it is difficult to know what policy implications, if any, to draw from the results in the law and finance literature. If path dependencies are sufficiently strong to have persisted for hundreds of years, is there anything that national policymakers can do to ameliorate their financial development if they have the misfortune of being saddled with the ‘wrong’ legal origin? Understanding the source of such path dependencies is, clearly, crucial to understanding the options available to policy makers contemplating legal and institutional change. The stress on the rigidity

and unidirectional causal effect of the legal order is all the more difficult to understand given that the legal origins approach has apparently ‘encouraged regulatory reforms in dozens of countries’. (La Porta et al., 2008: 326).

## **2.4 Summary**

The foregoing survey of the limitations of the ‘law and finance’ literature reveals a number of fruitful questions for research. In particular, little has been done to investigate the *dynamic effects* of particular legal systems in relation to the production of substantive legal rules: that is, how particular attributes of legal origins or systems shape and influence the evolution of the law, and in turn, the real economy. Such an approach may shed light on several of the contested issues, namely: (i) how, if at all, the structure of legal institutions influences the content and efficacy of legal rules; (ii) whether the differences between legal systems are reducing over time; and (iii) whether legal reforms stimulate financial and economic development, or *vice versa*.

## **3. The dynamics of legal change and economic development: theory**

By ‘dynamics’, we refer to the ways in which the structure of a particular institution—the legal system—may influence the direction of its own evolution over time. Law and finance scholars theorise, in the form of ‘adaptability’ and ‘political’ channels, two dynamic mechanisms that might account for the differences in both substantive legal rules, and their impact upon the real economy—on the level of stock market development, ownership structure of listed firms, level of dividends paid out to shareholders, private sector credit, the incidence of business start-up, levels of employment and unemployment, and (in the developing world) the size of the informal sector. Even assuming that these mechanisms can in some way be reconfigured so as to avoid relying on an inaccurate account of the common law/civil law divide, but on more specific features, their use begs significant questions. If some national legal systems are inherently ‘weaker’ than others, why do they persist? What precisely is the role played by the transplantation and diffusion of legal norms and procedures? The sources of such large path dependencies must surely also be closely tied to the patterns of legal institutions themselves. With this point in mind, we will now see if the ‘adaptability’ and ‘political’ theories can be decomposed in a way which will enable us to identify more precisely the mechanisms which may be at work.

### **3.1 Legal origin, economic growth and the transplantation of norms**

The ‘adaptability channel’ claim, that civil law systems are inherently less supportive of market institutions than common law ones, was made initially by

Hayek (1960) and has more recently been revived by Mahoney (2001: 505): ‘there are structural differences between common and civil law, most notably the greater degree of judicial independence in the former and the lower level of scrutiny of executive action in the latter, that provide governments with more scope for alteration of property and contract rights in civil law countries’. If legal origin had this effect, we would expect there to be differential growth rates for common law and civil law countries. However, this claim is not clearly made by LLSV themselves. In most of the analyses which they have offered, GDP is treated as a control, rather than as the dependent variable. Mahoney (2001), whose analysis is based on a sample of developed and developing countries in the period from the 1960s to the 1990s, claims to show the GDP per head grew faster in common law systems during this period.<sup>7</sup> However, La Porta *et al.* (2008: 301-2) note that his results hold for French-origin systems only if the civil law category is disaggregated into its French, German, and Scandinavian sub-groups, and that even then, his finding does not hold if certain controls, normal in this line of literature, are included. Other analyses suggest no such relationship is if developed nations alone are considered. Hall and Soskice (2001: 21) show that coordinated market systems in developed countries, all of which have civil law origins, had higher rates of GDP growth than liberal market regimes, all of which have common law origins, in the 1960s and 1970s. Growth rates for the two groups were roughly the same for the period from the mid-1970s to the mid-1980s. The liberal market systems then grew more quickly in the period up to the late 1990s which is the point at which the LLSV indices were constructed, but GDP per head was still slightly higher, on average, in the coordinated market systems.<sup>8</sup>

If there are negative effects of civil law origin, they seem to be confined to developing systems. Here, proponents of the legal origin hypothesis offer an argument which is related to the effects of transplantation. What they identify as the civil law orientation towards centralized state control of the economy may, they suggest, have been efficient in the mainland European (or, to be even more specific, French) context in which it originated, but it gives rise to inefficiencies when these norms and practices are transplanted: ‘when a civil law system is transplanted into a country with a ‘bad’ government, it will lead to less secure property rights, heavier intervention and regulation, and more corruption and red tape than does a common law system transplanted into a similar environment’ (Glaeser and Shleifer, 2002: 1221). This is a plausible approach, but it means that the effects of legal origin must be distinguished from those of transplantation as such, with closer attention paid to the conditions under which transplants occurred in particular jurisdictions and the reasons for the success or failure of the process in those cases (on which, see Pistor *et al.*, 2003).

A related point is made in Siems (2008b). He examined how shareholder protection has developed in 20 countries from 1995 to 2005. For transplant countries, an important factor was whether systems continued to take developments in the origin countries into account and thereby modify their law over time. This kind of legal diffusion was facilitated within the common law world by the presence of shared values and a common legal language. However, this was not restricted to common law countries. Within the common law family, there was no ‘natural’ following of the English path while, conversely, there were examples of influence across systems in the civil law world, for example between Germany and Austria, and between France and Luxembourg.

### ***3.2 Property rights, rents, and constituencies***

Another plausible account of the role of path dependence focuses on the distributional impact of legal rules (see Bebchuk and Roe, 1999; Stern et al, 2005; Rajan and Zingales, 2006). Particular legal institutions create entitlements in favour of certain constituencies. Thus a country’s legal institutions could serve as a powerful means of locking in, and themselves be locked in by, distributional patterns. This would not only exert a force of conservatism against a shift away from incumbent legal institutions; it would also tend to perpetuate and strengthen the distributional patterns associated with it over time. This is because those to whom the property rights gravitate may be expected to use these to shore up and extend their own influence, through rent-seeking activities. Where the ‘privileged’ group can increase its returns at least cost through productive enterprise, we might expect to see lobbying activity to protect further the entitlements of individuals involved in such enterprise. However, where the legal system instead permits the privileged group to transfer resources from other individuals to themselves at relatively low cost, we might expect to see efforts being devoted over time to increase the scope of that group’s control.

The ‘political’ channel theory imagines a stylised ‘common law’ system to give relatively stronger protection to the property rights of individuals, the expropriation of which would then require their consent. In contrast, a stylised ‘civil law’ system would give citizens at large relatively weaker property rights; the correlative of this is that those controlling the country—the political class—have an *additional* bundle of entitlements—that is, the ability to use the system to divert resources to themselves from individuals. If the system gives this group disproportionate influence, then they will be able to use this influence to hold up a shift towards a legal system that protects individual property rights more strongly.



As we have just seen, the claim that common law systems are inherently more protective of property rights than civilian ones has been disputed. However, the argument that certain configurations of legal institutions are more likely than others to generate rent-seeking by insider groups is one that can be tested separately from the legal origin claim, by looking more closely at the institutions themselves at country-level. Only then will it be possible to have a clearer idea of whether such configurations are associated with a particular type of legal systems or with a particular history of legal diffusion. Again, this points to a deeper empirical encounter with the historical experience of national legal regimes than has so far been attempted within the legal origin literature

### ***3.3 Institutional complementarities***

The ‘adaptability’ and ‘political’ theories both view legal systems in strongly functionalist terms: in the first case, laws directly influence economic development, with high-quality legal rules being matched to efficient economic outcomes; in the second case, laws are the result of political coalitions which serve to express the interests of groups in society. Both theories seek to explain legal evolution by reference to factors external to the legal system itself, and thereby downplay the possibility that legal systems are, to some degree, autonomous social institutions, evolving according to their own internal logic. This third position – an ‘institutional channel’ explanation of legal origin – does not reject a functionalist logic entirely, but it proceeds on the basis that legal rules are only partially functional with regard to their wider political and economic environments.

The core of this theory is the concept of ‘institutional complementarities’ as applied to legal systems (Ahlering and Deakin, 2007). This holds that legal institutions do not exist in a vacuum: they are interconnected with other social institutions—in particular, with social norms and co-ordinating conventions that are relied upon for the organisation of a society—which are in turn connected to patterns of production and modes of distribution (Milhaupt and Pistor, 2008). Thus legal systems are, to a certain extent, *endogenous* to the economic and political context in which they are situated. This view implies that both the “legal infrastructure” or “regulatory style,” which La Porta *et al.* (2008) associate with legal origin, and also the substantive content of legal rules, are shaped to some degree by trends in the economy and the political system. However, the ‘fit’ between the legal system and the forms of production is likely to be incomplete and possibly sub-optimal. Complementarities between institutions mean that a particular institution, or group of institutions—let us call it ‘X’ may be retained even if *in isolation* it might not be optimal. The existence

of a complementarity between institutions X and Y would mean that replacing X would have an adverse effect on the productivity of Y. Where the size of this adverse effect would be greater than the benefits from replacing X with another institution—say, Z—X will be retained. A key implication of the potential for institutional complementarities is that there will be certain ‘tipping points’ in history at which hard-to-reverse choices will be made. In the case of institutions X and Y, the adoption of either in isolation is readily reversible should it cease to be optimal, but once *both are adopted together*, then the resulting complementarities provide a source of cross-subsidy which can lock in an inefficient institution.

Here it is relevant that differences between common law and civil law systems seem to track quite closely the distinction drawn in the ‘varieties of capitalism’ literature between ‘liberal market’ systems and ‘coordinated market’ systems (Ahlering and Deakin, 2007). That is, systems in which employee participation is largely voluntaristic in the sense of being left to contract, and which are characterised by dispersed share ownership and deep and liquid securities markets, can be opposed to systems in which employee participation is statutorily co-ordinated, and in which share ownership tends to be concentrated in the hands of blockholders and securities markets are smaller and less liquid. A plausible working hypothesis is that legal institutions share complementarities with these other institutions, and with various social norms and conventions that exist in the relevant societies.

Comparative legal analysis has shown that distinct legal models of the business enterprise have developed in the laws of western European systems over the past two centuries: a ‘contractualist’ approach in the English common law, which emphasises the separation of labour interests from the firm and the priority of financial controls over management, can be contrasted with French and German ‘integrationist’ models in which, to differing degrees, workers are more fully integrated into the enterprise and the power of external financial interests is muted (Supiot, 1994). It has been argued that the roots of this divergence between systems are not to be found in the supposed distinction, upon which LLSV rely, between a predominantly judge-made common law and a statutory or codified civil law (Ahlering and Deakin, 2007). Many of the detailed rules relating to the business enterprise are statutory in origin in both the common law and civil law, and in both sets of systems there has been an ‘intertwining’ of legislative intervention and judicial innovation since the first few decades of the nineteenth century. Instead, it can be shown that the rules which emerged to meet the needs of business in each country were conditioned

by the wider economic environment of those systems, in ways which influenced their evolution at decisive points (Deakin, 2008).

A critical factor accounting for the persistence of diversity is the timing of industrialization. England's early industrialization occurred before the point at which early modern forms of corporatist regulation had fully given way to a legal order based on modern notions of contract and property, whereas in France and Germany the codification movement of the early nineteenth century swept aside the vestiges of late-medieval regulation several decades before large-scale industry developed. As a result, the core legal institutions of the business enterprise, the contract of employment and the company limited by share capital, were somewhat slower to develop in Britain than on the continent; this meant that the English common law was less well adapted to the appearance of large vertically-integrated firms at the turn of the twentieth century than its French and German equivalents. Legal codification on the continent was also one of the factors, along with the wider political context, which ensured that the claims of organized labour received legal recognition at an earlier point in France and Germany than in Britain.

Legal diversity in the way in which the business enterprise is conceptualized and regulated is the consequence of a range of different factors coming together, at points in the development of market economies, to influence the evolutionary path of the law. The way in which these factors combined to shape legal evolution during the formative period of industrialization in Western Europe was to a large extent *contingent* rather than *structural*; but once the predominant pattern was set, institutional lock-in meant that it was difficult to shift. To that extent, the different legal cultures of the common law and civil law have become the 'carriers of history', perpetuating diversity through their wider diffusion around the world as a result of legal transplantation in the course of the nineteenth and twentieth centuries.

Most developing countries obtained their legal systems through colonial settlement<sup>9</sup>; there is no reason to expect, in these cases, a degree of complementarity between transplanted legal institutions and indigenous economic ones. However, we might well expect to find that developing countries draw on models of legal regulation from parent systems because of the affinities of legal thought and language<sup>10</sup> which operate within given 'legal families': in this case, 'path dependence in the legal and regulatory styles emerges as an efficient adaptation to the previously transplanted legal infrastructure' (Botero *et al.*, 2004: 1346). Thus the French legal tradition of embedding labour and social rights in constitutional texts is one which has

significantly impacted on the development of labour law in Africa and, via Spanish and Portuguese influences, Latin America. The centralizing influence of the colonizing power in directing legal change may also, more straightforwardly be a factor. There is evidence that this is the case, for example, with the diffusion of norms of British ‘master and servant’ law throughout the common law world from the eighteenth century onwards, a process that continued up to the middle decades of the twentieth century (Hay and Craven, 2004).

On this view, some sort of ‘legal origin’ effect might be expected to persist into the present day, and could account for a degree of divergence across systems. But the strength of this effect might be weak when compared to other forces tending towards convergence, such as moves to develop internationally applicable standards in such areas as corporate governance, the harmonizing efforts of transnational entities such as the European Union, and the willingness of countries to borrow legal rules and institutions which appear to work well in other systems, regardless of their common law or civil law origins. Nor would we expect a legal origin effect which had such a weak ‘gravitational force’ to be a major break on economic development, or, conversely, to be an important stimulant of it. However, the strength or weakness of the legal origin effect cannot, on this approach, be determined *a priori*; it must be empirically investigated.

#### **4. Constructing panel data on legal rules**

The first step in such an investigation is the construction of indices tracking different dimensions of the law across time. This allows us to generate panel data on the evolution of legal institutions. In this section we present new indices tracking different aspects of the legal rules affecting the business enterprise. Our approach to index construction involved two stages. First, relatively long series of legal data were collected for a small number of countries: the UK, the US, Germany, France and India. These are of particular interest because they include three common law and two civilian countries; the three ‘mother countries’ for the common law and the French and German civil laws; one economically significant developing country which is also the world’s largest democracy, and the country which is the world’s largest economy. The legal data collected comprised indicators relating to the protection of shareholders creditors and workers. However, so as to minimise the risk of replicating the selection problems inherent in LLSV’s early indices, new indices, covering a much wider range of variables (between 40 and 70 in each index, as opposed to 4-5 in the first LLSV indices), were constructed.<sup>11</sup>

Our first sets of indices are therefore very detailed in their legal coverage, with over 150 legal variables coded for each country-year. These highly detailed, longitudinal datasets allow for an exploration of the way in which change in the laws governing the business enterprise has varied across civil and common law countries over a significant period of time.

#### ***4.1 Coding methodology: general observations***

The indices seek to capture legal rules which may be expected, if adequately enforced, to protect the position of financial claimants—shareholders and creditors—as well as employees of the business enterprise. In each case, a functional approach is adopted: the coding seeks to capture all rules which have the effect of protecting the interests of the constituency in question (see Kraakman *et al.*, 2004). The same functional role may be performed in different jurisdictions by rules with different formal classifications (Gilson, 2001). For example, there are a variety of ways in which minority shareholders may be protected from expropriating actions by majority blockholders: these could be effected by high quorum or supermajority voting rules as regards corporate actions likely to harm minority shareholders; fiduciary duties imposed on majority shareholders; appraisal rights allowing a minority shareholder to exit with full compensation; or indeed a requirement of approval from a public authority (Lele and Siems, 2007a). Similar issues arise in relation to creditor protection: that is, *ex ante* mechanisms such as minimum capital requirements may serve to provide similar protection to creditors as *ex post* mechanisms such as liability rules and disqualification for company directors; and for labour regulation, where worker representation rights and employment protection legislation may provide alternative routes to ensuring job security. Thus, for a study of this nature, functional equivalents must not be ignored in order to provide a coherent and meaningful characterisation of the law.

At the same time, to relate the coding to the underlying legal materials, the variables coded must correspond to formal rules or regulations: otherwise it would be impossible to verify the coding objectively. Thus each ‘variable’ coded is the absence or presence—and if present, the extent—of a legal rule formally classified in a particular way. This need, coupled with the possibility of functional equivalence, implies that it is desirable to include as broad a range of variables as possible in the indices. Hence the variable selection is, to the greatest extent possible, developed in discussion with scholars specialising in the relevant jurisdictions, in order to include as many rules as possible which function to provide protection to the relevant constituencies.<sup>12</sup> Most of the rules coded are found within company, insolvency, and employment law, but we

extended our survey to include aspects of securities regulation that involve protection of shareholders from directors and majority shareholders. Moreover, certain aspects of commercial law, most notably the treatment of secured credit, relate directly to the protection of creditors.

The interpretative nature of legal sources raises a particular problem in the coding of legal variables. Assigning a number to a particular variable in many cases requires an exercise of legal judgment. To minimise the risk of error, wherever possible expert lawyers trained in the relevant jurisdictions either did the primary coding, or were asked to validate the coding subsequently. Even this, however, is unlikely to remove the problem, as it is common knowledge that even lawyers from the same jurisdiction will disagree on the state of the law. Given this difficulty, transparency over the judgments made in coding is particularly important. Hence an extended data appendix containing the coding for the indices reported in this paper, and the associated legal justifications for these codings, is available on the internet.<sup>13</sup>

Another implication of the interpretive nature of legal analysis is that a purely binary coding system (that is, either ‘0’ or ‘1’ for all variables) may be misleading. For example, if a particular rule is generally applicable, but has a significant exception that is material to the way it will function, then a coding of either 0 or 1 will be somewhat arbitrary. To respond to this, partial scores have been used where appropriate, with explication of the relevant legal reasoning in the associated data appendices. As regards some variables, it has been possible to use cardinal scales (for example, where the law expresses conditions in monetary terms, the monetary figure can be used), which reduce the possibilities for researcher bias in coding.<sup>14</sup>

A number of other design choices were made in the index construction, the goal being to code the rules *as they affect parties in the real economy* (see Lele and Siems, 2007a, for a fuller account). The most significant were as follows:

- *Default rules* were included in the coding in instances where it would not be possible for the party they constrain to opt out of them, but not in cases where that party has simply an option to opt in (which we may expect not to be exercised where it would contradict that party’s interests).
- ‘*Self-regulatory*’ rules and principles (such as the UK’s Combined Code and City Code on Takeovers and Mergers, corporate governance codes in most systems, or, in the labour context, collective agreements which have *de facto* binding effect), which are viewed by market participants as imposing real constraints, were coded as such where appropriate

- *Federal jurisdictions* raise the issue of which state(s) should be selected for the coding in matters left to state law. The current analysis proceeds by coding the most ‘important’ jurisdiction, in terms of numbers of firms incorporated there (e.g. in the case of the US, Delaware).
- *Case law* (jurisprudence) was treated as a source of law in all jurisdictions, effective from the year in which the judgment was reported.
- *Statutory law* was treated as being effective from the year in which it came into force and not when it was enacted.

It is also worth emphasising that in analysing the pattern of change observed in the indices, it should be borne in mind that they merely represent the extent to which the law protects a particular constituency, and that no normative implications can be drawn without an understanding of their impact upon the real economy. ‘More’ may not necessarily be ‘better’; as where, for example, there are diminishing (or even subzero) marginal returns to additional protection. For example, as regards the rules protecting the interests of shareholders, company law must attempt a balance between different interests so that not a ‘maximum’ but an ‘optimum’ of shareholder protection has to be established (see, e.g., Stout, 2002; Anabtawi, 2006; Bainbridge, 2006). For example, whilst the value of the shareholder protection index for the US has increased considerably in the recent years due to the Sarbanes Oxley Act, the changes brought about by the Act and its implications have received criticism and some scepticism on whether it would actually mean an improvement in corporate governance (Romano, 2005).

#### **4.2 Shareholder protection<sup>15</sup>**

In keeping with prior literature (e.g. La Porta *et al*, 1997), our coding for shareholder rights focuses on the rules applicable to listed companies.<sup>16</sup> However, our coding is distinguished from prior literature by disaggregating two constituent types of shareholder protection. Corporate law is thought to contain provisions aimed at mitigating two varieties of agency cost that may harm shareholders: those between managers and dispersed shareholders, and those between majority and minority shareholders (see Coffee, 2002; Kraakman *et al*, 2004). Not only are these in turn correlated with different patterns of stock ownership (Roe, 2003), but there is no particular reason for thinking that legal rules geared to mitigating one will ameliorate the other (Kraakman *et al*, 2004).

Thus the variables that are used as proxies for shareholder protection in the index are divided into two subsets: those rules that protect shareholders against directors and managers, and those that protect (minority) shareholders against other shareholders. Many of the primary variables are in turn divided into two

or more sub-variables. For instance, the overall variable ‘power of the general meeting’ consists of seven sub-variables which address different issues over which the general meeting may or may not have decision-making power, namely, amendments of articles of association, mergers and divisions, capital measures, de facto changes, dividend distributions, election of board of directors and directors’ self-dealing of substantial transactions. In total, our shareholder protection index has 60 (sub-) variables whose development has been coded for the five countries.<sup>17</sup>

Some variables used in the existing literature have been disaggregated, modified or recast into more a more precise form, with detailed sub-variables. For instance, the LLSV variables ‘proxy voting’ and ‘oppressed minority’ are open to the charge of vagueness, and we have re-cast each of these into two separate sub-variables to ameliorate this.<sup>18</sup> Moreover, there are various ways in which enforcement may operate, for instance, private-law remedies, intervention by public authorities, and disqualification are equally conceivable. We have therefore built separate sub-variables to reflect enforcement.<sup>19</sup>

### **4.3 Creditor protection**

The early law and finance literature (La Porta *et al* 1997, 1998) employed a simple four-variable index of creditor rights.<sup>20</sup> These were then aggregated to give an index score, varying between 0 and 4. There were found to be statistically significant differences in the protection given to creditors, as measured by this index, between legal origins (La Porta *et al*, 1998). This creditor rights index was also used as an explanatory variable in various cross-sectional regressions. These results were, however, less striking than those produced for shareholder rights. When using the aggregate size of debt markets (that is, public debt) as the dependent variable, there was some explanatory power, but differences in the index were not capable of explaining all the differences between the levels of indebtedness of countries of different ‘legal origins’ (La Porta *et al*, 1997). Moreover, the results using share ownership concentration as dependent variable were not statistically significant.<sup>21</sup>

A general problem with this early creditor rights index, however, which may explain the relatively weak correlation with the overall size of debt markets, is that different constituent elements may cut in different directions (see Claessens and Klapper, 2005). That is, some parts of the index may ‘cancel out’ others, thereby undermining the meaningfulness of the overall score.<sup>22</sup> Moreover, the index focuses solely on bankruptcy law. In so doing, it overlooks the legal protection made available to creditors through secured credit and other contract-based mechanisms (Haselmann *et al*, 2006) and through company laws, which



contain significant creditor-oriented rules in many jurisdictions (see Kraakman *et al.*, 2004). Given this possibility of mis-specification, it should not be surprising that the results were not particularly strong.

As with the shareholder protection index, the first step in the construction of our creditor protection index was the coding of a wide range of creditor protection variables for a limited number of countries over an extended period of time. An index of 17 variables (many of which include several sub-variables, yielding a total of 44 separate indicators) was constructed.<sup>23</sup> These are comprised of variables drawn from three separate ways in which creditors may be protected by the law, which are represented as three sub-indices. First, restrictions may be imposed on the activities of active firms so as to reduce their risk of default on debt obligations. For example, their shareholders may be required to subscribe a minimum capital on formation, or they may be prohibited from paying dividends to shareholders out of capital, or from entering into undervalue transactions when they are insolvent. Secondly, creditors may be able to acquire rights by contract. Most important amongst these are probably the ability to take security in various guises, but the ease with which an unsecured creditor may enforce their claim is also salient. The difference between these first two sub-indices tracks a fundamental distinction in regulatory style, namely that between mandatory rules and the facilitation of contractual mechanisms (Glaeser *et al.*, 2001). Our third sub-index concerns bankruptcy law, which is clearly significant to the protection of creditors' rights. Various aspects of insolvency law are thereby characterised according to their tendencies to further creditors' (as opposed to debtors') interests.

#### **4.4 Labour regulation**

The study by Botero *et al.* (2004) set out to analyse the impact of labour regulation in three core areas: employment protection law, the law governing employee representation and industrial action, and the law of social security. The method adopted was to code legal rules, for the most part, with values in a range from 0 to 1, with 0 indicating no protection and 1 maximum protection for the interests of the employee. Altogether over 100 variables were scored in the index, with the social security index accounting for somewhat more than a third of these. Their analysis broadly confirmed the findings of the earlier LLSV studies on shareholder rights and creditor rights: legal origin mattered, in the sense that common law countries, as a whole, regulated the terms of employment contracts to a lesser degree than civilian countries. A similar result was found for the industrial relations law index, but the effect of legal origin was not as strong. Nordic-origin and French-origin systems of social security were found to be more generous than those of the common law, although

German-origin systems were not. Across the sample as a whole, higher scores on the labour index were correlated with higher youth unemployment, lower rates of male labour force participation, and a larger informal economy. However, such inefficiencies were confined to the sample of countries with above average per capita incomes, a finding which Botero *et al.* (2004: 1378) argued was an indication that more effective the enforcement, the more harmful the consequences of the law.

The scores in the Botero *et al.* index correlate with opinion poll evidence on the perception of labour law regulations (Chor and Freeman, 2005) and with other proxies for the effects of law such as the implementation of ILO conventions (Ahlering and Deakin, 2007). Botero *et al.*'s approach has directly informed the analysis of labour laws by the World Bank in its successive *Doing Business* reports since 2004 (World Bank, various years). However, the index has not been free of criticism. Botero *et al.* did not attempt to weight their variables to take into account the principle of functional equivalents and hence the different weights which could be attached to alternative forms of labour protection in different countries. Their approach is, however, defensible on the basis that the state of the empirical evidence on the relative importance of these variables is so primitive as to render any such 'weighting' an exercise purely in subjective (see Ahlering and Deakin, 2007 for discussion). A more difficult problem relates to the heavy reliance of Botero *et al.* of binary variables to capture what are likely, in practice, to be much more finely graduated degrees of difference across systems. They also play down the possible role of alternative forms of labour regulation to those contained in case law or legislation, such as collective agreements which have *de facto* binding effect. The predominant tradition of scholarship in labour law is one which argues that law is a 'secondary force' in social affairs and that social norms are often more powerful than legal ones (Kahn-Freund, 1980); at any rate, the multiplicity of sources of norms governing the employment relationship (legal rules, collective bargaining, workplace-level codetermination, custom and practice, and so on) means there is arguably a greater gap between formal body of labour law regulations and the practical effect of legal norms than there in the case of company and insolvency law. For a fully rounded view of the law's economic impact, account must also be taken of the different effects which labour law rules have on enterprises of different sizes, and on different sectors of a given national economy; but it is very difficult to do this in a country-based index such as the one constructed by Botero *et al.* They attempt to resolve the problem by seeking to code for rules which apply to industrial establishments of a certain size and to a male worker of a certain age, which goes part of the way but inevitably cannot capture the full range of impacts which the law has.

Some of the objections that we have just discussed are, perhaps, incapable of being completely resolved. Coding inevitably involves reducing a complex legal and social reality to a more manageable form as a first step in quantitative analysis. Our index takes Botero *et al.*, as far as possible, as its starting point, in order to make it possible to compare our approach and theirs; we add the dimension of a time-series, and we also code for functional equivalents to the law (de facto binding collective agreements) where we have evidence of them operating. We also make greater use than they do of graduated values in order to try to capture differences between systems more accurately than is possible with measurements based on binary variables.

In general, we follow the same functional approach as Botero *et al.*, which is to assume that laws which impose mandatory or, in some cases, default rules on employers limit their formal freedom of action while, conversely, empowering employees and enhancing their bargaining power. In common with Botero *et al.*, we recognise that labour law rules may play a dual role: they redistribute resources from employers (or their ultimate ‘principals’, such as shareholders) to employees, but they may also have an efficiency aspect to them, in the sense of providing insurance to the employee against risks associated with loss of income and employment (Simon, 1951), reducing transaction costs deriving with the incompleteness of the employment contract (Williamson, Wachter and Harris, 1975), and overcoming coordination or collective action problems which limit the scope for efficient rules to emerge spontaneously (Hyde, 2006). Thus just as maximum employment protection through law (a score of ‘1’) may not be optimal for employees, given possible inefficiencies from over-regulation, so its complete absence (a score of ‘0’) may not be optimal for employers, given the presence in unregulated labour markets of transaction costs and other barriers to coordination.

For a number of reasons, we did not attempt to integrate rules of social security law into our labor regulation index. The most compelling reason is that many social security law rules do not have the same type of economic impact as labor law rules; indeed, they may have the opposite effect. Social security systems formally impose charges on employers in the form of social security contributions, but they do not limit the exercise of managerial prerogative in the way that many labor law rules do. On the contrary, they may subsidize employment terminations or restructurings in various ways. They do not alter the balance of power between employer and worker in the same way that, for example, dismissal laws or strike laws do.

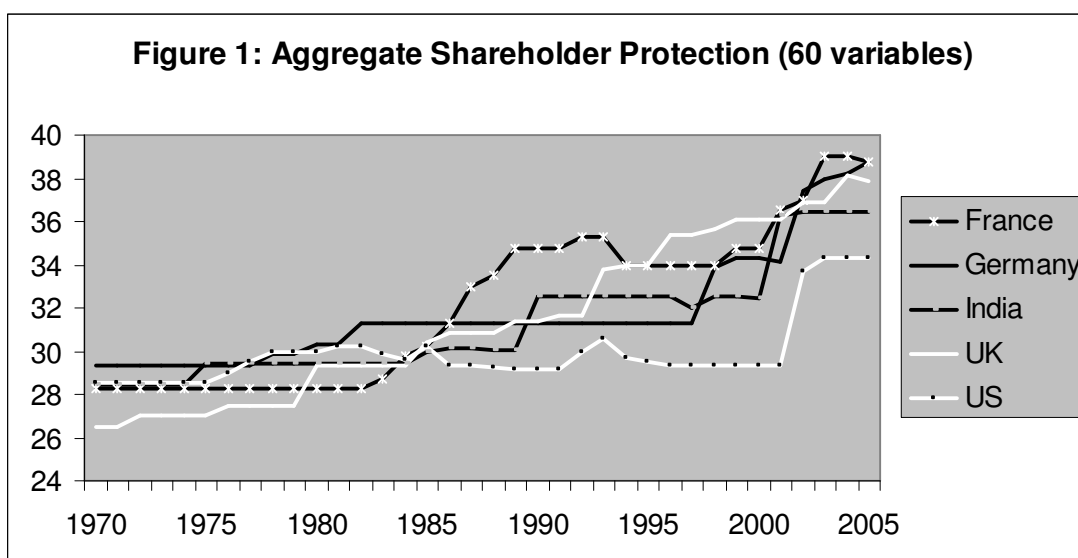
We have therefore constructed an index covering five aspects of labour and employment law: the regulation of alternative forms of labour contracting (self-employment, part-time work, fixed-term contracting and agency work); the regulation of working time; regulation of dismissal; the law governing employee representation; and the law governing industrial action. Altogether, our index consists of 40 individual variables.<sup>24</sup>

## 5. Legal evolution in the norms governing the business enterprise: evidence from panel data

The construction of longitudinal indices on the legal protection of three key constituencies in public firms allows us to explore the way in which legal change varies across different countries, and in different areas of law, in our dataset. In this section, we present an overview of the trends in the results by category of law (shareholder, creditor, and employee protection, respectively) before proceeding to consider overall trends towards convergence or divergence.

### 5.1 Shareholder protection

As a first presentation of the shareholder protection data, we simply aggregate all 60 (sub-) variables from our shareholder protection index for each of the countries and represent it graphically, shown in Figure 1:

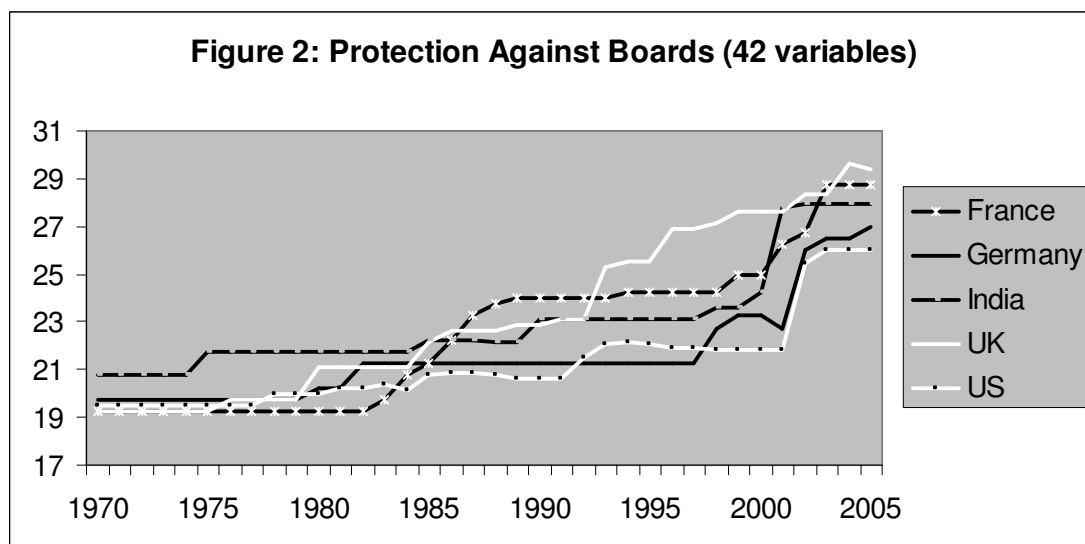


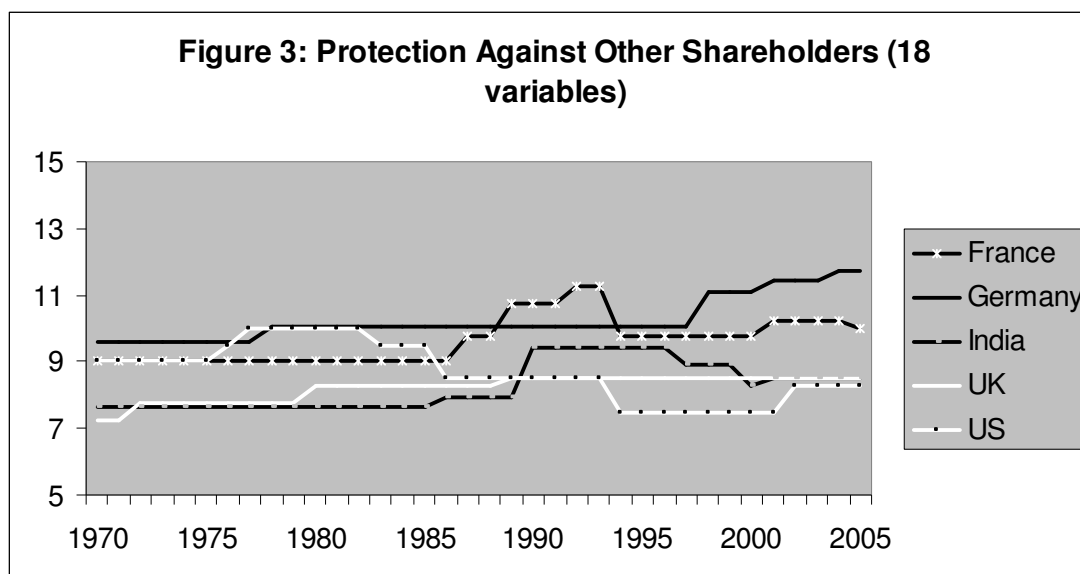
Two general points are worth making regarding the data presented in Figure 1.<sup>25</sup> First, each of the lines exhibits an upward movement over time, indicating that the aggregate value of the indices increased with time. In particular, there is a considerable enhancement in shareholder protection during the period 2002-

2005. This general pattern is remarkably consistent across both civil and common law countries.

Secondly, most of the lines have plateaus and steps, implying that law often does not change gradually. On the one hand, there may be years when a particular part of the law, such as the protection of shareholders, does not change at all. On the other, a law reform or a bundle of court decisions, may lead to amendments of various aspects of shareholder protection resulting in a sharp rise in the value of an index in a short while. Interestingly, this pattern does of change not appear to be significantly different across the various countries in our sample. Were common law more adaptable than civil law in the way suggested by the adaptability theory, we would expect to see differences in the pattern of change over time. Specifically, we might expect to see more incremental, and frequent, change in the common law countries, and less frequent—and more significant—changes in the civilian jurisdictions. The data do not appear to support this prediction, however.

Another type of comparison involves disaggregating the overall index into two subsets. First, those rules offering outside shareholders protection against boards—and hence functioning to mitigate managerial agency costs, and second, those rules offering minority shareholders protection against overreaching by majority shareholders—that is, functioning to mitigate shareholder-shareholder agency costs. These are presented in Figures 2 and 3 respectively:<sup>26</sup>





Two striking patterns emerge. First, it is conspicuous that in all sample countries the protection of shareholders against boards has increased considerably, whereas protection against other shareholders has not changed much.<sup>27</sup> Secondly, there is little aggregate difference in the levels of protection, as measured by our indices, across the sample countries.

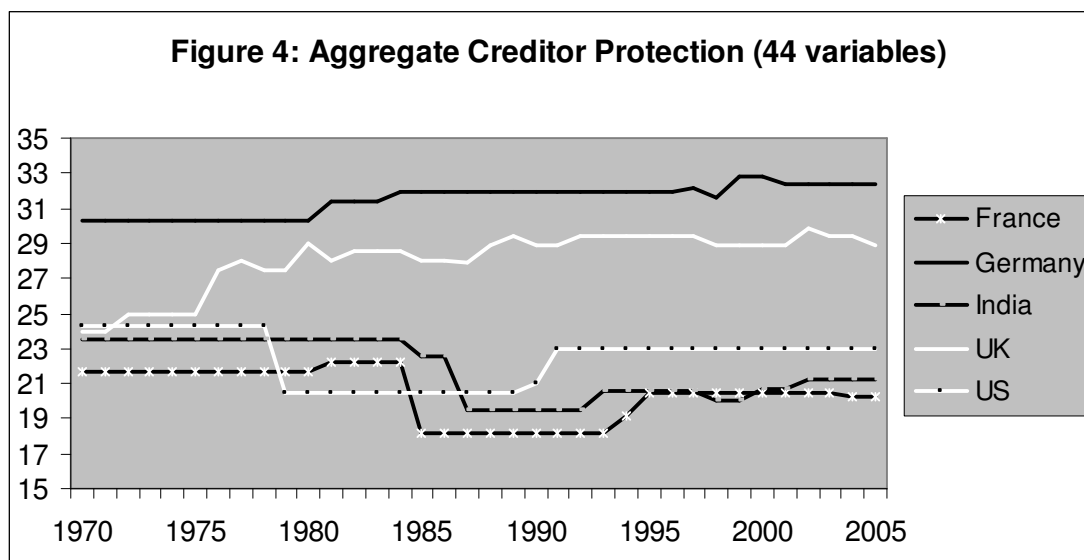
If legal rules were functionally adapted to the environment in which they operate, we would expect to find that rules protecting minority shareholders against majority overreaching would be stronger in jurisdictions in which share ownership was concentrated in the hands of blockholders, and that rules protecting shareholders against boards would receive more emphasis in jurisdictions in which dispersed ownership is the norm. Whilst it is true that India, France and Germany—where blockholder ownership is prevalent—all exhibit somewhat higher levels of minority-majority shareholder protection than do the US and UK (Figure 3), the difference is at best modest. Nor does the converse proposition hold: the US and UK do not seem to have generally stronger protection against boards—indeed, the US was, on our measures, weaker in this regard until the passing of the Sarbanes-Oxley Act in 2002. This seems to run contrary to the claim in the law and finance literature that strong protection against boards of directors is associated with dispersed stock ownership (La Porta *et al*, 1997, 1998).

Two further explanations for the general increase in protection against boards, but not against majorities, are as follows. The first is a *transition* account: that as blockholder countries seek to establish dispersed ownership regimes, their regulatory regimes will come to focus more on managerial agency costs and less on majority-minority agency costs. The second is an *interest group resistance*

story: that, in response to calls for improvements in corporate governance, those interest groups capturing rents under existing arrangements lobby against changes that will affect their private interests. We might expect interest groups openly associated with corporate law (such as managers) to be less successful in pursuing their agenda than those who obtain their rents through opaque control arrangements with public companies (such as controlling shareholders). On this view, we would expect not to see measures aimed at controlling the power of majority shareholders in regimes where blockholder ownership prevails.<sup>28</sup>

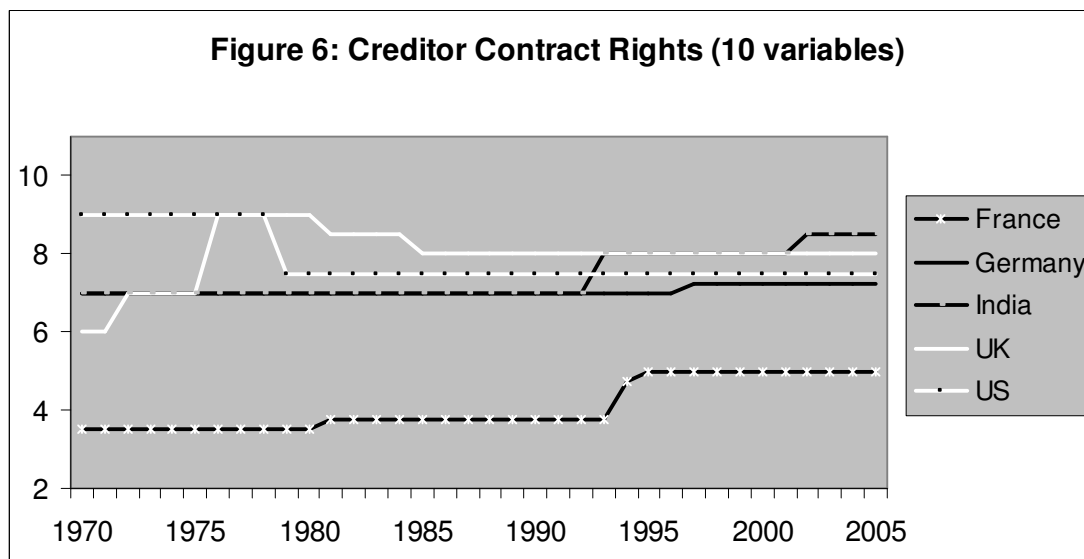
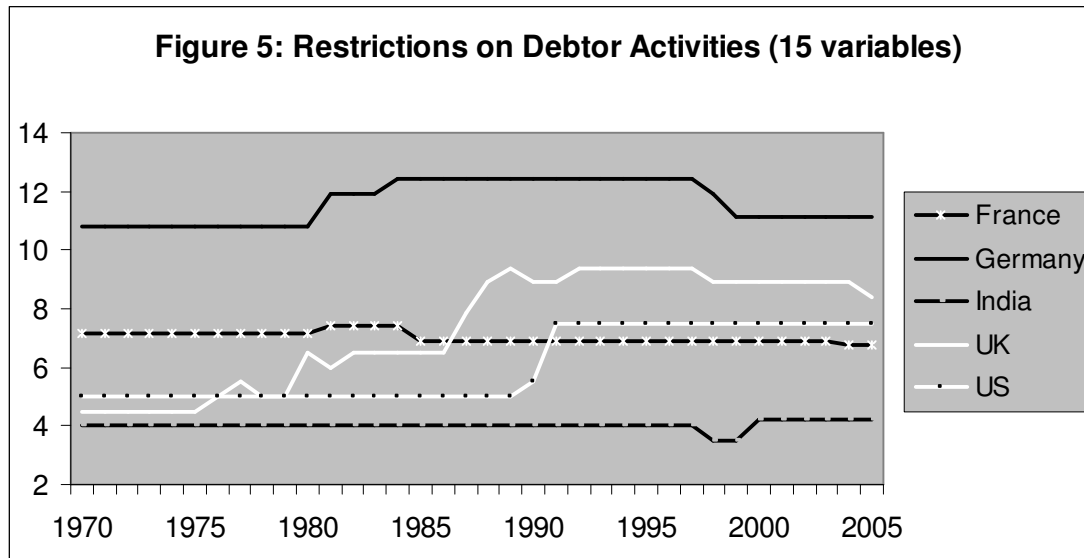
## 5.2 *Creditor protection*

Following the same pattern as for the presentation of the results regarding shareholder protection, Figure 4 presents the evolution over time of the aggregate measure for creditor rights. The overall pattern looks quite different to that identified for shareholder protection, with no clear overall trend discernible. Nevertheless, there are two common implications for the law and finance hypotheses. First, no clear pattern of difference emerges in Figure 4 between the overall scores of civil and common law jurisdictions. And secondly, the nature of change over time again looks remarkably similar across the common law/civil law divide. These points are well-illustrated by the fact that two of the most significant changes—the introduction of new bankruptcy laws in the US in 1978 and in France in 1985—both were implemented as comprehensive codes, and both reduced creditors’ protection substantially, yet occurred in systems from quite different legal origins.

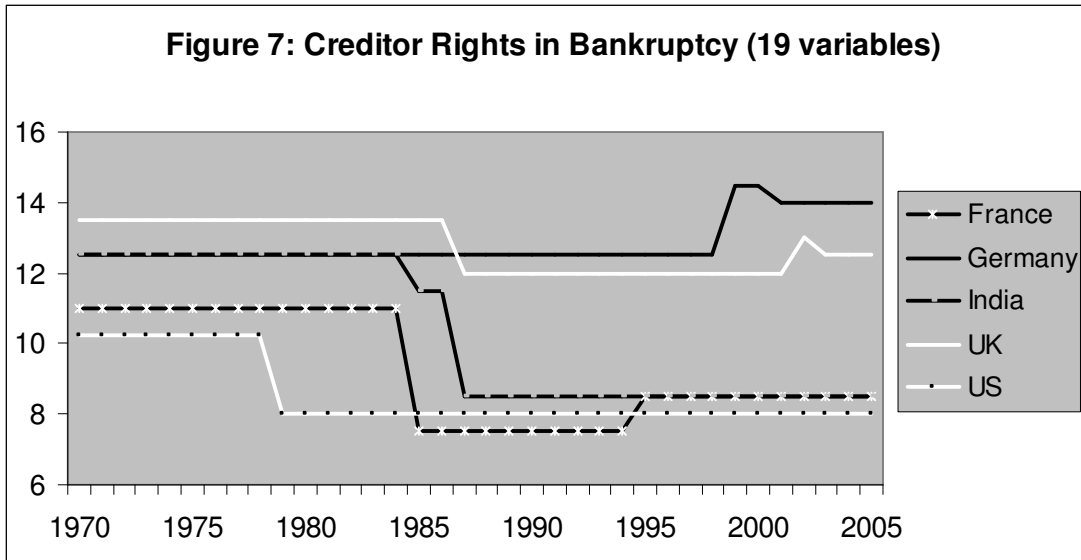


In order to explore further whether there are differences in regulatory style between different countries in our sample group, the creditor protection index is decomposed into three constituent measures. These represent, respectively: (i)

rules which take effect by limiting the freedom of the debtor firm to engage in activities that may harm creditors; (ii) rules which take effect by facilitating creditor contracting for greater protection; and (iii) rules which take effect by facilitating creditor power in bankruptcy proceedings. These data are presented in Figures 5-7, respectively.





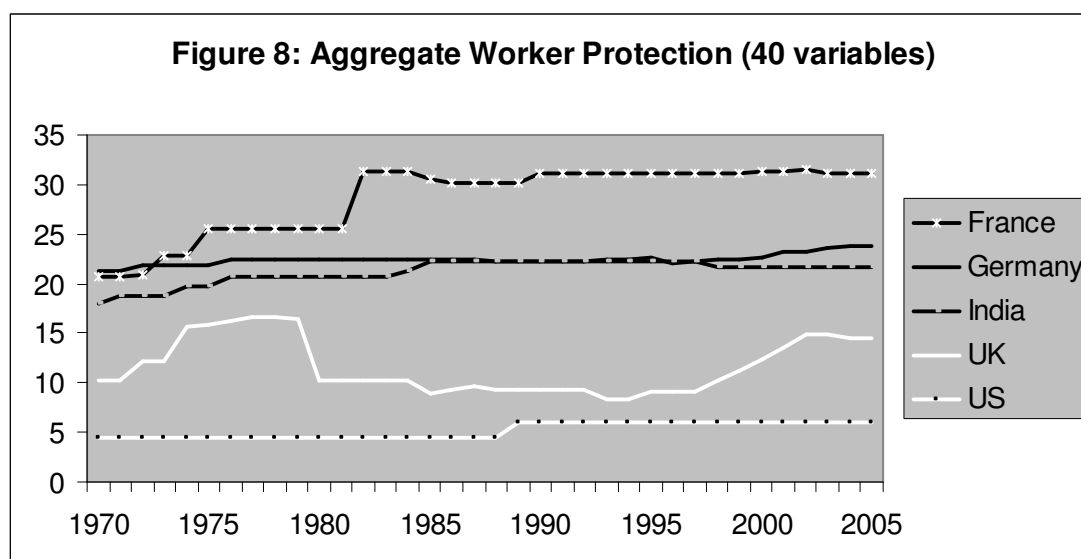


Disaggregation of creditor rights into these separate sub-indices reveals that variation in some aspects of creditor protection during our time period corresponds very weakly, if at all, to the civil/common law distinction. In particular, Figure 5 suggests that whilst Germany and France (the civil law countries in our sample) had greater creditor-protective mandatory restrictions on debtor conduct at the beginning of our period of study, this pattern no longer held by the end, with the advent of greater liabilities on company directors in the UK and US.<sup>29</sup> Whilst Figure 6 might be interpreted as suggesting that creditor contract rights have tended to be stronger in common law than in our civilian jurisdictions, a more natural interpretation is that France is simply an outlier. To the extent that these patterns of difference cut in opposite directions, they tend to cancel each other out and so are not revealed in the aggregate picture. The disjunct between legal origins and creditor rights is even more stark as respects bankruptcy law (Figure 7) does not appear to track legal origin. This is consistent with other recent law and finance work (Djankov *et al*, 2006). The bankruptcy sub-index is reflected in the aggregate index results (Figure 4), partly because of the complementary nature of the other two sub-indices, and partly because relatively more bankruptcy-related variables are coded.

### 5.3 Labour regulation

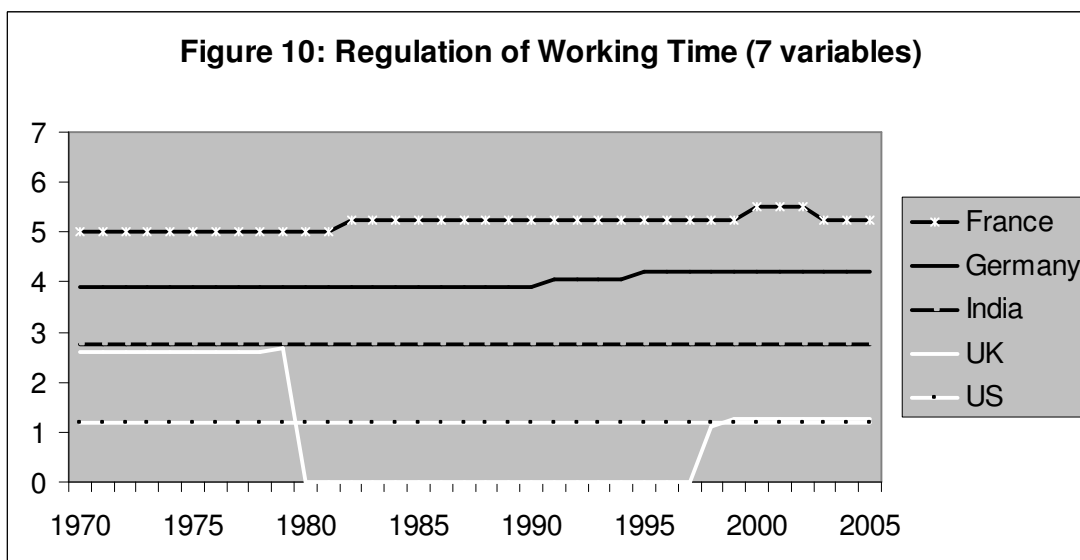
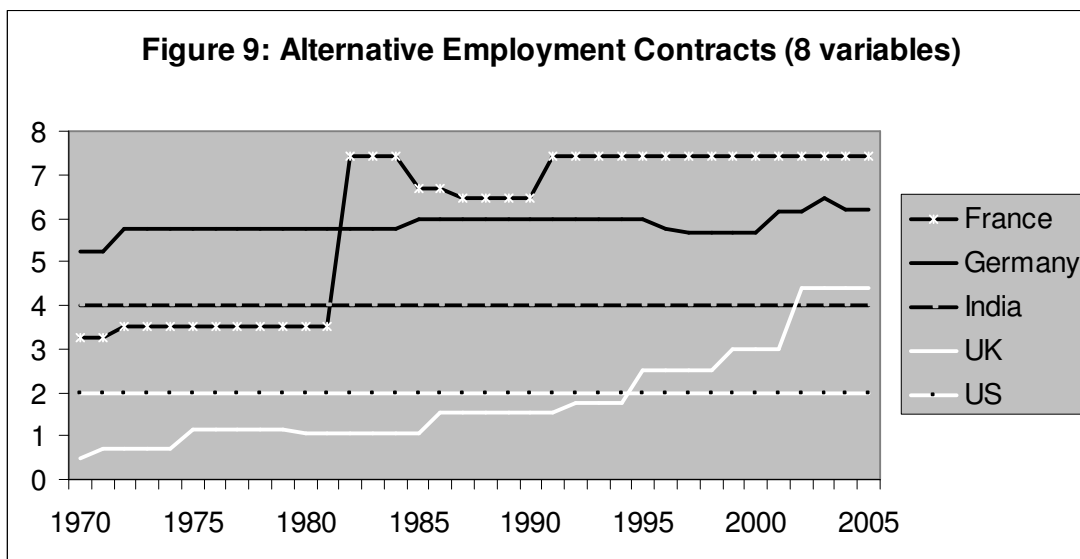
Figure 8 reports our findings on the evolution of labour law regulation over time. At first sight, the aggregate picture is strikingly different from that for the shareholder and creditor rights indices, since a clear divergence can be seen between the two civil law systems, France and Germany, and the three others, although the gap with India is much smaller than it is with the UK and, above all, the US. Looking beyond the common law/civil law divide, we can see that three of the systems - Germany, the US and India - have experienced relatively

little change, with Germany changing slowly and incrementally for the most part, and both India and the US hardly at all. By contrast, both the UK and France have seen very considerable change over this period, although in opposite directions. The UK, starting from a position of substantial protection for labour interests in the 1970s (although still below the aggregate level in France, Germany and India), underwent a rapid decline in the intensity of regulation during the 1980s and early 1990s, with a small revival from the late 1990s. The events triggering these changes were political: the election of a Conservative government committed to a policy of labour market deregulation in 1979, and the return to office in 1997 of a Labour government which ended the UK's opt-out to the EU Social Charter and proceeded to incorporate a large body of EU labour law into the UK system, as well as legislating on certain other matters. In France, the election of the socialist government in 1981 led to a series of labour law reforms, the *lois Auroux*, which were enacted in 1982 and affected a wide range of issues in both individual and collective labour law. Since that time, French labour law has tracked the changing political fortunes of the main parties, with some reduction in protection between 1986 and 1990 and more recently from 2003 when right-wing parties had a clear legislative majority; but this retrenchment has not led to a return to pre-1982 levels of labour protection.



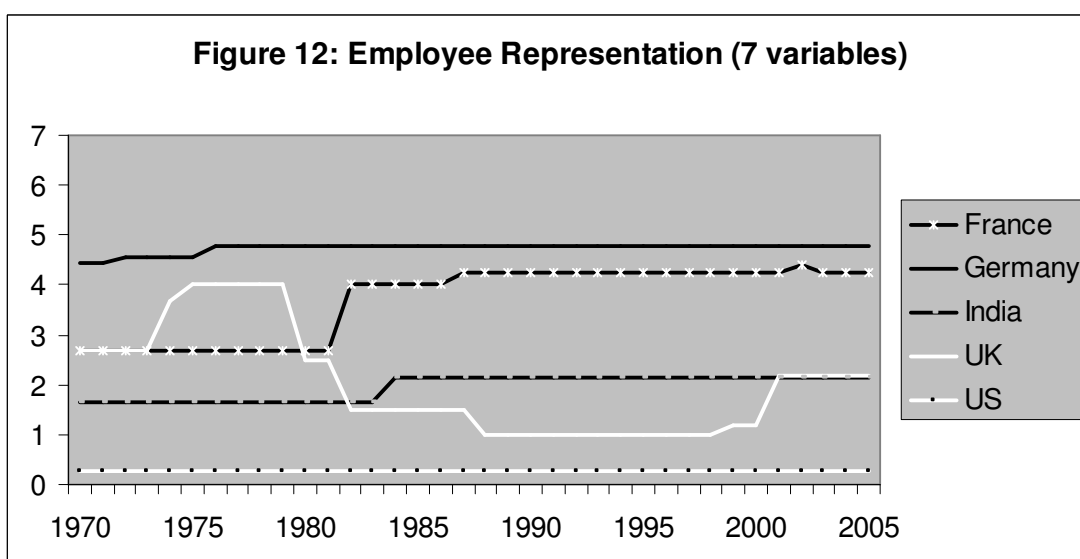
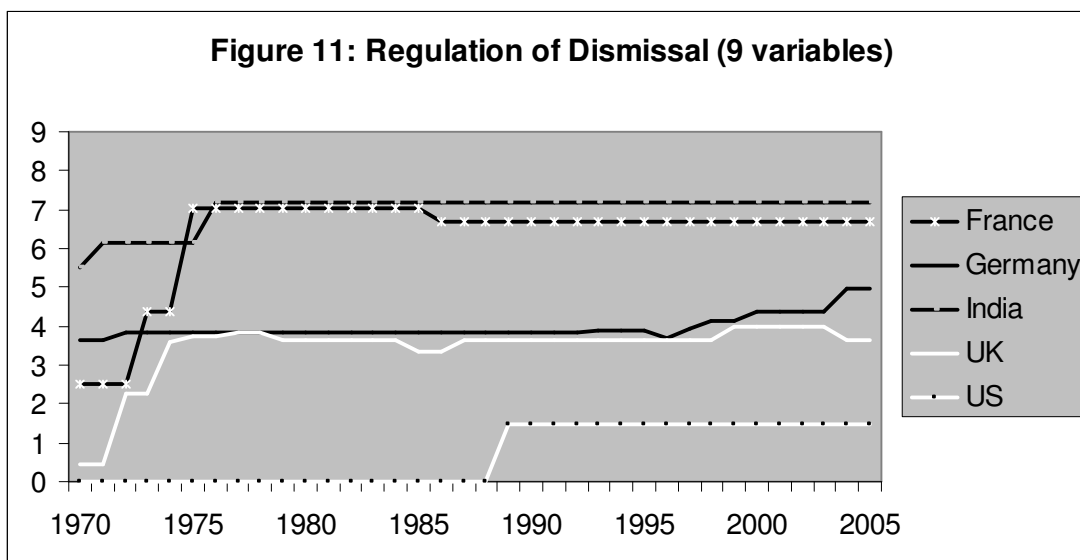
A fuller picture can be obtained from figures 9-14 which summarise the results from the five sub-indices. The US is an outlier here: it has weak levels of regulation in each of the five categories. This is a reflection of the weakness of basic laws governing working time (derived from federal legislation of the 1930s which has not been effectively updated since); a rigid and (for several decades) unreformed system of industrial relations law which neither provides

for compulsory worker representation at workplace level in the manner of continental European codetermination, nor for a meaningful right to strike; and the employment at will rule, which preserves managerial prerogative in the area of discipline and dismissal. French labour law, conversely, is strong across all categories, and in particular with regard to the control of working time and regulation of alternative employment contracts. German labour law is particularly strong on the issue of employee representation, thanks to its codetermination laws, which are stronger than those of France on this point.



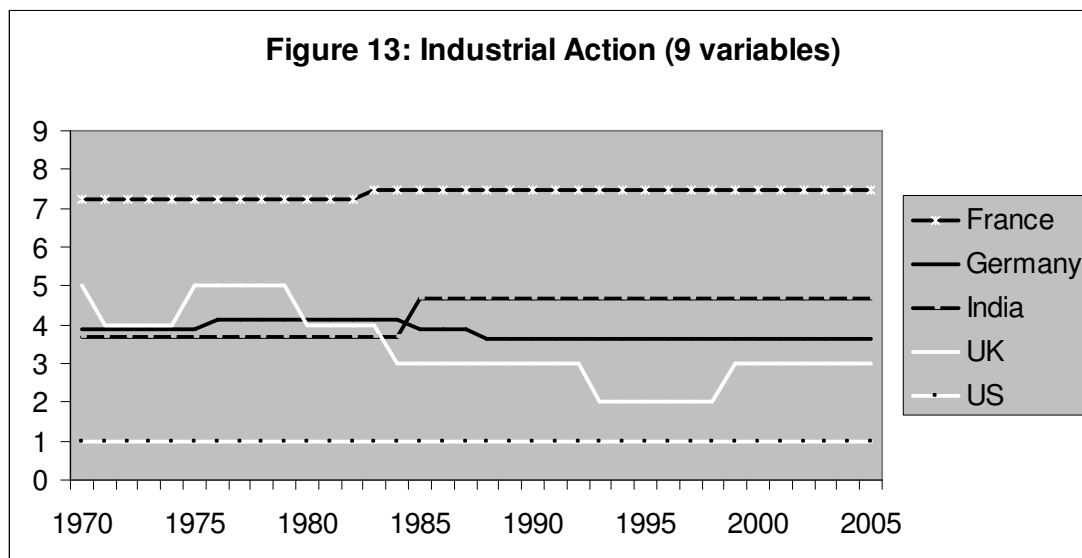
The breaking down of the index by categories is particularly revealing for the UK. Where labour law was strong in the 1970s, in respect of employee representation (at a time when the closed shop was widely enforced, although there was no codetermination and few mandatory rules on information and

consultation), it remained weak even in 2005, almost a decade after the election of a Labour government; and where it was weak in the 1970s, in relation to the control of alternative employment contracts, it was strong by 2005, as a result of EU directives on part-time and fixed-term employment which have been implemented since 1997. Working time controls, which were strong in the 1970s as a result of legal mechanisms for (in effect) extending the terms of multi-employer collective bargaining, disappeared from view in the 1980s as that system of legal support for sectoral collective agreements was dismantled; the implementation in 1998 of the EU Working Time Directive only partially redressed the balance. UK dismissal law has been relatively stable throughout the period from the early 1970s when it was first introduced; at the start of the 2000s, it was more or less aligned with German law, but since then has declined in significance at the same time as German law was being strengthened.



The centrepiece of India's labour law is legislation passed in the 1940s in the immediate aftermath of independence, the Industrial Disputes Act 1947. This provides a framework for collective bargaining and industrial action. Working time controls derives from factories legislation based on the British model. India's unfair dismissal laws were introduced in the 1970s and contain a concept of liability for 'retrenchment' which sets a high formal standard of protection by international standards. The laws reported for India are, for the most part, federal laws; we also report some state-level variations for the more heavily industrialized states (such as Maharashtra) and the extensive case law which plays a significant role in the Indian system.

India's labour law can be seen to have been influenced by the British model inherited on independence, as in the case of its factories legislation, but it has also departed from it in significant respects. Whereas the pre-1979 model of collective labour law in Britain stressed the role of voluntary trade union organization within a framework of 'immunities' from civil liability in relation to the conduct of collective bargaining and of industrial action, India's system, under the Act of 1947, used direct legal regulation of collective relations and of basic labour standards to set a floor of rights. India's dismissal law is also, on the face of it, far more protective than Britain's. The deregulation of the labour market which took place in Britain from the early 1980s onwards appears to have had no influence on Indian practice, although there is currently a major political debate about the level of employment protection provided by the law. In general, however, it is difficult to discern a strong influence of common law origin on India's post-war labour law evolution.



Nor is there much evidence of a shared legal origin effect in the cases of the UK and the USA. The US system of collective labour relations is entirely distinct from the British one, as it depends on a mechanism of legal certification of unions as bargaining agents which has no parallel in the British tradition. Although the UK has had laws for the compulsory recognition of trade unions between 1971 and 1979 and again from 2001, they operate as an adjunct to what remains, essentially, a voluntary system. In the short period, between 1971 and 1974, when British industrial relations legislation borrowed directly from the American model, the transplantation worked badly. At the level of individual employment law, the two systems diverged as long ago as the start of the twentieth century when most American states adopted the employment at will rule (or presumption), while British courts were inserting customary notice periods into contracts of employment and beginning to develop a set of common law implied terms governing the employment relationship. The enactment of unfair dismissal law in the 1970s set the systems further apart, even before the UK's membership of the European Union (as it became) provided a further impetus to their divergence.

Similar points may be made about France and Germany. Firstly, their proximity in aggregate terms conceals differences at the level of the sub-indices. On industrial action law and dismissal law, they are not especially close. They are closer together on regulation of the form of the employment contract and controls over working time. Their respective laws on employee representation are quite closely aligned, but within this category there are significant differences between them: German codetermination rights are more extensive than their French equivalents.

## **6. Convergence or persistence of diversity?**

In addition to allowing for examination of the ways in which the relevant legal rules in our sample countries have changed over time, our indices also allow us to compare trends in the data to see whether, and to what extent, the legal protection of shareholders, creditors, and employees in our sample countries has converged over time, or whether differences have persisted.

We employ two different methods to test for convergence. The first approach is to compare simply the differences in the variation in the aggregate scores, for example by plotting coefficients of variation in the mean of the aggregate scores. To the extent that the overall index gives us a measure of the functional protection of investors, this approach will reflect *functional convergence*. However, the use, in some of the indices, of ordinal variables and the simple

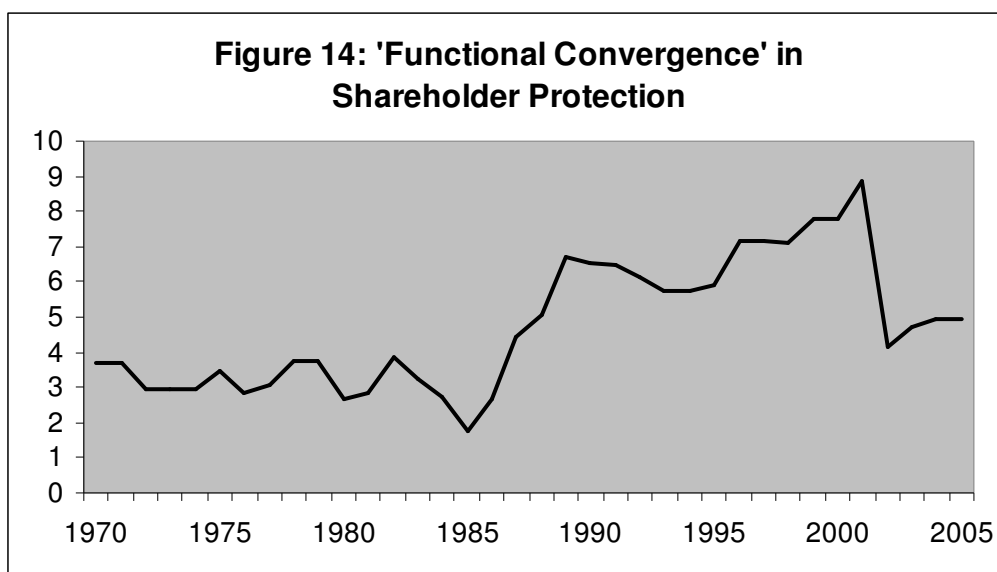
aggregation of results to comprise the indices mean that considerable caution should be exercised in the interpretation of results based on differences in aggregate scores.

A second approach is to measure differences across each individual variable. To do this, we calculated the differences between each variable in the law of a particular legal system and the same variable in the law of the other countries. Subsequently, the absolute values of these differences were added together. This measure, by focusing on differences between individual variables, gives an indication of *formal convergence*.<sup>30</sup> Whilst we can be reasonably confident that this measure does track differences in the formal law, complementarities and/or substitution effects between the impact of individual variables mean that it is unwise to infer any implications for change (or lack of) in the economy at large.

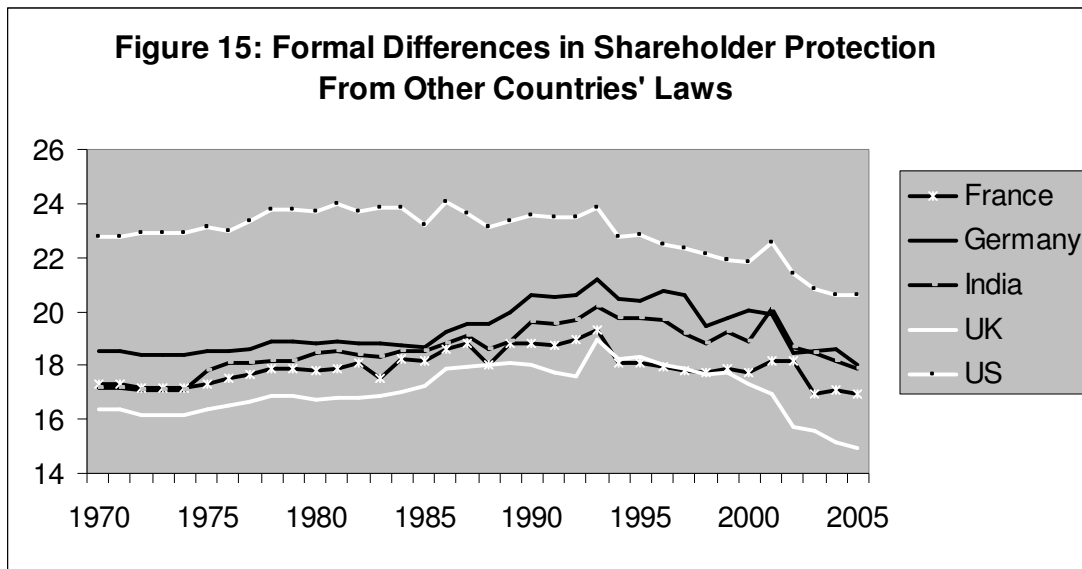
As in previous sections, we consider each of the sets of indices in turn.

### 6.1 Shareholder protection

Figure 14 tracks the evolution of coefficients of variation for the aggregate shareholder protection index scores in our five sample countries over 1970-2005. Whilst, as we have seen from Figure 1, the overall trend is towards greater shareholder protection, the variation as between the aggregate scores has actually increased over time. To the extent that overall indices capture the functional protection of shareholders, this implies that functional convergence has not (yet) occurred, although following the enactment of the Sarbanes-Oxley Act in 2002, there has been a sharp trend towards this.



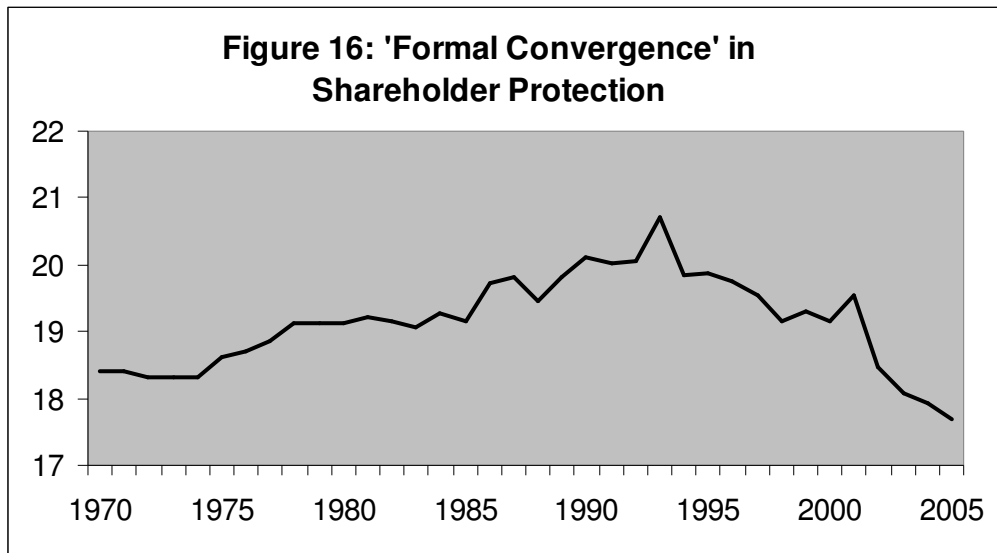
Turning to measures that capture variation in individual components of the index, Figure 15 presents the extent to which the scores for each country are different from each of the others. That is, for each country-year, it plots the sums of the absolute differences of each country's scores for each component variable from the scores for the respective component variables in each other country. The lower the score accorded to a country, the more similar the law, as represented in the shareholder protection index, is to the laws of each of the other countries.



Interestingly, Figure 15 suggests that, for the time period under consideration, US law has been something of an outlier as regards shareholder protection. As the US curve has been falling over time and especially since 2000, this may be thought to indicate a limited degree of ‘Americanisation’ of the law of the other countries. Indeed, our data suggest that, in some respect, the law of the other countries has become more similar to that of the US.<sup>31</sup> Yet in other cases it is US law that has changed to become more similar to those of other countries, especially as a result of the Sarbanes-Oxley Act of 2002. Also interesting is the fact that UK law has always been the least different from all the other countries than the law of the other countries. A possible explanation for this could be that the UK is both a member of the common-law and a member of the European Union, and thus influences and/or absorbs different legal traditions. Finally, it is remarkable that the curves of the five countries hardly ever overlap with each other. In other words, the rank-ordering of the countries’ degree of formal convergence is fairly stable. This may indicate that the degree to which a country takes foreign ideas into account is a deep factor of legal culture which does not change considerably over time.



The right-downward slant of the lines in Figure 14 imply that the relevant laws of the five countries have been formally converging towards the end of our time period. This trend is even clearer from Figure 16, which plots the overall mean of the sums of differences represented on Figure 14, giving an indication of the overall degree of *formal convergence* taking place during the time period.

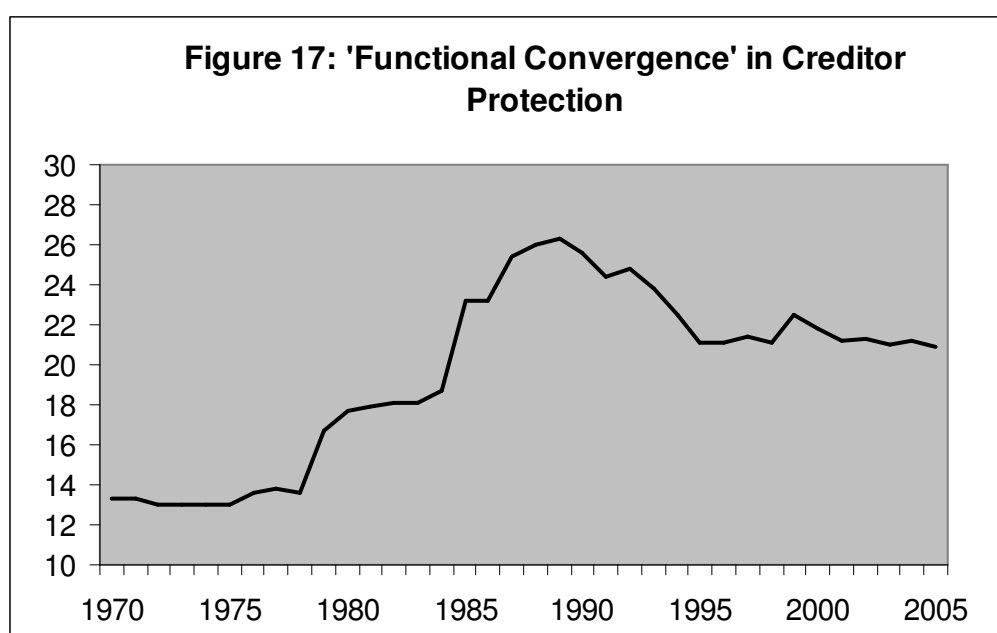


Two points in time are particularly important: 1993/1994 and 2001/2002. During 1993/1994, France made its law more flexible, whereas in the UK the Cadbury Code of Best Practice was applied. This led to a divergence, but in the succeeding years the other countries followed the UK model and enacted similar corporate governance codes. The convergence has increased significantly since the year 2001/2002. Following the burst of the dot-com bubble and the string of corporate scandals at the beginning of the century in many parts of the world, all five countries changed the law in a similar pattern. Consequently, Figure 16 implies that globalisation in the form of shareholder protection is indeed taking place.

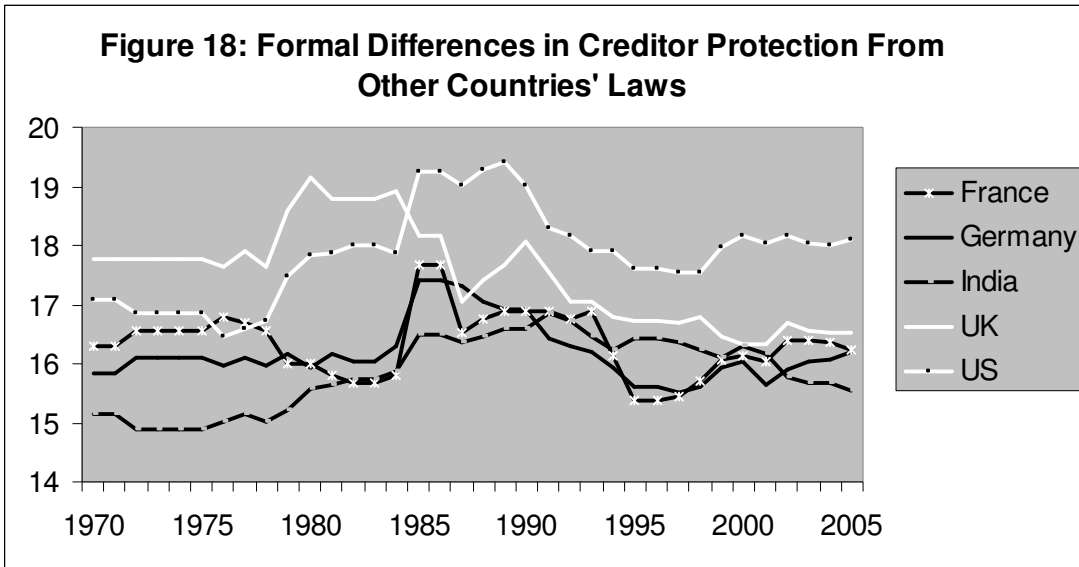
It is particularly striking to note that differences in aggregate scores (functional convergence) do not track absolute differences in individual scores (formal convergence). In short, there appears to have been rather less functional than formal convergence. This is different from the conclusion of Gilson, who argues that functional convergence is likelier than formal convergence, since while the underlying problems are similar, there are too many obstacles in the way of formal harmonisation (Gilson 2001). A possible explanation of our result is that – in contrast to Gilson’s suggestion – it is quite easy for a country to follow the current ‘fads’ in corporate governance by just copying some provisions of the law of other countries.

## 6.2 Creditor protection

Figure 17 tracks the evolution of coefficients of variation for the aggregate creditor protection index scores in our five sample countries over 1970-2005. Figure 4, showing overall scores, indicated no general pattern of evolution, and was suggestive that divergence between countries' creditor protections was actually increasing over time. This perception is reinforced by Figure 17.



Turning to our measures of differences in the formal legal rules, Figure 18 presents the extent to which the creditor protection scores for each country are different from each of the others.



As with shareholder rights (Figure 14, above), the US is something of an outlier for much of the period as regards creditor rights. In particular, the introduction of the US Bankruptcy Code in 1978, with the ‘debtor in possession’ reorganisation under Chapter 11, rendered US law’s treatment of creditors significantly different from those of the other countries in our sample. Another important event driving divergence was the adoption in 1985 of an employee-oriented French bankruptcy law.

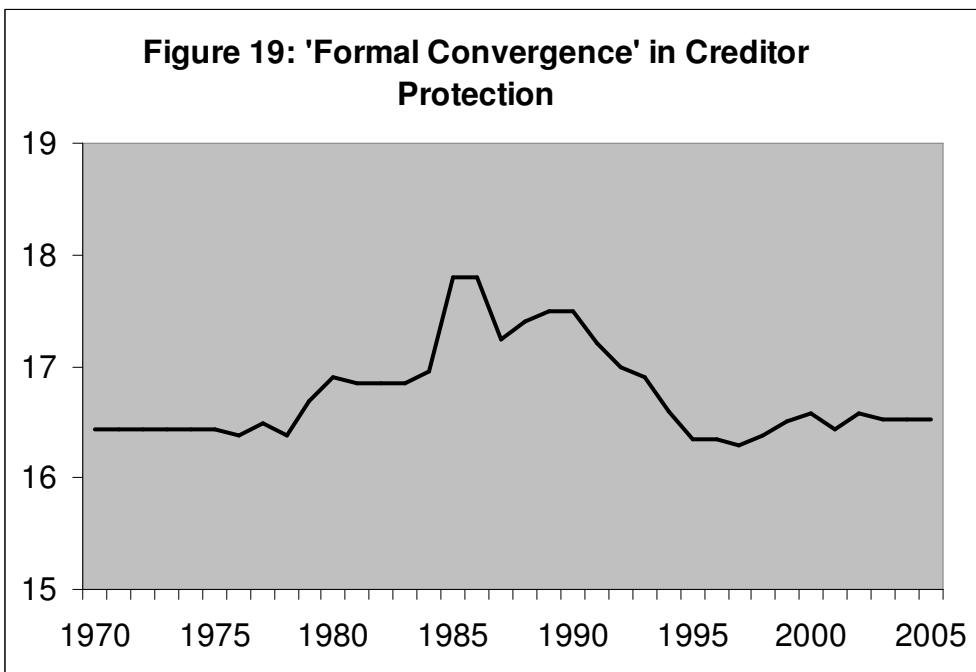


Figure 19 presents the overall means of the differences between countries’ formal laws on creditor protection. Consistently with Figures 12 and 13, it

suggests that there was a period of greater divergence during the late 1970s and 1980s, which has since been followed by a general pattern of convergence, although the overall differences remain, at the end of the period, as large as they were at the beginning.

### 6.3 Labour regulation

Figures 20 and 21, measuring the coefficients of variation in the aggregate labour regulation scores and overall means of the differences between countries' formal labour laws respectively, tell a similar story to that for creditor protection, namely one of divergence in the early 1980s being followed by slow process of convergence since then. However, the overall difference between the five systems is greater in the case of labour regulation than it is in the case of creditor protection.

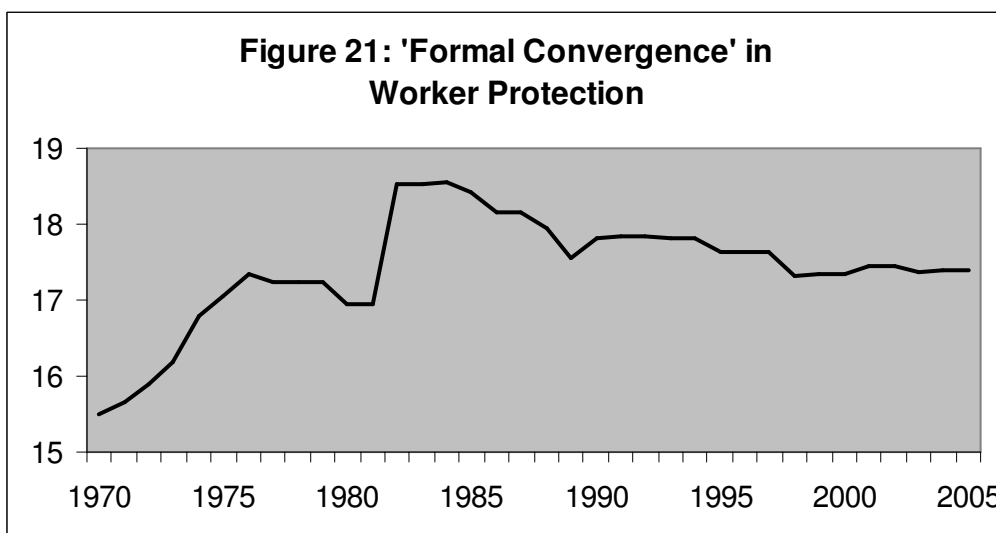
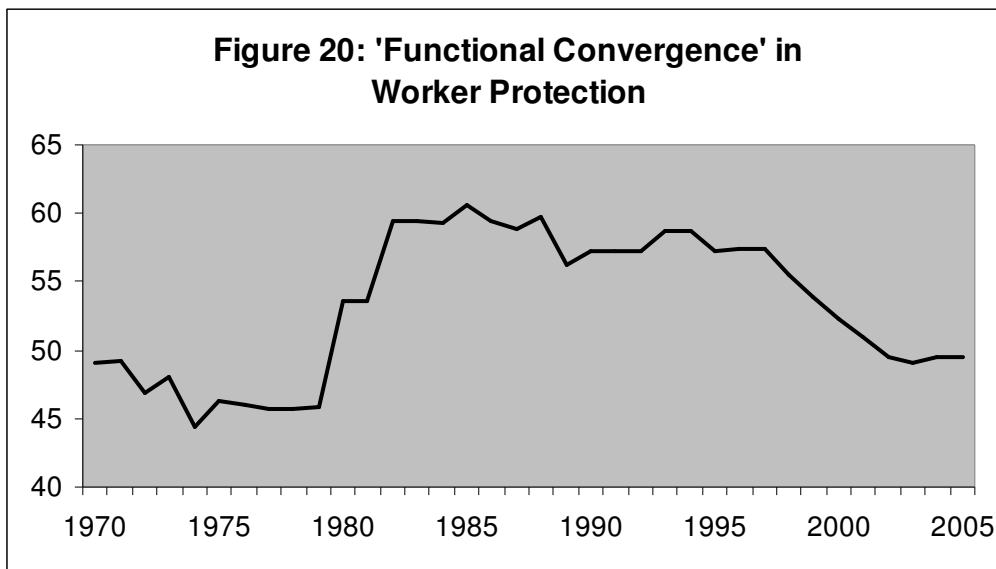
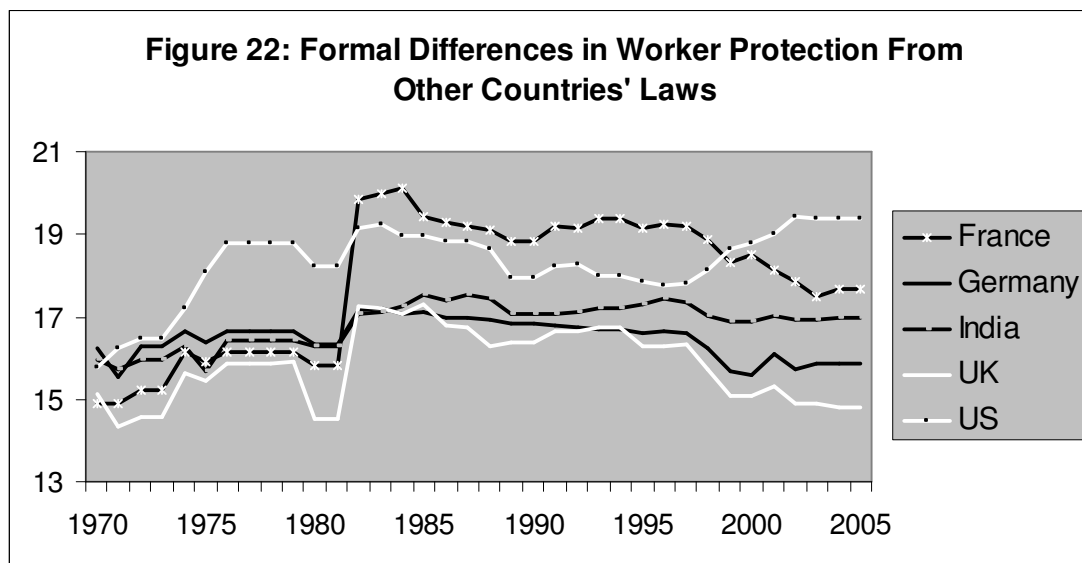


Figure 22 shows that, again as with creditor protection, the US is an outlier, although for parts of the period under review, French law was the most divergent from those of the other systems. The US system stands out for its lack of labour regulation across the whole range of individual and collective labour law issues. Since the early 2000s, some reduction in the levels of protection in France has seen it converging again with the rest. The UK's position as the system to which the others are, as a group, most closely converging may, as in the case of shareholder protection, be explained by its openness to both US and EU influences.



## 7. Conclusions

In this paper we have presented the first findings from a new index of legal change which measures shifts in shareholder, creditor and labour protection in five countries (the UK, the USA, Germany, France and India) over a 35-year period (1970-2005). Our index differs from those of La Porta et al. ('LLSV') in its time-series approach and in the depth of its analysis, with a wide range of regulatory materials being considered, including case law and functional equivalents to legislation such as self-regulatory codes and collective agreements. Our index is also wider than most of its predecessors in terms of the range of legal and other regulatory variables which have been coded. In addition we have sought to capture the role of default rules in addition to mandatory norms.

The studies carried out by LLSV coded for a very large number range of countries, providing breadth of overall analysis. Our current study, in focusing on just five countries and looking in detail at the composition of the indices in

each case, has been able to provide a fuller picture of the dynamics of legal change in those systems. Although our sample is small it includes some important country-level cases, whose experience might be expected to throw light on the role of law in relation to economic development: three ‘parent’ systems, the world’s most developed economy, and its largest democracy.

The two core claims associated with the empirical economic analysis of law over the past decade are, firstly, that the quality of law matters to economic development, and financial development in particular, and, secondly, that the origin of a given country’s legal system in one of the principal legal families – the English common law, and French and German civil law – influences the approach to regulation in that country and the type of legal rules that it adopts for dealing with the business enterprise. In this paper we have been able, in a first descriptive account of our index, to throw light on the dynamics of legal change, and to throw light on the second of these two claims, the legal origin hypothesis.

The main results are summarised in the Table 1. Our shareholder index shows that there has been considerable change in the law governing shareholder rights over the past three decades, with a high degree of convergence in recent years. Contrary to the legal origin hypothesis, it suggests that civil law systems, along with those of the common law, are moving in the direction of according shareholders greater protection. There is also no apparent common law/civil law divide in the case of creditor protection, but there is in the aggregate score for labour protection. However, when we delve more deeply into the results for the labour regulation index, and examine the scores for the sub-indices which make up the index as a whole, we see considerable divergence *within* legal families – between the US, the UK and India, on the one hand, and Germany and France on the other. Nor, when we examine the institutional history of the five countries in more detail, can we identify a direct influence for common law or civil law legal origin as a driver of change. The influence of UK labour law on Indian practice, for example, is more limited than would expect to be the case if the claims made by the legal origin literature about the effects of colonization on legal diffusion were correct. There would seem to be more powerful influences than legal origin on the diffusion of legal rules: these include the role of transnational standards setting processes (in particular via EU law) and the emergence of an international consensus around ideas of what constitutes best practice (as in the case of shareholder-orientated corporate governance codes).

**Table 1. Main trends in shareholder, creditor and worker protection in five countries, 1970-2005**

	<b>Shareholder Protection</b>	<b>Creditor Protection</b>	<b>Worker Protection</b>
<i>Strongest protection</i>	UK, Germany, France	UK, Germany	Germany, France
<i>Weakest protection</i>	US	France and India	US
<i>Direction of change</i>	improved protection in all countries	‘uneven’ development in all countries	improved protection in most countries (but ‘uneven’ in UK)
<i>Pace of change</i>	often incremental steps in all countries	some leaps in most countries	some leaps in UK and France; incremental steps in other countries
<i>Most ‘mainstream country/-ies’</i>	UK	Germany, India	UK, Germany
<i>Most ‘eccentric country/-ies’</i>	US	US	US, France
<i>‘Functional convergence’</i>	Divergence until 2001; now convergence	Divergence until 1985; now slight convergence	Divergence until 1983; now slight convergence
<i>‘Formal convergence’</i>	Divergence until 1993; now convergence	Divergence until 1985; now slight convergence	Divergence until 1983; now slight convergence

Two main sets of explanations have been offered for the legal origin effect claimed by LLSV: an ‘adaptability’ channel, according to which the processes of the common law are better suited than those of the civil law to adjusting the law to meet economic needs; and a ‘political’ channel according to which the principal difference between the common law and civil law relates to the opportunities provided in the different systems for rent-seeking. Both of these views posits a ‘strong’ legal origin effect and predicts that common law systems are more likely to produce efficient rules than their civilian counterparts. In this paper we have considered a third explanation, an ‘institutional channel’ in

which differences between common law and civil law systems are the result of complementarities between legal and economic institutions at the level of national systems. In this approach, diversity between common law and civil law systems has deep historical roots, in the original conditions of industrialisation in the ‘parent systems’ of western Europe. Thanks to the subsequent effects of the diffusion of legal norms from those parent systems, a ‘weak’ legal origin effect may still account for part of the observed variation in legal norms across systems. However, this effect needs to be considered alongside other more recent influences including the impact of transnational standard setting in company, insolvency and labour law. Nor is there any assumption here that common law institutions are better fitted to market-based economic systems than those of the civil law.

The descriptive account which we have provided of our datasets casts some light on these theoretical claims. We have observed that in the last 10-15 years there has been some convergence of the law. This concerns the legal protection of shareholders, as well as the protection of creditors and the regulation of labour. In particular, there is tendency towards convergence in shareholder protection law; this suggests that if there is a legal origin effect, it is not a sufficiently strong constraint to prevent civilian systems from adopting stronger shareholder protection measures. Further, with all indices broken down into their component parts, we observe a clear common law/civil law divide only in respect of certain groups of variables. There is little evidence of a strong centrifugal force operating between systems in the same ‘legal family’. Our findings are compatible with the ‘institutional’ channel approach to understanding the relationship between legal change and economic development.<sup>32</sup>



## Notes

<sup>1</sup> Companion papers explore the first approach, in the context of the relationships between the shareholder protection indices and stock market development (Fagernäs *et al.*, 2008; Armour *et al.*, 2008) and between the labour regulation index and a number of labour market indicators, including employment growth and productivity growth (Deakin and Sarkar, 2008).

<sup>2</sup> It may be noted that from an econometric point of view the main purpose of legal origin was to act as an instrumental variable in order to address the problem of endogeneity, or in other words the problem that the direction of causation between law and economic variables was not clear (see La Porta *et al.* 2006: 27). However, LSSV now take the view that legal origin cannot be regarded as a good instrument for the effects of legal rules, since it is likely to influence economic outcomes through a variety of mechanisms, of which the content of legal rules is just one. Instead, legal origin, they suggest, should simply be regarded as an exogenous or causal variable in its own right (La Porta *et al.*, 2008: 298), a point we return to in our discussion, below (see sections 2.2 and 3.3).

<sup>3</sup> For example, the development of deep and liquid securities markets in both the US (Coffee, 2001) and the UK (Cheffins, 2001) *preceded* the development of ‘high quality’ investor protection laws. Indeed, it was precisely the development of such securities markets that generated the constituencies that called for reform.

<sup>4</sup> In this context, an instrumental variable is one that is used to clarify the direction of causation in the relationship between the main variables of interest. An instrumental variable should be linked in some way to the independent variable but must not be endogenous to (in the sense of being causally influenced by) the dependent one. Legal origin, if defined to refer to the common law or civil law foundation of a given legal system, cannot be the *consequence* of economic factors, because in the case of virtually all countries it was imposed through an external event such as conquest or colonization, or was adopted at a point prior to industrialisation. On this basis, legal origin dummies were used in the early law and finance literature to show that it was law which mattered to the economy, rather than vice versa. However, a variable cannot be used as an effective instrument if it might plausibly have influenced the dependent variable through means other than the independent variable. For this reason, La Porta *et al.* no longer consider legal origin to be a good instrument for the content or quality of legal rules: see our discussion in the text, *infra*. Moreover, if legal origin is as broadly defined as La Porta *et al.* (2008) now suggest, to refer to ‘regulatory style’, it is less plausible to treat it as entirely unaffected by the economy. See our discussion below.

<sup>5</sup> In a little-noticed irony, it is common for law and finance scholars to refer to the ‘UK’s’ legal system as being synonymous with the common law. Scotland, which is part of the UK, has its own legal system distinct from that of England and Wales, and which is one of the best-known examples of a ‘mixed’ (part common law, part civilian) legal system.

<sup>6</sup> For example, China and Japan are treated by LLSV as being of German legal origin. However, in the case of China, its codified company law (introduced in 1993) drew on a mixture of different legal systems—including elements from Taiwan, Germany, France and Japan. And in other areas of law, China has no comprehensive civil code (in contrast to Germany, its supposed legal origin), beyond a codification of its contract law. Turning to Japan, whilst at the end of the nineteenth century, it transplanted large parts of the German civil codes, the Japanese Commercial Code has changed very significantly since World War II, largely owing to American influence (Siems 2008a).

<sup>7</sup> A similar statistical analysis of the relationship between legal families and GDP can be found at <http://www.droitcivil.uottawa.ca/world-legal-systems/eng-monde.php>. On Mahoney’s specific claim, La Porta *et al.* (2008: 301-2) note that his results hold for French-origin systems only if the civil law category is decomposed into its French, German and Scandinavian sub-groups, and that, even then, this finding is sensitive to the inclusion of certain controls.

<sup>8</sup> Hall and Soskice do not make the connection between ‘varieties of capitalism’ and legal origin; La Porta *et al.* argue that the link is very close, but consistently with their theoretical position, argue that ‘legal origins are essential to understanding the varieties of capitalism’: La Porta *et al.*, 2008: 287.

<sup>9</sup> This does not rule out the possibility that in some respects the pre-existing legal system also remains important; see Siems (2007a).

<sup>10</sup> However, this is not the case for all legal families. In particular, in the civil law world there is the problem that many countries copied a translated version of a particular foreign code but have not taken recent up-dates into account, because its law-makers do not read the language of its (former) origin country (Siems, 2008b). For instance, apart from Austria and Switzerland, this concerns all (supposedly) German legal origin countries.

<sup>11</sup> The second stage of the quantitative work involved developing a reduced form of each of the indices which could then be used to collate data on a wider range of countries. The results of the analysis of these datasets are reported separately (on the shareholder protection index, see Armour *et al.*, 2008; Siems 2008b).

<sup>12</sup> As a further means of minimising ‘home bias’, in the construction of variables, consideration was paid to the OECD Principles on Corporate Gover-

nance (OECD, 2004), the IMF's Principles of Orderly and Effective Insolvency Laws (IMF, 1999), the structure of labour regulations set out in ILO conventions and recommendations, and the comparative literature on company, insolvency and labour law (e.g. Armour *et al*, 2002; Funken, 2005; Cools, 2006; Siems, 2007b) as well as the laws of the countries themselves.

<sup>13</sup> At <http://www.cbr.cam.ac.uk/research/programme2/project2-20output.htm>

<sup>14</sup> Cardinal variables are clearly indicated as such in the data appendix. In each case, the results have been mapped onto a scale ranging between 0 and 1 in order to maintain consistency with the other elements of the indices.

<sup>15</sup> A fuller account of our findings here is found in Lele and Siems (2007a).

<sup>16</sup> This is so because the economic data that would be combined and tested in the further econometric study for which these indices form the basis is available with respect to listed companies.

<sup>17</sup> The list of these variables and a description of their coding can be found in Lele and Siems (2007a) and online at <http://www.cbr.cam.ac.uk/research/programme2/project2-20output.htm> (project datasets).

<sup>18</sup> With respect to 'proxy voting' it is important to distinguish between a variety of aspects, such as, who can be appointed, whether companies have to facilitate proxy voting, who bears the costs of a proxy contest, and whether the proxy rules affect communication between shareholders (Index, variables I 4.1-3, 8.2). We have therefore recast it into two separate variables 'anticipation of shareholder decision' and 'communication with other shareholders', which are further divided into meaningful sub-variables (*ibid*). With respect to 'oppressed minority', we have first of all distinguished between substantive law for protection against mismanagement of the directors and managers and fraud on minority by or transferring of assets and profits out of firms by majority (or controlling) shareholders for their benefit (Index, variables I 6.1 and II 9.1).

<sup>19</sup> See Index, variables I 6.3, 16, 18.1, II 9.2.

<sup>20</sup> The constituent elements were (1) whether the debtor's management continue to run the firm during reorganisation proceedings; (2) whether an automatic stay of creditors' claims is available during bankruptcy proceedings; (3) whether secured creditors get paid first in bankruptcy; and (4) whether there are restrictions on a firm's ability to enter reorganisation proceedings.

<sup>21</sup> However, as La Porta *et al* (1997) observe, creditor rights are likely to be ambiguous as respects share ownership. That is, strong creditor rights might either foster concentrated, controlling creditors—implying controlling shareholders to balance them—or alternatively foster creditors who monitor on behalf of dispersed equity.

<sup>22</sup> Specifically, the lack of an automatic stay (variable 2) will in many cases lead to the dismemberment of a distressed firm. This will harm creditors' returns, thereby undermining the attractiveness of debt finance. However, adherence to the rule of absolute priority (variable 3) may unambiguously be expected to enhance the attractiveness of debt finance. Thus positive scores on these two components of the index may be expected to cancel one another out.

<sup>23</sup> The full index and dataset can be viewed online:

<http://www.cbr.cam.ac.uk/research/programme2/project2-20output.htm> (project datasets).

<sup>24</sup> See Deakin *et al*, 2007, where the index is reproduced. The full index (with justifications for the codings) and dataset can be viewed online:

<http://www.cbr.cam.ac.uk/research/programme2/project2-20output.htm> (project datasets).

<sup>25</sup> A fuller account is found in Lele and Siems (2007a).

<sup>26</sup> The difference in the number of variables in Figures 2 and 3 (42 v 18) reflects higher complexity in the law which provides protection against board and managers.

<sup>27</sup> Barring the US curve, which loses a few points in the 1980s and 90s in particular because of introduction of flexibility in issuance of shares with varying voting rights and in exclusion of liability for breach of duty of care.

<sup>28</sup> The 60 shareholder protection variables cannot just be disaggregated into the categories 'shareholders v. director' and 'minority v. majority shareholders'. In two accompanying articles we have also used the sub-aggregates 'active shareholder', 'passive shareholder', and 'boards' (Siems, 2006a) and 'public control and mandatory law', 'voting power of shareholders', and 'listed company variables' (Lele and Siems, 2007b).

<sup>29</sup> This is consistent with the finding in Djankov *et al* (2002) that countries with civil law legal origins impose greater mandatory restrictions on the formation of a business enterprise.

<sup>30</sup> See Lele and Siems (2007a: 37-43). A similar methodology, which leads to virtually the same results, would sum squares of differences between countries for each of the individual variables. For example, for the UK, this involves summing, for each variable-year, the squares of differences between the UK's score and those of each of the four other countries in the dataset. The sums-of-differences for each country are then averaged to provide an overall indicator. This too gives an indication of formal convergence.

<sup>31</sup> For further details on the changes described in this and the following paragraph, see Lele and Siems, 2007a.

<sup>32</sup> This is also the case with econometric analyses of our datasets which seeks to see how far there are correlations between our measures of legal change and patterns of economic growth, the results of which are reported elsewhere: see Fagnäs *et al.*, 2008; Armour *et al.*, 2008; Deakin and Sarkar, 2008. This analysis is still at a relatively early stage.

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