THE LEGAL FRAMEWORK GOVERNING BUSINESS FIRMS AND ITS IMPLICATIONS FOR MANUFACTURING SCALE AND PERFORMANCE: THE UK EXPERIENCE IN INTERNATIONAL PERSPECTIVE

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By

Simon Deakin
CBR, University of Cambridge
s.deakin@cbr.cam.ac.uk

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Abstract

This paper review empirical studies examining the economic effects of laws governing the formation, financing and organisation of business firms with the aim of putting the UK experience in a comparative perspective. The literature identifies two models of legal support for manufacturing which imply different directions for policy: on the one hand, the Silicon Valley model of venture capital funded growth which depends on liquid capital markets and flexible labour markets, and the northern European and Japanese model which is based on long-term innovation, stable ownership, and institutionalised worker-management cooperation. The UK has some of the legal features of the Silicon Valley model, but important parts are missing: for example, the Californian rule under which post-employment restraints ('restrictive covenants') are void on the grounds of their anti-competitive effects has no equivalent in the UK. Conversely, although the UK has certain elements of the northern European or east Asian model of institutionalised corporate governance, it is unlikely to be able to replicate the 'productive coalition' approach of these countries as long as the legal framework prioritises shareholder rights and the market for corporate control, and provides limited encouragement for job security. The Silicon Valley and 'productive coalition' models are ideal types which can distract from the fact that most countries, the UK included, are hybrid systems with some of the characteristics of each model. Rather than designing laws and policies exclusively with one model or the other in mind, it may be preferable to consider specific laws and policies on their own merits, while bearing in mind that a given legal rule or policy does not operate in isolation from others and that there may be some 'network effects' in operation due to the way that particular rules interact.

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1. Introduction

This paper is a review of international comparative research analysing the effects of the UK legal and institutional framework on the scale and performance of the manufacturing sector, with particular reference to financing, innovation and productivity performance. The review covers legal and institutional arrangements affecting the financing, governance and management of business firms, including:

- corporate finance, governance, shareholding, and management objectives
- the scale and outcome of takeover activity
- the relative importance of quoted and unquoted sectors and of 'Mittelstand' businesses
- the scale and nature of finance for early stage and start up businesses
- attitudes to insolvency and business failure
- employment protection

The review also assesses current debates about possible future directions for the evolution of the current UK legal and institutional structure and their implications, both positive and negative, for the future of manufacturing in the UK in the next 20 years.

The structure of the paper is as follows. Section 2 below provides an overview of the possible effects of legal institutions on growth, and sets out the core research hypotheses which the empirical literature has explored. Section 3 then makes some preliminary points on the sources used in the literature on the economic effects of legal institutions, and on the balance between quantitative and qualitative research methods. It also considers the relevance of this literature, some of which is manufacturing-specific in its coverage but much of which is not, to the scope of the review. Section 4 surveys findings on the economic effects of laws and corporate governance codes concerning corporate form, board structure and composition, and shareholder rights, with specific reference to their impact on innovation and their relationship, complementary or otherwise, to product market competition. Given the importance of these questions for policy and the depth and extent of the available empirical evidence, this set of issues receives the most extended treatment in the survey. Sections 5-9 then provide a briefer overview, in each case, of the most relevant findings from a number of linked issues concerning the economic effects of laws and codes affecting the governance and management of firms: takeover regulation (section 5), inter-firm contracting (section 6), the legal framework for early-stage financing (section 7), the law on insolvency and business rescue (section 8), and employment protection legislation (section 9). Section 10 consists of an assessment of the findings from the point of view of the development of policy.

2. Research questions

The legal framework governing the ownership, financing and organisation of business firms can be expected to affect the competitiveness of the UK's manufacturing base in a number of ways.

Corporate governance, or the body of laws, regulations and practices affecting the way in which companies are governed and controlled, will affect the nature and scale of external financing of firms and the effectiveness of the capital market as a resource-allocation mechanism. Through these channels, corporate governance regulations can be expected to have effects on the innovation path of firms and on the quality of management. Other aspects of the legal framework governing companies include insolvency law, which affects credit flows to firms and the governance of firm-level risk, and employment law, which affects hiring and labour use strategies and the quality of employment relations.

Table 1 summarises hypothesised relationships between legal rules and prevailing modes of firm-level innovation. It follows the 'varieties of capitalism' approach in identifying likely 'clusters' of complementary institutions operating in different national contexts (Hall and Soskice, 2001; Hall and Gingerich, 2009).

According to the varieties of capitalism approach, 'liberal market' systems such as the UK and USA, liquid capital markets and flexible labour markets are underpinned by legal protection of shareholder rights coupled with relatively weak employment protection legislation. By contrast, in 'coordinated market' systems such as those of France, Germany and Japan, capital markets tend to be less liquid and share ownership more concentrated at the level of the firm, while workers, conversely, have more substantial legal guarantees of employment protection and voice within the governance of the firm. In principle, these different patterns of ownership, governance and legal regulation could give rise to divergent forms of innovation, with liberal market systems favouring 'radical' innovation through the development of new products and processes, and coordinated market ones tending towards the 'incremental' adaptation of existing technologies (see Table 1, below).

Creditor rights are more difficult to fit into this typology. There is some evidence of an association between medium or weak creditor protection, on the one hand, and risk-taking by innovative firms, associated with greater use of leverage (Acharya and Subramanian, 2009). In so far as this model is a good description of any single national regime, it is a better match for the US than for Britain, where insolvency law has traditionally favoured the interests of secured creditors over those of incumbent managers and unsecured creditors. Although the Enterprise Act 2002 moved UK practice closer to a model in which the coordinating role of secured creditors during insolvencies was reduced, the British system remains, in comparative terms, a creditor-friendly one.

Table 1. Complementarities between corporate governance and modes of innovation (source: Deakin and Mina, 2012)

	Shareholder protection	*Creditor protection*	*Worker protection*	*Mode of innovation*
Liberal market systems	High (legal support for hostile takeover bids, share buy-backs, shareholder activism)	Medium or weak (debtor in possession laws, laws favouring corporate rescue over liquidation)	Weak (minimal legal support for employment protection, no codetermination)	Strong venture capital market 'Schumpeterian' creative destruction regime Higher-risk investment High incidence of radical innovation Efficient labour market matching
Coordinated market systems	Weak (minimal legal support for market for corporate control, limited minority shareholder rights	Medium or strong (legal recognition of priority for secured creditor's rights)	Strong (effective legal support for employment protection and codetermination)	Limited use of venture capital Slower creative destruction dynamics Investment risk more spread Incremental tech development Continuous employee learning

3. Sources, methods and scope of this review

In the course of the past decade there has been a considerable increase in the scale and sophistication of empirical studies examining the effects of legal rules and institutions on firm performance, financial development and, more generally, on economic growth. Much of this evidence is cross-national in its focus, enabling the experience of the UK to be placed in a comparative perspective. Methodological advances have made it possible to model and estimate the impact of legal rules on the economy in more rigorous ways than before.

Sources

The principal change has been the development of data on legal and institutional variables which can be used in quantitative analysis. So-called 'leximetric' coding techniques involve the construction of indices providing measures of the content of legal rules and of the general effectiveness of legal institutions in a given country. The earliest of these, the OECD's index of employment protection legislation (EPL), dates from the late 1980s and has been considerably extended and refined since then (Grubb and Wells, 1993; OECD, 1994, 2004, 2008). Starting in the mid-1990s, indices for shareholder rights, creditor rights and labour regulation were developed by US-based researchers, with the support of the World Bank (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1998; La Porta, Lopez-de-Silanes and Shleifer, 2008; Botero, Djankov, La Porta, Lopez-de-Silanes and Shleifer, 2004; Djankov, McLiesh and Shleifer, 2007; Djankov, Hart, McLiesh and Shleifer, 2008). The coding methods developed in these studies were incorporated into the World Bank's *Doing Business* reports (World Bank, various years), which have appeared annually since the mid-2000s and provide data on a wide range of legal and institutional variables. The World Bank is also responsible for developing a set of indicators on governance which, among other things, measure respect for legality (or the 'rule of law') on a cross-national basis (Kauffmann, Kray and Mastruzzi, 2009).

In parts of the empirical literature, the 'legal origin' of a given country's legal system, that is to say its origin in one of the main 'families' of legal systems (English common law; French and German civil law), is taken as a proxy for the quality of legal institutions. The basis for this view is the claim that systems with an English-law origin (the UK and Commonwealth countries, and the USA) have inherited institutions which are more effective in protecting contract and property rights than those prevalent in civil law regimes (most of mainland Europe, east Asia, and Latin America) (La Porta et al., 2008). This claim is controversial; it seems unlikely that a single variable can stand in for the wide variety of legal-institutional arrangements found in both developed and developing systems (Ahlering and Deakin, 2007). In analysing the UK's comparative position with regard to other industrialised countries, it would therefore be going too far to assume that the UK's common law legal origin necessarily provides it with an inherent source of competitive advantage. However, the legal origin of a country may well have a number of consequences for the relationship between law and economic growth, including facilitating (or obstructing) the transplantation of legal rules: there is evidence that transplants occur more frequently, and work better, within legal families, so that, for example, transfers from the common law world to the civil law world, and vice versa, may face institutional obstacles (Armour et al., 2009c).

Providing a quantitative measure of the content and effect of legal rules is not a straightforward process, and the results obtained from leximetric coding should be treated with caution. Indices generally report 'ordinal' values, capturing the relative strengths of legal rules and legal effectiveness across different countries and over time in the same country. They should not be regarded as providing an absolute or 'cardinal' measure of the contents or effects of laws. Subjective or judgmental elements enter into the process of index construction, in the choice of indicators, the definition of coding protocols, and the use of weights when aggregating scores (for discussion of these points, see Siems and Deakin, 2010). External validity can be enhanced through transparency in the reporting of sources and in the description of coding algorithms (enabling 'reverse engineering' of scores), and use of survey and interview data to confirm or supplement the values arrived at in the coding process. Notwithstanding some significant criticisms of the coding techniques used in certain cases (in particular the controversial World Bank datasets on labour law regulation: see Lee, McCann and Torm, 2008), the indices developed by the OECD and World Bank have become widely used by social scientists and policy makers. A case can be made for their use as long as limitations inherent to this type of data source are acknowledged (Siems and Deakin, 2010).

A major limitation, nevertheless, of both OECD and World Bank data, is the lack, in both cases, of extended and continuous time series data. The OECD's EPL index provides data on laws from the late 1980s but on a discontinuous basis, while the Doing Business datasets go back only to the early 2000s. The datasets on corporate, insolvency and labour law developed at the Cambridge Centre for Business Research (CBR) provide continuous time series for a small sample of mostly developed countries (including the UK) going back to the early 1970s, and time series for a larger sample of 25 developed and developing countries covering the period 1995-2005 (see http://www.cbr.cam.ac.uk/research/projects/project2-20output.htm; Armour, Deakin, Lele and Siems 2009; Armour, Deakin, Sarkar, Siems and Singh, 2009; Armour, Deakin, Mollica and Siems, 2009). Longitudinal data of this kind make it possible to use time-series econometric techniques which distinguish between short-run and long-run effects of legal change.

Methods

The greater availability of data creates opportunities for statistical testing of the impact of the law on the economy, but it also poses new challenges. A pervasive problem is the so-called ‘endogeneity’ issue: even if correlations can be established between an ‘independent’ or causal legal variable, and a ‘dependent’ or outcome economic variable, the direction of causation between the two may not always be clear (with the result that the causal variable may be ‘endogenous’ to or caused by the outcome variable). For example: is the UK’s broadly pro-shareholder takeover law a driving force behind takeover activity, or, on the contrary, a reflection of a financial system within which institutional shareholders are powerfully placed to influence the content of the relevant rules? A simple correlation between regulatory and economic variables does not provide an answer to this question, because correlation is not equivalent to causation. A number of techniques have been developed by econometricians and statisticians to address the endogeneity problem, including the use in regressions of variables which are (or can be assumed to be) uncorrelated with one or other of the principal variables of interest (‘instruments’), and lagged or historical values of variables (as used in ‘Granger causality’ techniques), to identify the direction of causality. Another approach is to use ‘difference in differences’ techniques when estimating the impact of a legal change. This is often done in the context of ‘quasi-experimental’ or comparative studies which compare the experience of a jurisdiction which have undergone a legal change with that of a comparable jurisdiction which has not (Card and Krueger, 1995).

A further problem is the possibility of spurious correlations, which is a particular problem in regression analyses of longitudinal data (‘auto’ or ‘serial’ correlation). Statistical techniques developed to deal with this include ‘differencing’ of values (used to overcome autocorrelation in time series) and ‘cointegration’ (the identification of a common stochastic trend linking two otherwise unstable or ‘non-stationary’ time series). A particular set of regression models used in time series and panel data analysis, known as vector autoregression (VAR) and vector error-correction (VEC) models, have been advanced as capable of distinguishing between short-run and long-run effects of exogenous ‘shocks’ to the economy in a context where multiple causal influences are in play, including non-linear (dynamic, two-way) causation (Hoover, Johansen and Juselius, 2008). Because of these properties, VAR and VEC models are becoming widely used in estimating the economic impact of legal and regulatory changes (see below). Notwithstanding these methodological advances, caution must be exercised when seeking to draw policy conclusions from these and other econometric studies, given that time-series and panel data econometric analysis is a developing area, with a changing 'state of the art'.

The limitations of econometric testing in this area can be addressed through consideration of evidence from case studies and other qualitative analyses. A 'multiple methods' approach, combining qualitative and quantitative analysis, should, in principle, be used to analyse legal-institutional phenomena (Nielsen, 2010). Case studies, based on interviews and direct participant or non-participant observation, can be useful in identifying the direction of causality, thereby complementing quantitative research (Poteete, Janssen and Ostrom, 2010). Thus in the review that follows, while the principal focus is on empirical quantitative studies, reference is also made to qualitative research, where it expands on or clarifies the results of statistical analyses.

Scope of the review

Most of the econometric studies reviewed in this survey are based on samples of private-sector firms drawn from a wide cross-section of industries, but some focus specifically on manufacturing or on mixed samples of manufacturing and utility companies. The sectoral scope of particular studies is detailed in the sections which follow. The literature on innovation and corporate governance is largely concerned with manufacturing firms. Thus it is possible to draw conclusions on the impact of legal and institutional factors upon the manufacturing sector specifically.

4. Corporate finance, governance, shareholding, and management objectives

Shareholder rights, ownership structure and the separation of ownership and control

The standard legal form of the business enterprise, the company limited by share capital or (as it is sometimes known) the 'joint-stock company', contains features which, while generally conducive to efficient corporate governance, may also detract from it. The legal institutions of separate legal personality (giving the company as a legal person the capacity to hold property and enter into contracts) and limited liability (protecting shareholders from claims by the company's creditors) between them provide the foundation for a division of labour between managers and investors, which allows for specialisation of the management function and reduces the costs of capital (Armour, Hansmann and Kraakman, 2009). At the same time, the separation of the 'ownership' of the firm (vesting, at least residually, in the shareholders) from its 'control' (vesting initially in the board of directors and then, through delegation, in managers and other employees of the firm) creates a divergence of interests between owners and managers which could impact negatively on the value of the firm. In the corporate governance literature this is referred to as the problem of ‘agency costs’, shareholders in this context being regarded as the ‘principals’ and managers as their ‘agents’ (It should be borne in mind that the terms ‘principal’ and ‘agent’ are not being used here in their legal sense; in law, directors are agents of the company, not of the shareholders.)

The implications for corporate governance of the separation of ownership and control differ according to how, more precisely, ownership is structured. In the UK, USA and other ‘liberal market economies’, the tendency has been for share ownership to be dispersed among a large number of retail or portfolio shareholders, investing for returns. By contrast, in the ‘coordinated market’ systems of mainland Europe and Japan, the predominant form of corporate ownership consists of blocks held by banks, families or companies holding shares in order to maintain a business relationship with the investee company.

There is empirical evidence suggesting that ownership structures are correlated with different approaches to governance of the firm (Berglöf and Van Thadden, 1999; Barça and Becht, 2001; Armour, Cheffins and Skeel, 2002). In dispersed ownership systems, governance tends to be *externally* orientated, that is to say, it is based on external benchmarks of performance, such as return on equity and other shareholder-value based metrics, and monitoring is undertaken by actors external to the organisational structure of the firm, such as independent directors and portfolio shareholders investing for returns. In this arrangement, shareholders tend to operate at ‘arms-length’ from managers, rarely intervening directly in operational matters, and relying on share options and similar performance-related executive remuneration schemes to align managers’ interests with their own. Such shareholders seek to minimise the risk of underperformance by diversifying their holdings across a wide range of listed firms, and using the liquid capital market to exit their holdings if performance in a given firm declines.

By contrast, in blockholder systems, governance is *internally* orientated. Benchmarks for managerial performance tend to refer to organisational objectives such as sales growth, production and employment, and to profitability defined as return on assets rather than return on equity. Monitoring is undertaken by actors internal to the firm, such as blockholders, long-term customers and suppliers who are often also shareholders, and employees, as in the case of Japanese ‘peer-based’ monitoring of CEOs by other members of the senior management team (Buchanan and Deakin, 2008), or German-style codetermination, in which employee representatives have seats on the supervisory board (Pistor, 1999). In these systems, dominant or majority shareholders tend to take, of necessity, a long-term view of their holdings, given the limited opportunities they have for exit from the firm, and do not generally act as pure portfolio shareholders seeking to maximise investment returns, at least over the short run. Instead, they tend to see a large share stake as a strategic investment which serves a number of purposes: in the case of customers and suppliers, maintaining business links; in the case of 'main' or 'house' banks, generating network-type externalities across a group of linked firms, or in the case of family ownership, supplying a mix of employment and investment opportunities. It further follows that in the case of blockholder systems, the problem of agency costs arises more at the level of relations between dominant shareholders and minority investors, than between shareholders as a whole, on the one hand, and managers, on the other (Shleifer and Vishny, 1996).

The above descriptions are ideal types which abstract from the detail of national systems; within national regimes, diverse approaches to governance and monitoring can also be found (Aoki and Jackson, 2008; Aguilera and Jackson, 2010; Aoki, 2010). Nevertheless, they provide models which may be useful when characterising the nature of corporate governance in the UK by comparison to practices in other developed countries. There is a history of dispersed ownership of large listed companies in the UK which goes back to nineteenth century stock exchange rules requiring a 'free float' (or large allotment of shares for sale on the open market) on the occasion of a stock market listing or 'IPO' (Hannah, 2008; Burhop, Chambers and Cheffins, 2011). Concerns about the separation of ownership and control were already being voiced in the UK in the 1920s (Keynes, 1926, anticipating the analysis by Berle and Means (1932) for the US). The trend was reinforced in the UK after 1945 by a further decline in family shareholdings arising from mergers and acquisitions (Franks, Mayer, Volpin and Wagner, 2012) and by a rise in institutional shareholdings, as pension funds increased their equity investments (Cheffins, 2008). The result was a structure of ownership of UK publicly listed companies that was much more dispersed than was the case in continental Europe at this time (Franks et al., 2012), and somewhat more dispersed even that of the US (Holderness, 2009).

How far this evolving pattern of ownership, and the corresponding emphasis on 'external' forms of monitoring, was driven by legal change is difficult to judge. Company law was not especially protective of the rights of external shareholders during this period, and it is likely that the rise of institutional investors led to changes in the law and stock exchange listing rules to reflect the need for shareholder protection, rather than the other way round (Franks et al., 2012). Fiscal law, which subsidised occupational pension funds in various ways including giving preferential tax treatment to payments received as dividends, appears to have played a more direct role than company law in shaping ownership patterns in UK listed companies during this period (Cheffins, 2008).

By the early 1990s, there was a perception that existing legal mechanisms in the UK were not effective in ensuring effective monitoring of managers by shareholders. Rather than legislate for new protections, government took the step of encouraging self-regulation through corporate governance codes beginning with the Cadbury Code of 1993. Among the reforms initiated in this way was legal and regulatory encouragement for independent boards and for separation of the CEO/Chair functions, both of which, it was believed, would enhance the accountability of managers to shareholders. This was not an isolated development; other countries were taking similar steps to strengthen shareholder rights, although to some degree the UK was in the vanguard in this process, and the model set out in the Cadbury Code was to prove influential worldwide in the years following its adoption. Figure 1 records in graphical form the strengthening of shareholder rights in the UK by comparison to those in other large economies over the past four decades, and Figures 2 and 3 display data on global trends since the mid-1990s. These show that developed and common law countries have, on average, stronger shareholder protection than developing or emerging and civil law ones, respectively, but that the latter are catching up.

Figure 1. Shareholder protection in five countries, 1970-2005 (maximum score: 60). Source: CBR Shareholder Protection Index (SPI-60).

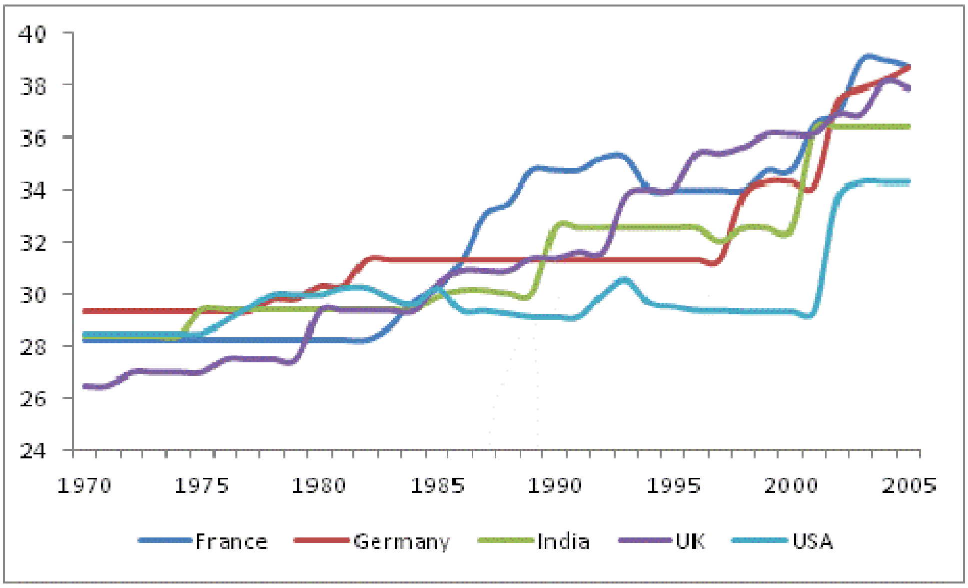


Figure 2. Shareholder protection in developed, developing and transition countries, 1995-2005. Source: CBR Shareholder Protection Index (SPI-10).

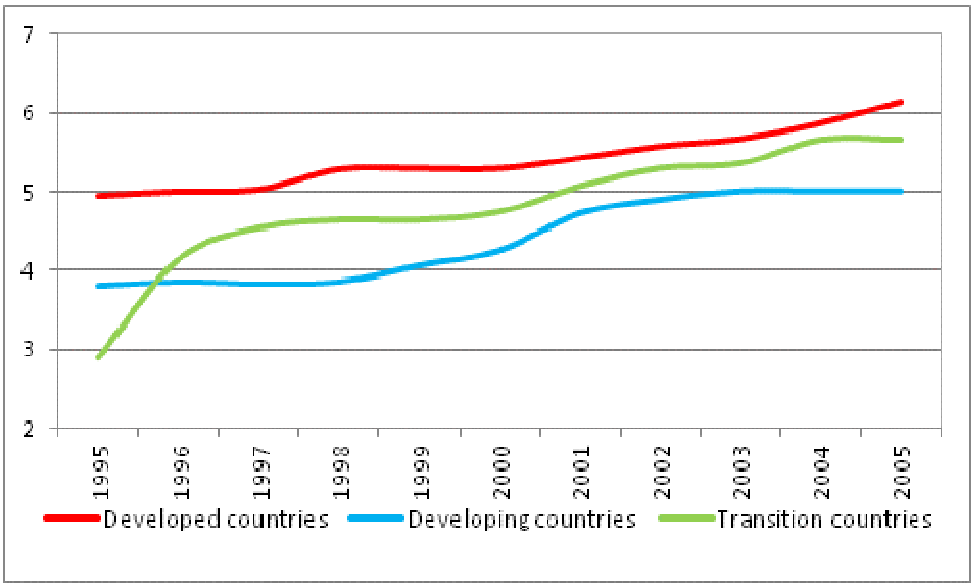
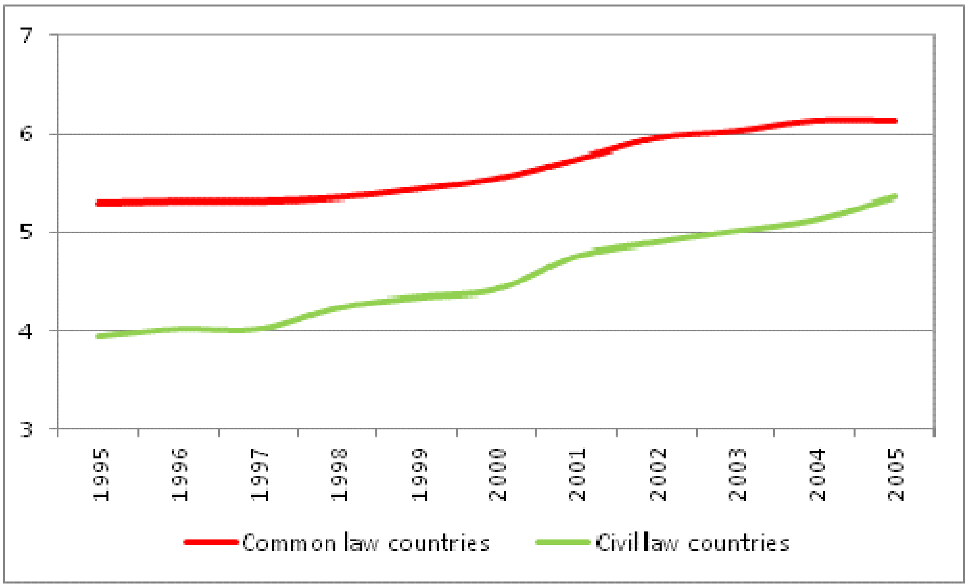


Figure 3. Shareholder protection in common law and civil law countries, 1995-2005. Source: CBR Shareholder Protection Index (SPI-10).



Empirical evidence on the impact of shareholder protection laws and corporate governance standards

The key empirical question arising from the trend towards greater shareholder protection is whether the strengthening of shareholders' legal rights has had tangible effects on firm performance and, more generally, on economic growth. In principle, it should have led to improved managerial effectiveness and, via that route, to greater organisational efficiency and higher growth. These effects should be measurable in a number of ways: by reference to the value placed by shareholders on firms (share price movements around the 'event window' of corporate announcement, and longer term share values relative to assets, or 'Tobin's q'); the efficiency with which firms use their capital (return on equity); their profitability (return on assets); and their productivity performance.

Early research in this field was shaped by Gompers, Ishii and Metrick's study (2002) of the effects on firm values of the adoption by US listed companies of measures restricting shareholder decision-making over changes of control, including takeovers and mergers, and entrenching boards against shareholder influence. Their so-called G-index of corporate governance provisions focused on poison pills, supermajority requirements, staggered board rules, golden parachutes and similar measures adopted by US listed firms, mostly in the period during the 1980s when the effects of hostile takeover bids were highly contested. They found a consistently negative correlation between firm value (measured by Tobin's q) and a high score on the G-index (indicating weak shareholder rights). Subsequent studies have refined this analysis, and have suggested that the results derived from the G-index are mostly driven by the adoption by firms of poison pills and similar devices for restricting the role of shareholder decision making in change of control transactions (Bebchuk, Cohen and Ferrell, 2009; Cremers and Ferrell, 2010, 2012). The G-index and later variants based on it mostly focus on company by-laws and other internal corporate arrangements rather than legal regulation of corporate governance, although some account is taken of state-level laws on takeover bids. Because of its focus on poison pills and other features of corporate practice which are mostly specific to the American experience, this series of studies, although highly influential for both research and policy in the USA, has limited relevance for the experience of most other countries, including the UK, which have placed greater focus on board structure and in particular the issue of director independence as a route to more effective corporate governance.

Another very influential paper in the development of the field was the study by La Porta et al. (1998) of the impact of cross-national differences in shareholder rights on financial development and growth. Their 'anti-director rights index' measured shareholder rights by coding for laws affecting shareholders' voting, voice and dividend rights. Higher scores on this index, indicating a higher degree of shareholder protection, were found to be correlated with more dispersed share ownership, and also with common law legal origin. This original index was limited in scope (it did not code for director independence or takeover regulation) and time-invariant; later studies (reviewed below) have added further variables and incorporated a time-varying element to the process of legal index construction.

The first studies of the likely effects of legal encouragement for independent boards and related aspects of corporate governance were carried out in the context of US listed firms in the 1990s, when director independence was not a legal requirement, making it possible to compare the situation of companies with different board arrangements. In the most comprehensive such study, Bhagat and Black (2002) found that there was no clear correlation between independent boards and corporate performance. While underperforming companies increased the proportion of non-independents on their boards, apparently in an attempt to improve performance, this strategy was largely unsuccessful.

Bhagat and Black's causal variable, board structure, was constructed from data on the proportion of 'inside', 'affiliated' (that is, non-executive but linked to the company) and 'independent' directors, in a sample of around 1,000 large US public companies across a range of industries (including manufacturing sectors). Their outcome variables were Tobin's q, return on assets, sales over assets, and adjusted stock price returns. They controlled for firm-specific characteristics including pre-existing board structure, firm size, industry, and the presence of larger, 'blockholder' shareholders (>5%). They found that there was a negative correlation between director independence and one or more of the performance variables in the period prior to the adoption of majority independent boards, suggesting that weaker firms were more likely to increase the proportion of independent directors on their boards. They also found that firms adopting independent boards did not subsequently outperform the market, and, for one of the variables (Tobin's q), did worse than comparable firms. They then looked at the impact on growth, using the percentage growth in assets, sales and operating income over a period of years as the outcomes variables. Again, they found no positive impact of director independence on performance.

Bhagat and Black concluded from their study that the performance advantages of independent boards were most likely being overstated: insider directors were 'conflicted' (that is, inclined to support management) but well informed, whereas independent directors, while likely to be more attuned to shareholder concerns, were also less knowledgeable on underlying business of the firm. On this basis, they argued for corporate governance standards based on a model of a ‘mixed’ board of insiders and outsiders, rather than the majority-independent boards that were then being widely advocated in both the US and the UK.

Notwithstanding these findings, which were replicated by a number of other studies at the time and since (see Adams et al., 2010, for a recent survey), US corporate governance standards in the early 2000s moved in the direction of mandatory independent boards: the Sarbanes-Oxley Act of 2003 required a majority of independent directors on audit and remuneration committees, and listing rules on the NYSE and NASDAQ exchanges were tightened up to require main boards of quoted companies to have majority independent membership. Studies of the impact of the SOX provisions including those on board structure have generally found negative effects of its introduction, in particular for already well-governed firms, indicating high costs of compliance associated with this form of legislative intervention, and few if any performance-related benefits (Litvak, 2007).

In the UK, company law largely leaves companies free to structure boards as they wish. The issues of board composition and structure are governed by the flexible regulatory approach of corporate governance codes applying to listed companies (currently, the UK Corporate Governance Code). Under the principle of ‘comply or explain’, listed companies have the option of either complying with the relevant corporate governance standard (such as rules on board structure), or of explaining why they do not comply. The thinking behind this approach is that companies are heterogeneous and should be allowed to match their corporate governance arrangements to their own needs. Thus the test of whether a given firm has adopted effective governance procedures is, in the final analysis, for the market to make; weak (or ill-matched) governance structures will be reflected in lower share prices.

The flexibility inherent in the UK approach makes it possible to test for the consequences for firm performance of companies’ decisions on board structure and other corporate governance arrangements. The empirical literature for the UK broadly follows that for the US, in failing to find a clear correlation between the adoption of independent boards and separate CEO/Chair roles, on the one hand, and firm performance on the other. One of the few studies to examine in detail the effects on performance of companies’ different approaches to disclosure (or ‘explanation’ as an alternative to ‘compliance’) is by Arcot and Bruno (2007). Using a sample of a sample of 245 non-financial listed UK firms, they studied the impact of corporate governance compliance and reporting on firms’ return on assets, over a five year period (1999-2004). They found some evidence of a positive correlation between compliance and performance and some evidence, but also evidence that firms which did not comply with the standards set out in the Cadbury Code but offered effective explanations for non-compliance performed best of all. The worst performers were those which did not comply with corporate governance standards prior to the implementation of the Code, but did so after it was introduced.

The implication of the Arcot-Bruno study is that corporate governance standards may perform a useful function in enabling already well-run firms to signal this fact, in particular through their use of the 'explanation' option. However, this potentially positive effect of corporate governance codes must be qualified by another of Arcot and Bruno's findings, namely that shareholders did not value this subset of firms as highly as they should have done given their higher profitability; rather, there was a bias, in the valuations placed on companies by the stock market, in favour of firms which formally complied with the provisions of the Cadbury Code. This result implies a degree of shareholder myopia which puts into question the assumption, implicit in the 'comply or explain' approach, that the market can efficiently gauge the quality of explanatory disclosures.

There is evidence to suggest that the impact of the laws and corporate governance codes strengthening shareholder rights differs according to the national context that is being considered. A number of studies have found that changes to legislation and/or to listing rules, encouraging greater independence of boards and related corporate governance changes, have been reflected in improved firm performance in developing countries, as measured by Tobin's q (Black, Jang and Kim, 2006, for Korea) and abnormal share price returns around the 'event window' of the announcement of legal changes (Black and Khanna, 2007, for India).

There are few studies comparing the experience of developed and developing countries. Deakin, Sarkar and Singh (2012) report findings from a study of the impact of legal reforms in a panel of 25 developed and developing countries over the period 1995-2005. Their causal variable consisted of the measure of legal adoption of pro-shareholder reforms in the 10-indicator version of the CBR Shareholder Protection Index (SPI-10). This set of indicators is focused on issues of board structure, shareholder voice and voting rights, and protection of minority shareholder interests in the context of takeover bids. The outcome variables in this study consisted of country-level measures of financial development, drawn from the IMF's Financial Structure Dataset. They used a vector error correction analysis and the GMM (generalised method of moments) technique to estimate the long-run impact of legal changes, and Granger causality techniques to test for the direction of causation. They found a positive impact of legal change on stock market values (stock market capitalisation over GDP) for developing countries, as well as evidence, in the developing world, of reverse causation, suggesting that investor demand was, in part, driving legal change. For developed countries, they found a positive impact of reforms on stock market capitalisation for common law countries only; there was no effect in civil law systems. This finding suggests that standards of the kind contained in corporate governance codes have had most impact in common law systems, such as the USA and UK, which have dispersed share ownership, but a limited impact in civil law systems, which tend to have concentrated or blockholder ownership. In addition, the results from this study for developed common law countries indicated a possible 'bubble' effect, with legal change associated with an increase in equity values but not in the underlying volume of shares traded (this was not the case with the developing country sample).

These comparative studies imply that corporate governance reforms encouraging or mandating protections for shareholders are most likely to have positive impacts in systems where equity markets are still in the process of emerging and where firm-level governance is weak. In developed country contexts, on the other hand, they can have negative implications, imposing regulatory costs on already well-governed firms, and contributing to overvaluation of shares during stock market bubbles. This effect is most marked in common law systems such as the UK and USA (Deakin et al., 2012). In civil law countries, where ownership still tends to be concentrated in large blocks, reforms premised on the assumption of the US- or UK-style separation of ownership and control run the risk of failing to bed down in practice.

Legal support for shareholder activism

An alternative mechanism for ensuring managerial accountability to shareholder interests is direct engagement by shareholders with the managements of their investee companies on matters ranging from dividend policy and financial structure to corporate strategy. In the US, a number of the larger pension funds pursued activist strategies during the 1990s, approaching companies directly with a view to eliciting their agreement on changes to corporate governance structures. Econometric studies generally have not found a positive correlation between this type of activism and firm performance (Gillan and Starks, 2007). Through a combination of the high costs of engagement, uncertain returns, and free-riding by other shareholders, it had largely petered out by the mid-2000s (Kahan and Rock, 2007).

A more enduring form of shareholder engagement has been so-called 'hedge fund activism'. This takes the form of sustained, public and often confrontational engagement by specialised investment vehicles with the capacity to take large holdings (on average 5-20%) in mostly cash-rich, medium-sized firms, and put pressure on their managements to release value to shareholders through higher dividends and share repurchases (Armour and

Cheffins, 2012; Buchanan, Chai and Deakin, 2012). Hedge funds have generally been more successful in pursuing this strategy than pension funds were, in part because they are not constrained by the same requirements of prudential regulation and so have greater flexibility in targeting their investments according to a high-risk, high-return strategy.

The incidence of hedge fund activism is linked to differences in the legal framework for corporate governance. Katelouzou (2012), using the CBR Shareholder Protection Index as a measure of legal protection for shareholders, finds that a higher value on the index is correlated with a greater incidence of hedge fund activism across countries. This kind of activism is particularly pronounced in the USA, where, it has been estimated, around half of listed companies have an activist investor holding a stake of 5% or more, and is also present in the UK, although to a lesser extent (Buchanan, Chai and Deakin, 2012). Buchanan et al. (2012) report that hedge fund activism in the UK is mostly focused on smaller listed companies on the AIM exchange, although there are instances of activists targeting larger, listed companies, as in the intervention by Nelson Peltz's fund in Cadbury Schweppes in 2007 which triggered the sale of the company's drinks business and opened the way to its subsequent hostile takeover, in 2010, by its US rival, Kraft (see House of Commons BIS Committee, 2010).

Empirical studies report generally positive impacts of hedge fund interventions on share price returns but are more equivocal on their implications for long-run firm performance. Brav, Jiang, Partnoy and Thomas (2008), analysing a dataset containing over 1,000 interventions by activist hedge funds in US companies over the period between 2001 and 2006, found evidence of positive abnormal returns to shareholders in the 'announcement window' around the disclosure that a fund had taken a 5% or more stake in a target company. Greenwood and Schor (2009), basing their analysis on a somewhat different sample of activist interventions covering the period 1993-2006, found that events which led to a takeover within the following 18 months produced very substantial gains for target shareholders. Becht, Franks and Grant (2010), analysing a sample of 362 interventions in 15 European countries, also reported positive abnormal returns to activism. On the other hand, Klein and Zur (2009), analyzing a sample of hostile hedge fund interventions, reported declining profitability and earnings in the year following the event, and no recovery thereafter. Brav et al. (2008) found, on average, a negative impact on both profitability and return on assets in target firms immediately following interventions by reference to the performance of firms in control groups, but a recovery in both to pre-event levels by the end of the first year, and a small improvement by the end of the second year. Some studies report negative impacts on other stakeholders. Klein and Zur (2011) found that target companies' bonds suffered a loss of value following interventions.

There is also evidence that hedge fund interventions have been less successful in countries with concentrated share ownership and a limited role for independent directors on boards. In Japan, notwithstanding a legal environment which was ostensibly favourable to hedge fund interventions, activism of this kind failed to make much headway in the light of resistance from boards unwilling to prioritise the maximisation of shareholder value over long-term strategic goals. In addition, hedge funds active in Japan were unable to gain the support of other shareholders for their campaigns, a reflection of the limited role played by portfolio investors even now in the Japanese market, and the continuing role of business-related investments by large shareholders (Buchanan et al. 2012). Buchanan et al. (2012) report the results of an econometric analysis of hedge fund activism in Japanese firms which shows minimal impact of hedge fund interventions on capital structures; a negative stock market reaction, indicated by declines in Tobin's q; and, either no impact on managerial performance (for confrontational interventions) or deteriorating performance (non-confrontational interventions) three years after the initial share purchase.

Activism need not necessarily take a public and/or confrontational form. An alternative to confrontational hedge fund activism is the model of the 'focus fund', pioneered by the Hermes UK Focus Fund. Focus funds engage with investee companies over management strategy and offer a combination of investment support and management-consultancy type advice. Becht, Franks, Mayer and Rossi (2010) report positive returns from 41 focus-type investments made by the Hermes fund between 1998 and 2004. In September 2012 the fund was sold in a trade sale, reportedly after a number of years of disappointing returns.

Another form of shareholder activism is direct engagement on corporate social responsibility (CSR) issues such as climate change, supply chain management and labour standards. Dimson, Oguzhan and Li (2012) study the impact of 2,152 such engagements in a sample of 613 publicly listed US firms in the period 1999-2009, derived from data provided by a large institutional investor with a commitment to socially responsible investment. They find that firms which are the subject of successful targeting (in the sense of an engagement which leads to change in firm practice) have cumulative abnormal returns of around 4% in the following year, and also have above average operating performance (measured by return on assets). They suggest that these positive effects on operating performance are the result of CSR engagements attracting more loyal and socially conscious employees, customers and shareholders, and signalling a commitment to governance improvements of a kind likely to increase firm value.

The belief that institutional investors should be more active in engaging with management underlies the Stewardship Code, issued by the Financial Reporting Council in 2010, and intended to lay down guidance to pension funds and other institutional shareholders on the steps they should take to ensure effective monitoring. The prospects for the Code are uncertain in the light of the mixed evidence (see above) on returns from activism, and the declining proportion of UK equities held by the domestic institutional investors to which the Code is principally addressed (less than a third in 2012, down from three fifths in 1993: Cheffins, 2010).

Corporate objectives, short-termism, fiduciary duties, and the investment chain

Company law does not prescribe in a precise way the criteria which should guide strategic decision-making by boards. Company directors have a duty to act in the 'best interests of the company' or, as this is now put under the Companies Act 2006, section 172, to 'promote the success of the company for the benefit of its members as a whole', the 'members' here being the shareholders. To this end, the board must 'have regard to' a number of matters including 'the likely consequences of any decision in the long term', as well as the interests of the company's employees, the need to foster the company's relationships with customers and suppliers, and the impact of the company's operations on the community and the environment. It is not clear whether the enactment of section 172 has had an impact on either the procedure or the substance of decision-making at board level. Prior to its coming into force, it was already the case that company law granted boards considerable discretion to balance short-term and long-term considerations when taking strategic decisions, and, specifically, to have regard to the interests of non-financial stakeholders where to do so would, in the directors' view, promote the success of the company. On the other hand, it was also clear that company law imposed few constraints on boards which took a short-term view of corporate objectives; nor did the law do much to offset growing pressure from shareholders for high and continuous returns.

In a series of papers based on around 40 in-depth interviews with UK-based investors and managers carried out in the early 2000s, Barker, Hendry, Sanderson and Roberts reported on attitudes towards shareholder value maximisation as the goal of the company. They found some evidence of pressure from asset management firms and other institutional investors on their investee companies to enhance returns, but also a high degree of internalisation of the shareholder value ‘norm; among corporate managers themselves: managers were ‘almost more dedicated to the pursuit of shareholder value than the fund managers they were meeting’ (Roberts et al., 2006: 288). Shareholder-value type arguments were used by senior corporate managers to bolster their internal authority and as a justification for potentially contentious decisions on restructuring and remuneration. They also reported that while corporate executives generally drew a distinction between managing for long-term shareholder value and satisfying short-term demands of the market, in practice the line between these two notions of shareholder value was blurred (Hendry et al., 2006a, 2006b).

One of the consequences of the move towards independent boards in both the UK and the USA has been greater scrutiny of the hiring of senior executives, including CEOs, by board members, and the increased use of incentive payments and bonuses for CEOs based on share price performance and other performance criteria. The delegation of nomination and remuneration decisions to board subcommittees with a majority of independent members is mandatory for US listed companies under the Sarbanes-Oxley Act and recommended practice under the UK Corporate Governance Code. Although in principle these changes should bring about a closer alignment of managerial and shareholder interests, and hence increase firm value, there is evidence that firm value may be negatively affected by short-termism associated with the financial incentivisation of CEOs. Antia, Pantzalis and Chul (2010) find that longer time horizons for CEOs of US listed companies, which they calculate in terms of current tenure plus age, are associated with higher firm value as measured by Tobin’s q, while Brochet, Loumioti and Serafeim (2012), who measure the short-term orientation of CEOs on the basis of transcripts of conference calls with investors, find that US firms with a short-term strategy attract short-term investors and have higher stock price volatility.

The nature of relationships in the investment chain between pension fund trustees (who have a fiduciary duty to maximise returns for the scheme members) and asset managers, and the resulting implications for the strategies pursued by investee companies, is the subject of a small but growing empirical literature. Del Guercio and Tkac (2002) find, in the context of a US study, that pension funds are more likely than mutual funds to replace fund managers after poor performance over the short term (up to one year), and Heisler, Hittell, Neumann and Stewart (2007) similarly find that US pension fund trustees’ fiduciary duties and duty to monitor managers together make them prone to use short-term performance measures and to replace managers who fail to meet them.

Corporate governance, shareholder rights and innovation

There is a developing literature on the relationship between corporate governance and innovation, which specifically relates to the impact of shareholder pressure for high returns on the growth and performance of manufacturing firms.

From the viewpoint of agency theory, corporate governance arrangements which designate residual control and income rights to shareholders have 'survival value' because by doing so they reduce the costs associated with contractual monitoring and risk-adjustment. The reduction of agency costs contributes to the firm's competitive survival because it enables it to deliver products at lower prices, all things being equal (Fama and Jensen, 1983). In principle, this argument can be extended to cover the case of innovation: shareholder-focused firms should be more likely to survive and prosper in environments which offer the possibility of supra-competitive returns from innovation, on the one hand, and the threat of obsolescence, decline and exit under the pressure of Schumpeterian 'creative destruction', on the other.

The agency-theoretical view of the governance-innovation link has been challenged by the theory of the innovative firm developed by Lazonick (2001, 2007, 2010) and O'Sullivan (2000; 2003). In their approach, the firm consists of a set of organisational relations which determine the way in which investment decisions are made, what types of investments are made, who makes these decisions and who claims the returns from these investments. The fundamental trade-offs in the investment decision are, firstly, between the short and the long term, and, secondly, between internal and external mechanisms of financing. The main trade-off in the redistribution of profits is between the claims of shareholders and those of 'residual' stakeholders, above all the employees of the firms who engage in collective learning and by doing so develop the innovative potential of the business. The central conflict of interest for the firm rises from the need to commit to innovation, a source of sustainable growth and continued employment, over a longer period of time than the one that would be sufficient to generate equal amounts of speculative returns for shareholders. The potential consequences of this conflict include the (mis-)use of the stock market to maximise shareholders' returns to the detriment of other stakeholders (in particular employees but also strategic customers and suppliers) as well as investment in innovation. It can also lead, as Lazonick has argued in the case of the US, to inequitable and unstable resource allocation in a number of large corporations governed according to the shareholder value maximisation principle (Jensen, 1986) which has had negative effects, Lazonick argues, on workers, firm competitiveness, and macroeconomic growth (Lazonick, 2010).

A related critique of the agency-theoretical view has been made by Tylecote and his collaborators. After reviewing the role of finance and corporate governance in a national innovation systems framework (Tylecote 2007), they find that country-specific factors significantly influence the rate and direction of technical change as well as the development path of firms. This suggests that the agency model describes those systems, those such as the US and UK, which rely heavily on external finance, supplied through the capital market, to support innovation, but has limited relevance in other contexts.

In the case of the USA and the UK, there is evidence of potentially negative effects of shareholder-orientated corporate governance rules on investment decisions. Graham et al. (2005) report that US listed companies are becoming less willing to invest in R&D when they come under pressure to prioritise shareholder returns through share buy-backs and higher dividends. Asker, Farre-Mensa and Ljungvist (2012) find that US listed firms invest less than comparable private firms and are less responsive to changes in investment opportunities, particularly in industries characterised by high sensitivity of stock prices to current earnings. Comparative studies also provide evidence of trade-offs between shareholder protection and stock market values, on the one hand, and innovation, on the other. Belloc (2012) reports the findings of 48-country study which analyses the relationship between shareholder protection, as measured by the World Bank and CBR indices, and innovation, as measured by investments in R&D and patenting activity. Employing a panel data methodology, he finds that that a high level of legal shareholder protection is correlated with a higher level of stock market capitalisation, but a lower level of innovation activity.

Lazonick and Prencipe's (2005) case study of Rolls Royce points to tensions between corporate governance practices in the UK and the development of technological capabilities by manufacturing firms. The paper describes how Rolls Royce consolidated and then improved its position in the global market for aircraft engine production in the course of the 1990s through a strategy of building internal capabilities that was led by a largely engineering-focused team of managers. In this period, the development of the company's three-shaft turbofan engine enabled it to overtake its US rival Pratt and Witney to become the second-ranked commercial aviation engine producer after GE. In the early 1990s the company cut dividend payments, and its share price subsequently under-performed the FTSE 100 index. Despite this, the company was able to raise capital through a rights issue in 1993, and it took on debt to fund a number of acquisitions. By the end of the decade it had largely paid off its debt through the revenues generated by increasing sales; its share of the global turbofan market increased from 8% in 1987 to 30% in 2002. Throughout this process, the company's management was effectively protected from negative investor opinion by the ‘golden share’ retained by the UK government. The senior management team had virtually no ownership stake in the company, and the board members between them held less than 0.5% of the issued share capital. The authors of this study make the point that the success of Rolls Royce needs to be seen against the background of ‘the relative lack of success, more generally, of British companies in high-technology manufacturing industries over the past half century or so’ (Lazonick and Prencipe, 2005: 502).

Corporate governance, product market competition and innovation

There is a growing literature examining the interaction between corporate governance standards and product market competition, which has implications for the relationship between governance and innovation. One of the main drivers behind productivity improvements in British industry since the early 1980s has been the stimulus to competition provided by policies of deregulation and privatisation, the removal of barriers to international trade, and changes to domestic and European Union competition law (Crafts, 2009). Buccirossi et al. (2009) report a positive correlation between competition policy and total factor productivity growth in 12 OECD countries over the period 1995-2005. These findings are consistent with the view that product market competition selects out inefficient firms and generally serves to maximise the aggregate value of firms across a given sector or national economy. This view, however, begs the question of the role of corporate governance mechanisms: are they needed in a context where product markets are already competitive?

The empirical literature diverges on this point. Giroud and Muller (2010) analyse the impact of firm-level governance practices on a number of performance measures (share price performance, Tobin’s q, return on equity, return on assets, net profits) for a sample of over 3,000 US listed companies across a range of industries (including but not confined to manufacturing sectors). They then control for the competitive structure of industries, as measured by the Hirschman-Herfindahl index of concentration. They find that governance has only a small effect on firm performance in competitive industries and a more sizable positive impact on performance in non-competitive ones. They conclude that product market competition and corporate governance operate as substitutes: governance has little role to play in enhancing firm performance if product markets are already competitive.

Knyazeva and Kynazeva (2012) reach an opposite result, although differences in their focus, which is on legal rules rather than firm-level practices, and in the scope of their study, which does not include the USA or Canada, may partly explain the divergence. Rather than focusing on differences in firm-level governance practices in a single jurisdiction as Giroud and Muller (2010) did, they look at differences in country-level laws on shareholder protection, using, for this purpose, the time-invariant index developed by La Porta et al. (1998). They use a very large sample of mostly manufacturing firms (regulated industries and financial firms are excluded) in 45 developed and developing countries, excluding US or Canadian incorporated firms. They find that shareholder rights have a positive impact on firm performance (both financial performance and profitability) in industries which are more competitive (using the HHI as the measure of competitive structure). They explain this result on the basis that shareholders are likely to monitor managers more effectively in competitive industries where it is easier to identify and remedy managerial underperformance.

Chai, Deakin, Sarkar and Singh (2013) introduce innovation into the picture by using as a measure of product market competition the abnormal persistence of firm-level profits. If markets were perfectly competitive, abnormally high profits should be competed away over time. Persistence of profits can therefore be interpreted as indicating incomplete or imperfect competition in product markets. However, abnormal persistence can also be interpreted as evidence for the presence of innovative firms which are successful over time in capturing rents from product or process innovation. Using a very large sample of manufacturing firms in 18 developed and developing countries, Chai et al., (2013) estimate the impact of laws governing shareholder rights on the persistence of firm-level profits. They use the CBR Shareholder Protection Index for the period 1995-2005 (SPI-10) as the measure of legal shareholder protection; as this varies over time it provides an alternative (and potentially more revealing) measure to the time-invariant index of La Porta et al. (1998). They find that higher shareholder protection reduces the persistence of profits in common law countries and increases it in civil law countries. This is consistent with the view that increases in legally mandated or encouraged shareholder protection during the 1990s and 2000s had a negative impact on firm-level innovation (proxied here by the abnormal persistence of profits) in common law systems. In civil law systems, which had a lower level of shareholder protection to begin with, the effect was positive, implying that there is a curvilinear (inverted U) relationship between shareholder rights and firm-level profitability based on innovation.

5. The scale, outcome and effects of takeover activity

Hostile takeover bids (defined as bids for a controlling shareholding made without the initial agreement of the board of the target company) are more common in the UK than in other developed countries, allowing for the relative size of the UK's listed company sector, and such bids are more likely to lead to a change of control than elsewhere. Jackson and Miyajima (2008) record 18 hostile bids in France between 1991 and 2005 and 6 each in Germany and Japan. In the same period there were 176 in the UK and 332 in the US (the US listed company sector is more than twice the size of the British one). The success rates for hostile bids (defined as a sale of control to the bidder) was 42% in the UK and 22% in the US. During the same period, they report that 12 bids succeeded in France, 5 in Germany, and one in Japan.

The regulatory framework governing takeover bids for listed companies in the UK is derived from the Takeover Code and certain rules of company law. The Takeover Code currently has a statutory underpinning, following the implementation in 2006 of the Thirteenth Company Law Directive, but it remains essentially a self-regulatory code, developed and administered by the City Panel on Takeovers and Mergers. The contents of the Code broadly reflect the interests of institutional shareholder groups which, historically, were in a position more effectively to lobby for protection for minority shareholder rights than their US counterparts (Armour and Skeel, 2007). Rules protecting shareholder interests under the UK Takeover Code include the principle of equal treatment, which is to the effect that all shareholders of the offeree company of the same class must be accorded equivalent treatment; the mandatory bid rule, under which a shareholder which has acquired 30% of the company's voting rights must extend to all shareholders an offer to purchase their holdings for at least the highest price it has paid for similar shares in the previous 12 months; an obligation upon directors to give shareholders financial advice on the merits of the bid; and rules prohibiting various defensive actions such as issuing new shares or disposing of assets during the bid period. In addition, general company law places limits on the powers of boards to issue stock to friendly third parties and stock exchange rules on pre-emption require any new shares to be issued to existing shareholders first. Company allows non-voting shares to be issued but in practice this has been discouraged by institutional shareholder bodies such as the Institutional Shareholders Committee.

The general effect of these legal provisions, listing rules and code provisions is that target boards of UK listed companies generally have less leeway to oppose bids than boards of similar firms in other industrialised countries (for an overview of the relevant legal and regulatory differences, see Deakin and Singh, 2009). Since the mid-1980s the US courts have generally upheld ‘poison pills’ which can be triggered by a target board if it considers that an offer undervalues the company. A common type of poison pill is a ‘rights plan’ under which the board has the power to issue stock to a friendly third party or more generally to shareholders other than the bidder. To this end, a US board can take into account what it may consider to be the negative impact of a bid on employees, suppliers and other non-financial stakeholders and hence on the wider company as a going concern. A target board may have to ‘redeem’ (or abandon) a poison pill if it receives multiple bids and an ‘auction’ for the company begins. However, in the absence of an auction, boards with poison pills already in place are generally able to deflect hostile bids, as long as they avoid conflicts of interest and otherwise act in good faith. This is contrary to the UK position, where a single hostile bid can often result in a takeover. As Deakin and Singh (2009) explain, had Cadbury been a US-listed company with a poison pill in place, it would have been in a position to resist Kraft’s uncontested bid on the ground that it was not conducive to long-term value.

In other industrial countries, hostile takeovers are rare because of other elements in the regulatory framework (see Deakin and Singh, 2009). In France and in the Nordic systems, multiple voting rights can be used to entrench dominant shareholders, notwithstanding attempts to limit the use of weighted voting in the Thirteenth Company Law Directive. Germany has moved away from weighted voting following the passage of the Thirteenth Directive, but the continuing presence of worker directors on the supervisory board makes it more difficult for bidders to win board approval. A number of EU member states, including France and Germany, have taken advantage of provisions in the Directive which allow companies to put anti-takeover defences in place with the approval of the supervisory board or shareholder meeting. The adoption of the mandatory bid rule in some continental European countries has had the paradoxical effect of making it more difficult for takeover bids to be launched against incumbent blockholders, who are now in a position to demand an increased premium in return for control (Berglöf and Burckart, 2003; Ventoruzzo, 2008).

Japan has recently moved in the direction of allowing companies greater leeway to adopt poison pills and other takeover defences. Following the *Bull-Dog Sauce* litigation of 2006, in which a hedge fund that launched a hostile bid against a mid-cap food manufacturer as part of an activist campaign was described by the court as an ‘abusive acquirer’ on the grounds that it had no long-term plan for the management of the company, substantial number of listed companies moved to adopt US-style poison pills whose legality had previously been in doubt, a move further encouraged by legislative changes around the same time. Japanese courts have developed a test of ‘corporate value’ as the benchmark for evaluating bids, as an alternative to shareholder value, a development also reflected in guidelines on takeover bids issued by the industry ministry, METI, in the mid-2000s (for assessments of how far this represents a qualification of shareholder rights, see Armour, Jacobs and Milhaupt, 2011; Buchanan et al., 2012a).

Qualitative empirical research suggests that directors of UK-listed companies tend to see their role during a bid as ensuring that the financial interests of the current shareholders are fully protected. If this means advising shareholders to accept an offer which values the company at a premium to the pre-bid share prices rather than taking steps to resist a bid that they regard as value-destroying over the medium to long term, they will tend to take the former route. Deakin, Hobbs, Nash and Slinger (2002) report findings from case studies of 15 hostile takeovers of public utilities and manufacturing firms in the UK takeover wave of the mid-1990s. For this study, interviews were conducted with executive directors and other senior managers, non-executive directors, institutional investors and legal advisers. They found that boards generally focused on short-term shareholder returns when evaluating bids, in part because of legal advice that this was required by the Takeover Code. A provision in the version of the Code in force at that time, which stipulated that boards should consider the impact of bids on employees, was regarded by the directors and advisers interviewed by Deakin et al. as unimportant in practice. Non-executive directors were reported as making the case for maximising shareholder value in preference to rejecting bids that would lead to the break-up of companies.

Since this research was conducted, the Takeover Code has been amended, in the light of the Directive, to include a provision requiring the bidder to set out a corporate strategy for the target and to detail possible job losses and changes to terms and conditions of employment. The target board must also give its view on the implications of the bid for employment. It is unclear whether these changes have affected the likelihood of bids succeeding, but it seems unlikely that they would have this effect. They do not appear to have materially affected the outcome of the Kraft-Cadbury bid. Representations made by the bidder during a bid, concerning its corporate strategy, do not normally give rise to legal obligations, as Kraft's closure of Cadbury's Somerdale plant, which it had indicated would continue to operate, made clear. The Takeover Panel criticised Kraft for making a statement in respect of its intentions with regard to the Somerdale plant for which, it found, there was no objective or reasonable basis (see House of Commons BIS Committee, 2011), but this did not affect the validity of Kraft's bid or give rise to any legal liabilities on its part. As part of the so-called 'Cadbury law' consisting of amendments to the Code made in September 2011, the Code now provides that a party to a bid that makes a statement in relation to a course of action that it intends to take after the end of the offer period is to be regarded as bound by that statement for a period of 12 months from the date on which the offer period ends, unless there has been a material change of circumstances.

Econometric studies suggest that, on average, hostile takeovers do not lead to improved financial performance in target firms, although the variance is large, with gains in a significant proportion of cases (Martynova, Oosting and Renneboog, 2006; Cosh and Hughes, 2008). Thus the performance benefits of hostile bids for firms that are actually taken over are unclear at best. The wider and perhaps more pertinent issue is the impact of the UK's takeover regime on listed companies in general. The absence of takeover defences of the kind which are commonplace in other developed economies means that managers of UK-listed companies are more exposed to the disciplinary effects of the 'market for corporate control' than their counterparts elsewhere. From an agency-theoretical perspective, this should lead to reduced agency costs and more efficient management (Fama and Jensen, 1983). The counter argument is that the pressure to maximise short-run shareholder value which stems, indirectly, from the operation of the UK's takeover regime, deters firms from investing in strategic capabilities, the returns on which can only be realised over a longer-term time horizon than that implied by the interests of at least a segment of shareholders in speculative returns (Lazonick and O'Sullivan, 2000). From this point of view, the continuation in force of the bid-friendly Takeover Code is a fetter on the innovative potential of UK-listed companies.

US research based on 1990s data suggests that shareholders during this period placed a higher value on the stock of companies which did not have anti-takeover defences (Gompers, Ishii and Metrick, 2002; Cremers and Ferrell, 2011, 2012). This can be read as evidence that poison pills reduce firm value, by allowing managers to entrench themselves against shareholder pressure (Bebchuk, Cohen and Ferrell, 2009). An alternative interpretation is that shareholders overvalue the speculative opportunities which arise from hostile bids, while finding it harder to assess potential returns on R&D and investments in organisational capabilities (Deakin and Slinger, 1997; Lazonick and O'Sullivan, 2000). There is also evidence that the premium enjoyed by US firms with more shareholder-orientated corporate governance arrangements of this kind has diminished over time (Bebchuk, Cohen and Wang, 2011). This is compatible with the view that the choices firms make on corporate governance structures, including takeover defences, are endogenous to their particular strategies and circumstances, and so likely to be efficient, and evaluated as such by the market. Relatedly, there is evidence that anti-takeover defences are widely adopted by high-technology firms following an IPO. Google and Facebook are among companies with weighted voting provisions which have allowed the founders to retain effective control post-flotation. Provisions of this kind are not prohibited by UK law, but are very rarely observed among listed companies, largely because of institutional shareholder pressure for the retention of the practice of one-share, one-vote (Deakin et al., 2002; Armour and Skeel, 2007).

6. The contractual and corporate governance environment for medium-sized enterprises ('Mittelstand' type firms)

The relatively large size of the German 'Mittelstand' sector in proportion to the rest of the national economy, together with the stable and enduring nature of many Mittelstand firms, stands out in comparisons with other industrialised economies but in particular with the UK. The longevity of German Mittelstand firms appears to be linked to family ownership and to the absence of opportunities for owners to exit through a trade sale or IPO, both of which are common in the UK for successful, first-generation medium sized enterprises. The differences in the trajectories of UK and German firms appear to be related, in the first instance, to ownership structures and modes of financing, but also to the legal-regulatory framework affecting mergers and acquisitions. Franks et al. (2012), in a cross-country study, report that family firms tend to evolve into widely-held firms only in countries with strong investor protection and liquid capital markets, and even then not in sectors with a low incidence of mergers and acquisitions and fewer investment opportunities. In countries with weak investor protection laws and less liquid capital markets, family ownership persists, regardless of sectoral effects.

In addition, there is evidence that the institutional environment for inter-firm contracting in Germany is more favourable, in a number of respects, to the emergence of a sustainable medium-sized enterprise sector, than it is in the UK. The economic impact of these different national legal frameworks for contracting was the subject of the 'vertical contracts' study which was carried out by the Cambridge Centre for Business Research as part of the ESRC's contracts and competition programme in the mid-1990s. This project set out to examining how functionally similar transactions (contracts between 'original equipment manufacturers' and suppliers of component parts) were organised across the three national legal systems of Germany, Britain and Italy. Around 60 in-depth interviews were carried out with firms in the three countries concerned and further interviews were undertaken with trade associations and other relevant parties. A semi-structured questionnaire was used to obtain a mix of quantitative and qualitative data. The sample firms were drawn in each case from two established manufacturing sectors, namely mining machinery and kitchen equipment.

The research found considerable diversity in the form of contracts, their duration, and their substance. Contracts in Germany tended to be longer term, spanning more than one exchange, and to make greater use of formal mechanisms of risk allocation, such as hardship clauses, than in the other two countries. The study also found divergence in the willingness of parties to use legal action to enforce their contractual rights. Although the British firms most strongly stressed the virtues of contract informality, they were also the most likely to have to take legal action in response to non-performance. Resort to law to pursue a debt or resolve a contractual dispute was least likely in the apparently most highly juridified system, Germany.

Three levels of contractual regulation are relevant in the German context: the body of commercial contract law, which in Germany is infused by the values of 'good faith' in commercial dealing derived from paragraph 242 of the civil code; the standard form agreements for commercial dealing which are laid down at industry level in Germany; and inter-party agreements at micro-level. Standard forms follow closely the guidance of the law on what amounts to performance in good faith; individual contracts, in turn, rarely depart from the template set at industry level.

There is a considerable contrast here with English commercial law governing inter-firm contracting. Parties to contracts are very much 'free to make their own agreements' in the absence of an overarching principle of good faith and relatively weak industry-level standard terms. During the period of the study in the early 1990s, standard form contracts were disintegrating in the industries being studied, as a result of the privatisation of coal, gas and electricity; monopsony buyers, in the form of the old nationalised state corporations, had performed a similar role to trade associations in Germany in ensuring that standardised contract terms were followed. With their departure from the scene, long-established terms dealing with the balance of risk between main contractors and sub-contractors were swept aside in favour of agreements which shifted the risk almost entirely on to the latter.

In Italy, as in Germany, trade associations play an important role in setting and enforcing standards for commercial agreements. However, legal notions of good faith have limited relevance in commercial contracting in this context, by virtue of the perceived rigidity of the court system. Principles of fair dealing are reflected instead in trading standards which operate in particular regions or industries and which are linked to the roles played by local government and by trade associations.

Among the empirical findings of this ESRC-funded research on contracts was considerable evidence of differences in the way commercial parties regarded the legal system (Arrighetti, Bachmann and Deakin, 1997; Burchell and Wilkinson, 1997). In Germany, respondents commented that their contracts were shaped by the general law as well as by the ‘general conditions of business’ applying in their industry. Both the Civil Code and the general conditions were seen to apply ‘as a matter of course’. In Italy, firms were unable to estimate the costs and outcomes of legal action and did not rely extensively on contractual form to shape their relationship, apparently reflecting a court system perceived as slow, expensive and uncertain in terms of outcome. In Britain, there was a sectoral divide. Most mining machinery contracts were detailed and sophisticated, reflecting the legacy of nationalisation in the coal industry; in the other sector studied, the manufacturing of kitchen furniture, it was common to find firms reporting that informal understandings were preferable to legally binding and/or written agreements.

The research also threw light on attitudes to trust. A large proportion of British respondents reported that they would try to deal with a breakdown of trust through personal and informal contacts, while German managers emphasised pre-contract screening and the use of formal contract terms to provide protection against failure to keep to agreements. The German approach to contacting was ‘indicative of a system in which firms are careful about entering into business relationships but, when they do, they expect them to be long-term, and to deal with difficulties within the relationships by contractual means’ (Burchell and Wilkinson, 1997: 226).

7. The legal framework for early-stage finance and start-ups

The legal regime governing early-stage finance and start-ups is a composite of the standard-form contracts which have evolved over time to meet the needs of firms and investors, and elements of the legislative framework drawn from each of the areas considered in this review, (company law, insolvency law and employment law), as well as tax law.

It has been argued that shareholder pressure operates as a device for releasing capital from under-performing firms and ensuring its reallocation to more profitable and, in principle, innovative ones elsewhere in the economy, including start-ups. Specifically, it is suggested that the availability of venture capital for start-ups is linked to the ability of shareholders to extract value from companies in mature sectors through takeover bids and direct engagement with companies to increase dividends and engage in share buy-backs (‘shareholder activism’). Once the capital is released in this way, the capital market functions to redirect it to growing firms in developing sectors of the economy (Summers, 2001). More generally, it is argued that a liquid stock market is important for providing venture capital firms with an exit strategy, via an IPO, which will enable them to cash out their investments (Gilson and Black, 1997).

In the same vein, a flexible labour market can be understood as complementing the corporate governance mechanisms which underpin early-stage finance. The ability of established firms to downsize at minimal cost is part of the process by which hostile takeovers and shareholder activism work to free up capital for wider circulation in the economy. While downsizing in response to shareholder pressure can be analysed as a breach of implicit contracts between the firm and its core workforce (Shleifer and Summers, 1988), agency-theoretical approaches see advantages in labour law regimes which give employers the freedom to restructure the enterprise where to do so will enhance shareholder value (Jensen, 1993). This implies a regime of minimal employment protection regulation and limited provision for collective employee voice in the event of redundancies.

For start-ups, a low degree of employment protection could be seen as providing an important source of flexibility in hiring and firing (although for evidence linking employment protection to higher innovation rates, see section 9 below). Conversely, freedom for employees to move between firms, free of the constraints imposed by non-competition clauses of 'restrictive covenants', has been identified in empirical studies of Silicon Valley as an important dimension of the 'high velocity' labour markets which characterise high-technology clusters (Saxenian, 1994; Hyde, 1998).

The protection of creditors' rights can also exert direct and significant influences on the capacity of the firm to finance its R&D activities. Strong creditor protection, in particular as it relates to the rights of secured creditors such as banks, reduces the lender's risk, thereby, at least in theory, favouring access to credit by firms that seek external finance. Improved access to credit will provide more and better inputs to be deployed in the R&D process with potentially positive effects on the innovation performance of the firm. Thus strong protection of secured creditors' rights should favour innovation by firms dependent on bank-led finance.

A counter-argument is that stronger creditor protection rights will imply stricter control over borrowing and exert a conservative influence over the technological and market risk associated with the innovation investment of the debt-holder. Since innovation can be sensitive to threshold effects and because its outcomes are systematically and heavily skewed, weaker creditors' rights should be conducive to innovation via a high-risk, high-rewards strategy.

Acharya and Subramanian (2009) offer empirical evidence for this argument. Using the limited time-series index prepared by Djankov et al. (2007), they find that stronger creditor rights in corporate bankruptcy laws dampen innovation as measured by patents lodged and citations to patents. In countries which experienced a change to their insolvency laws, additional protections for creditors led to a decrease in patenting rates in innovative industries, linked to the unwillingness of firms to take on debt. Acharya, Yakov and Litov (2011) report complementary findings to the effect that strong creditor rights reduce finanicial risk taking by firms.

Armour and Cumming (2005) also find empirical support for this proposition, using an index which measures changes in the severity of personal bankruptcy legislation over time. Reductions in the severity of personal bankruptcy law in several European countries in the 1990s were strongly correlated with a rise in self-employment in that period. Armour and Cumming also report a stronger effect of bankruptcy law on entrepreneurial activity, defined in terms of the size of the self-employed sector, than either real GDP growth or stock market returns. Relatedly, Armour and Cumming (2006) find evidence that strict enforcement of personal bankruptcy laws, as measured by, among other things, the period of discharge from bankruptcy, is related to lower levels of venture capital fundraising. The UK is towards the more liberal end of the spectrum on laws governing discharge from personal bankruptcy (Armour, 2004).

Although there is a growing body of evidence on cross-national variations in the extent of venture capital funding and in the nature of start-up activity, this is not, as yet, clearly linked into the literature on the legal framework of corporate governance. A focus on the US case, which remains by far the largest national market for VC funding, would suggest that a combination of strong shareholder protection, flexible labour laws and weak creditor rights works well in encouraging start-ups. Within Europe, the UK has a regulatory regime which most closely resembles that of the US in each of these respects, but it does not have the highest incidence of VC activity relative to the size of the national economy; the Nordic economies, in particular Finland and Sweden, have a higher volume of VC investment in proportion to GDP (Lahr and Mina, 2011: 7), despite having weaker shareholder rights regimes and stronger employment protection legislation than the UK. The UK more clearly leads the rest of Europe in private equity (PE) funding as a whole (that is, VC funding plus PE-type buy-outs of mature companies: Lahr and Mina, 2011: 9). It has been argued that the UK's sizable private equity sector, which accounts for around a fifth of all private sector employment, is driven as much by the preferential tax treatment of debt in comparison to equity, in particular the availability of corporate tax relief on interest payments, as it is by the framework of corporate governance and employment law (Thornton, 2007).

8. Insolvency law and corporate rescue procedures

The CBR creditor protection index (CPI) codes for three areas of corporate insolvency law: the law governing creditors' rights while the company is a going concern; the rights of secured creditors; and the law governing priority of claims and related matters in the event of bankruptcy (Armour et al., 2009a). A reduced form of this index with ten core variables can be used to analyse legal change in the larger sample of 25 countries (the CPI-10: Deakin et al., 2012).

Figures 4-5 show an increase in creditor protection over time in countries independently of their level of development and legal origin. Common law systems and developed systems have the highest scores, but the gap between the common law and civil law has almost disappeared by the end of the period. Within the civil law group, French origin systems (a group which includes the southern European and Latin American systems) had lower scores than both the English-origin and German-origin ones, but they also saw some of the greatest increases in protection, suggesting convergence on the more protective approaches of the other two legal families. Over the decade to 2005 more or less every country in the sample strengthened protections for secured creditors and took steps to facilitate out of court enforcement of security interests (see Armour et al. 2009c for details).

Figure 4. Creditor protection in developed, developing and transition countries, 1995-2005. Source: CBR Creditor Protection Index (SPI-10).

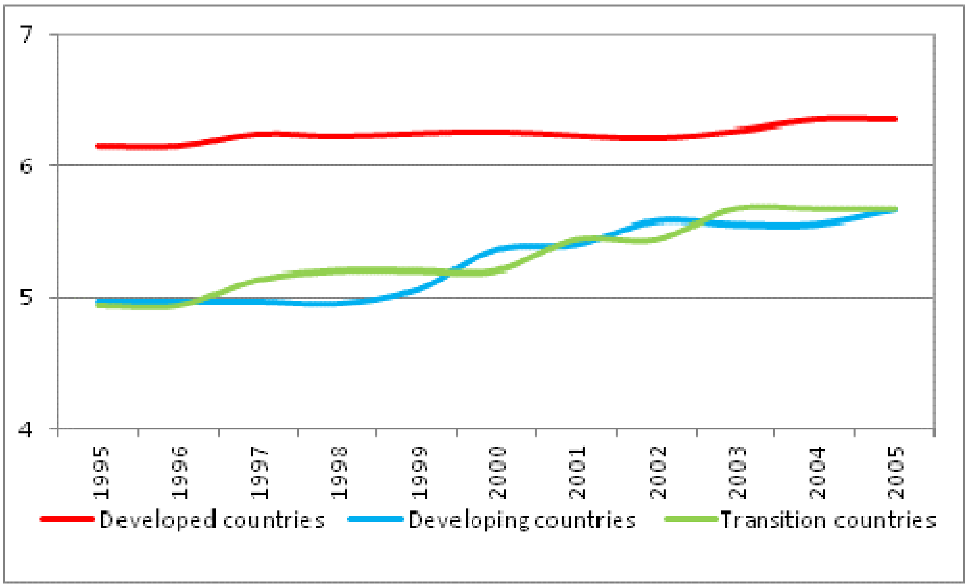
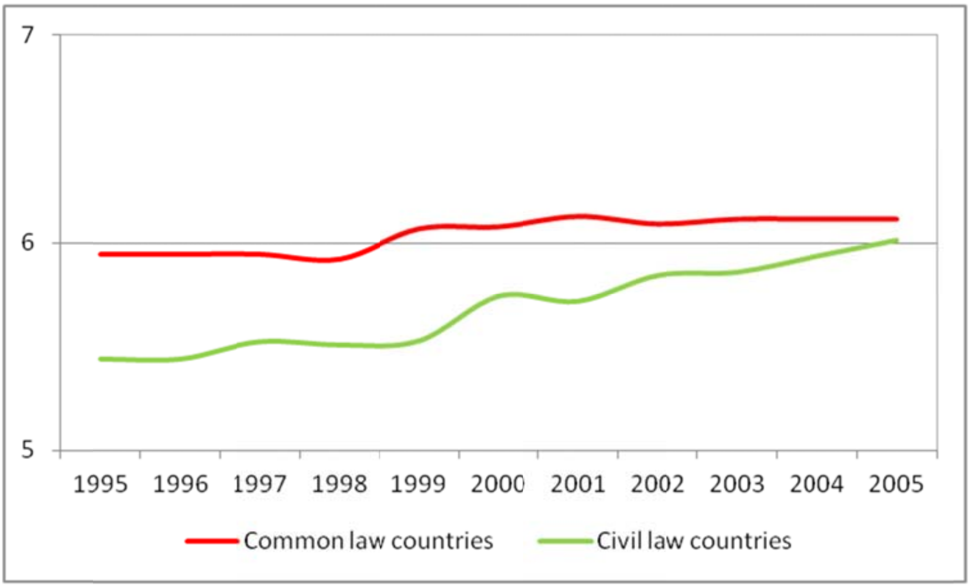


Figure 5. Creditor protection in common law and civil law countries, 1995-2005. Source: CBR Creditor Protection Index (SPI-10).



Although there has been a general trend towards the strengthening of creditor rights, countries have also been experimenting with corporate rescue mechanisms which allow incumbent managers to retain control of the underlying business in an insolvency, where this is in the interests of a range of internal stakeholders (employees, customers and suppliers) and third parties who would be negatively affected by the failure of the firm. The US Chapter 11 model of 'debtor-in-possession' bankruptcy procedures provides the leading example of this approach, although, in practice, it is becoming more common for creditors in the US to assert control through strict conditions attached to the financing of firms undergoing such reorganizations (Skeel, 2004; Ayotte and Morrison, 2009). In the UK, the passage of the Enterprise Act 2002 altered the balance of power between secured and unsecured creditors in favour of the latter by replacing (mostly bank-led) receiverships with a streamlined administration procedure, but did not go as far as Chapter 11's debtor-in-possession regime in qualifying creditor rights (Armour, Hsu and Walters, 2012).

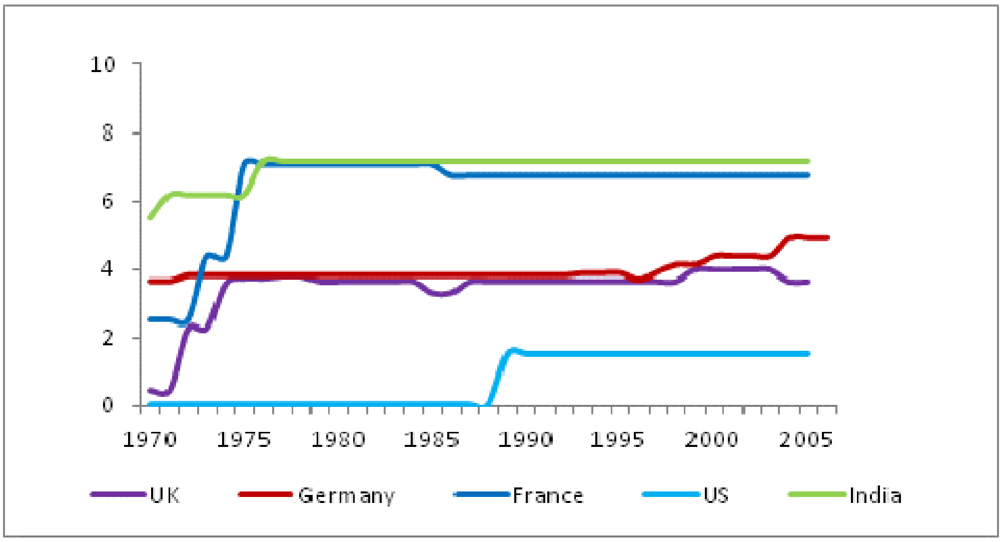
In the UK, insolvencies increasingly take the form of 'pre-packaged' administrations under which the business is sold to a separate entity following negotiations between an insolvency practitioner and a potential purchaser while the incumbent manageent team is still in place. Empirical research on pre-packs by Frisby (2007), based on a mixture of interviews and statistical analysis of insolvency data, suggests that they tend to preserve employment and do not have a higher failure rate than other types of business sale, but that they also have a negative effect on unsecured creditors' returns. Polo (2011) finds that pre-packs tend to be used in industries where reputation, intangibles and employees are important aspects of firm value, and that by avoiding the break-up of viable businesses they increase overall returns from the insolvency process, without leading to expropriation of unsecured creditors.

9. Employment protection legislation

Theory predicts mixed effects of employment protection legislation ('EPL') on employment and productivity. On the one hand, stricter EPL should cause unemployment as the costs of hiring are increased in an upturn. In addition, EPL may slow down the movement of workers from less productive firms and sectors of the economy to more productive and growing ones (Saint Paul, 1997). On the other hand, stricter EPL may reduce unemployment by making firms more reluctant to dismiss in a downturn. EPL can also induce productivity gains by ensuring the more efficient matching of firms and workers (Levine, 1991). Firms subject to stricter EPL come under incentives to train workers for more productive employment, thereby compensating for restrictions on their ability to hire and fire at will (Koeniger, 2005).

Because EPL is generally stricter in Europe than in the USA, the divergence between the European and American experiences of job growth since the 1970s has been the focus of a number of studies. In the 1960s, the USA had higher unemployment than western Europe, but in the 1980s this relationship was reversed, with the USA enjoying faster employment growth in comparison to the sluggish European record on job creation. In France and Germany there was a significant increase in the intensity of job security legislation in the 1970s, while in the US context there was, relatively speaking, little change. The UK has had unfair dismissal laws which were modelled on continental European practice since the early 1970s and it continues to be more closely aligned with mainland Europe than with the US on this issue, as Figure 6 below, which is based on the CBR labour regulation index (LRI), indicates (Deakin, Lele and Siems, 2007).

Figure 6. Employment protection in five countries, 1970-2005. Source: CBR Labour Regulation Index (LRI-40).



In the late 1980s and early 1990s, the divergence in the legal environment between the US ad Europe was used in a number of analyses, culminating in the OECD's Jobs Study (OECD, 1994) to argue for the negative effects of EPL. However, these early studies used data on the strength of EPL which can now be seen to be somewhat rudimentary. In 2004 the OECD, using its more developed EPL indicator, which incorporated a time-series element, reported only weak evidence of a link between EPL strictness and flows into and out of unemployment (OECD, 2004). This found no link, overall, between EPL and cross-national variations in unemployment levels. The same study found some evidence of a reduction in unemployment associated with greater flexibility in the use of temporary and fixed-term employment, but more recent studies suggest that relaxation of dismissal rules in the case of these forms of employment is more often associated with a rise in dismissals which is not compensated for by increased hirings (Güell and Rodríguez Mora, 2010).

Complementarities between EPL and institutional variables such as product market regulation and corporate governance structures are being examined by a growing number of studies. In this vein, Amable, Demou and Gatti (2007) find that, in OECD countries, product market deregulation produces higher GDP growth only if a high level of EPL is preserved. They suggest that product market regulation, rather than high EPL, was a cause of Europe's sluggish employment growth after 1980. Gatti (2009) reports that high levels of EPL are complementary to concentrated corporate ownership in coordinated market systems, with this conjunction leading to high rates of GDP growth. Low levels of EPL strictness are combined with dispersed ownership and liquid capital markets in liberal market systems.

Similar complementarities can be found in Deakin and Sarkar's analysis of the CBR labour regulation index (LRI) (Deakin and Sarkar, 2008). They undertake a time-series analysis of changes in labour law over time and trends in employment and productivity growth in France, Germany, the USA and UK. For the UK they found no long-run effects of these legal reforms on either employment or labour productivity. In Germany, on the other hand, a positive impact of stricter dismissal law on productivity growth was identified. In France there was a positive relationship between working time reductions and employment growth.

These findings suggest that EPL (and related forms of labour law legislation such as working time controls) may have had beneficial economic impacts in coordinated market (and civil-law origin) systems. In such systems, the potentially negative effects of EPL, in terms of disincentives for hiring and a reduction in the intensity of flows into and out of employment, are countered by the positive institutional influences of active labour market policy and state support for training (Hall and Soskice, 2001). In the same way, a stable corporate governance environment may operate alongside strict dismissal laws and legally mandated codetermination, to produce circumstances conducive to a high level of complementary investments by employers and workers in firm-specific human capital. This in turn tends to foster the long-run growth of capital intensive, high-productivity orientated firms.

Deakin and Sarkar's analysis for the US suggest that the strengthening of dismissal laws there in the late 1980s (in the form of the WARN laws which required employers to give notice of dismissal and make severance payments when downsizing their workforces) was associated with productivity gains, but at the expense of employment growth. This result implies that for a liberal market regime, such as the US, dismissal legislation can bring about efficiency gains through better utilization and motivation of labour in parts of the economy, but at the expense of slowing down overall employment adjustments, which are then reflected in higher unemployment.

Other studies have looked at the effect of the partial erosion of the rule of employment at will which took place in a number of US states from the 1970s. Autor, Donahue and Schwab (2004) report some evidence that the most far-reaching of the modifications to employment at will, the 'implied contract' exception, led to an increasing in unemployment in the states affected, without any countervailing improvements in productivity (Autor et al., 2004). To reach this result, Autor et al. constructed a sophisticated index which timed changes in the law to the point at which pro-worker decisions were first reported in the press and would thereby have come to the attention of employers. An alternative approach to coding, based on rulings which marked a shift in doctrine at the level of the appellate courts as opposed to all decisions marking a shift to a pro-worker approach, found no evidence of a disemployment effect (Walsh and Schwarz, 1996). In further analysis, Autor, Kerr and Kugler (2007) found evidence that pro-worker rulings were associated with a rise in both employment and labour productivity in manufacturing sectors, but with a decline in total factor productivity in these industries.

A body of work is beginning to look specifically at the relationship between EPL and innovation. There are two possible routes by which they might be related. One possibility is that EPL, by raising dismissal costs, provides incentives for firms to move to, or remain on, a ‘high road’ to competitive success, based on continuous product and process innovation, as the condition of being able to maintain a credible commitment to job security. This also implies a greater commitment by firms to training and upgrading of the labour force. A second possible route depends on the effect of EPL in reducing the downside costs to employees of risk-taking of the kind associated with high-innovation practices. If employees are confident that their knowledge and know-how will not be appropriated ex post by the employer, through dismissal, they are more likely to contribute their skills and knowledge to the development of innovative products and processes.

There is some evidence to support both these sets of claims. With respect to the first, Koeniger (2005) finds that a high level of EPL at country-level is associated with more innovation-related firm-level training. With respect to the second, Acharya, Baghai-Wadji and Subramanian (2012a) use the CBR labour regulation index to examine the effects of changes in EPL over time on patenting activity and citations to patents. Using a difference-in-differences approach, they find a positive correlation which can be interpreted as a causal relationship, with greater employment protection laws stimulating higher innovation based on employee input to new products and processes. In a separate study Acharya, Baghai-Wadji and Subramanian (2012b) examine the effects of the erosion of the employment at will rule in US states from the 1970s onwards. Again, stricter controls over dismissal are found to be correlated with higher innovation, with the direction of causation running from the former to the latter. This study finds that the states with the greatest concentration of high-tech firms, namely California and Massachusetts, are among those with the most significant exceptions to the employment at will rule (the ‘implied good faith exception’), and that following the tightening of wrongful discharge laws in these states there was an increase not only in patenting activity but in the number of entrepreneurial start ups and in the numbers employed in innovative firms. The study also reports positive effects on patenting activity in California following the adoption of the federal WARN law on notice and severance pay (on WARN, see above). The authors ascribe these effects to the reduced risk of 'hold-up' of innovative employees by firms following the adoption of stricter employment protection laws.

These findings on the positive link between innovation and employment protection are being replicated in other studies. A cross-national study by Belloc (2012) reports evidence that a combination of low EPL and high shareholder protection is correlated with reduced innovation, measured in terms of patenting and patent citation rates. Griffith and McCartney (2010) report a correlation between high EPL and investments by multinational firms engaging in incremental innovation (involving the adaptation of existing technologies), although they also find that low EPL attracts cross-border investments by firms pursuing radical innovation (developing new technologies). Zhou, Decker and Kleinknecht (2011) find, in an econometric study of Dutch firms in a range of sectors including manufacturing, that firms adopting 'Rhineland' style job security practices had stronger innovation performance (measured in terms of sales of new or improved products) than those with 'Anglo-Saxon' hire-and-fire type practices. Temporary contracts were positively correlated with 'imitative' (follower) strategies on the part of innovating firms, but negatively correlated with strategies of market-leading firms. They interpret their findings as support for a theoretical model within which innovating firms offer 'functional flexibility', combining job security with a high degree of firm-specific training and intra-organisational mobility on the part of workers, rather than 'numerical flexibility' which relies on temporary contracts and redundancies to meet fluctuations in labour demand. On this basis they caution against policies of labour market deregulation, arguing that they will reduce pressures on weaker firms to upgrade their performance.

10. Assessment and policy analysis

This paper has reviewed the growing body of studies examining the economic effects of laws governing the formation, financing and organisation of business firms. Key findings from empirical papers are summarised in Table 2.

Table 2. Summary of key findings on the impact of the legal framework for corporate governance on firm performance and innovation

Study	**Methodology**	**Result**	**Magnitudes**
Bhagat and Black (2001)	OLS and 3SLS regressions	Board independence is negatively correlated with firm performance (US firms, 1990s)	Adjusted R^2 0.376 (retrospective effect) and 0.429 (prospective effect)
Black and Khanna (2007)	Event study	Pro-shareholder corporate governance reforms trigger share price increases (India, 2000s)	Increases of 4%, 7% and 10% over 2, 5 and 10 day event windows
Black, Jang and Kim (2006)	OLS regression	The adoption by firms of improved corporate governance standards leads to higher firm values (Korea, 2000s).	Firms with 50% outside directors had 0.13 higher Tobin's *q* (roughly 40% higher share price)
Arcot and Bruno (2007)	Pooled regression	Compliance with corporate governance code provisions is positively correlated with firm performance, although the best performers are firms which do not comply with the code but offer full explanations for non-compliance (UK, Cadbury Code, late 1990s to mid-2000s)	Companies not complying but offering full explanations had ROA 3.4% higher than average

Study	Methodology	Result	Magnitudes
Deakin, Sarkar and Singh (2012)	Time series analysis (VEC and GMM methods)	Legal protection for shareholder rights induces stock market development in common law and developing countries (25-country study, 1995-2005), but not in civil law countries	R^2 0.659 (common law countries), 0.259 (developing countries), 0.227 (negative sign for turnover ratio)
Knyazeva and Knyazeva (2012)	OLS regression	Laws protecting shareholder rights are correlated with superior performance by firms in more competitive industries (cross country study, 1989-2007)	The addition of one point in the La Porta et al. shareholder rights index (1-5 scale) increases average return on assets by around 13% and average return on equity by around 10% for firms in competitive industries, and is equivalent to half the effect of a one standard deviation change in other performance determinants (firm size, assets, investment opportunities)
Belloc (2012)	Panel data analysis	Stronger shareholder protection laws increase stock market capitalisation but reduce innovation as measured by patenting activity (cross-national study, 1993-2006)	R^2 between 0.374 and 0.877 (different models)
Chai, Deakin, Sarkar and Singh (2013)	Panel data analysis	Stronger shareholder protection laws reduce innovation as measured by the abnormal persistence of profits in common law countries but increase it in civil law countries (1995-2005)	R^2 0.323.

Study	Methodology	Result	Magnitudes
Armour and Cumming (2006)	Panel data analysis	Temperate personal bankruptcy laws stimulate venture capital financing (cross-national study, 2000s)	A reduction in time to discharge in bankruptcy by one year increases VC fundraising in proportion to GDP by approximately 0.03%
Acharya and Subramanian (2009)	Panel data analysis (difference in differences method)	Laws strengthening creditor rights dampen innovation by reducing financial leverage and risk-taking by firms (cross-national study, 1978-2002)	Countries that underwent a creditor rights increase (decrease) generated 9.7% less (10.7% more) patents, 13.3% less (15.4% more) citations to these patents, and 8.4% less (9.2% more) patenting firms; in countries that underwent an increase (a decrease) in creditor rights, more innovative industries generated 10.3% less (11.5% more) patents, 56.4% less (29.3% more) citations to these patents, and 9.5% less (10.5% more) patenting firms than less comparable, less innovative industries
Deakin and Sarkar (2008)	Time series analysis (ARDL method)	Laws strengthening working time and dismissal protections have positive impacts on employment and productivity in civil law countries (France, Germany); in the US, strengthening of dismissal protection led to increased productivity but reduced employment growth	Adjusted R^2 0.69 (working time and employment growth, France), 0.17 (working time and productivity, Germany), 0.18 (dismissal regulation and productivity, Germany), 0.51 (dismissal regulation and employment growth, US), 0.17 (dismissal regulation and productivity, US)

Study	Methodology	Result	Magnitudes
Acharya, Baghai-Wadji and Subramanian (2012a)	Panel data analysis (difference in differences method)	Increases in dismissal protection lead to increased innovation as measured by patenting rates, citations to patents, and start ups (cross-national study, France, Germany, USA, UK, 1970-2006)	The tightening of procedural standards in UK dismissal law in the late 1980s, equivalent to an increase of 0.0378 in the dismissal law index, corresponded to an increase in the annual number of patents, citations, and standard deviation of citations by 1.3%, 1.6%, and 2.2% respectively; after passage of the US WARN Act in 1988, affected firms filed about one additional patent every two years and received two additional citations per year on average
Acharya, Baghai-Wadji and Subramanian (2012b)	Panel data analysis (difference in differences method)	Adoption of dismissal protection in US states (exceptions to employment at will) leads to increased innovation as measured by patenting rates, citations to patents, and start ups (1970s-2000s)	The adoption of the good-faith exception to employment at will led to an increase in the annual number of patents and citations by 12.2% and 18.8% respectively, compared to firms located in states not adopting this rule, and to an increase in start-ups of 12.4% by comparison to other states

More generally, the literature identifies two models of legal support for manufacturing which imply different directions for policy: on the one hand, the Silicon Valley model of VC-funded growth which depends on liquid capital markets and flexible labour markets, and the northern European and Japanese model which is based on long-term innovation, stable ownership, and institutionalised worker-management cooperation. The UK has some of the legal features of the Silicon Valley model, but important parts are missing: for example, the Californian rule under which post-employment restraints (‘restrictive covenants’) are void on the grounds of their anti-competitive effects has no equivalent in the UK. Conversely, although the UK has certain elements of the northern European or east Asian model of institutionalised corporate governance, it is unlikely to be able to replicate the ‘productive coalition’ approach of these countries as long as the legal framework prioritises shareholder rights and the market for corporate control, and provides limited encouragement for job security, to the extent that it currently does.

The Silicon Valley and ‘productive coalition’ models are ideal types which can distract from the fact that most countries, the UK included, are hybrid systems with some of the characteristics of each model (Aoki and Jackson, 2008). Rather than designing laws and policies exclusively with one model or the other in mind, it may be preferable to consider specific laws and policies on their own merits, while bearing in mind that a given legal rule or policy does not operate in isolation from others and that there may be some ‘network effects’ in operation due to the way that particular rules interact.

Bearing these points in mind, the empirical evidence presented in this review suggests that there is a case for looking again at the way that the legal framework of corporate governance affects innovation and manufacturing more widely. The weight of the empirical evidence is that the current legal framework in the UK is a deterrent to certain types of innovative activity, namely those involving complementary investments in knowledge-based technologies and firm-specific human capital which generate returns over an extended time horizon. Over the past half century, as Lazonick and Prencipe (2005) noted in their study of Rolls Royce, there have been very few cases of British firms attaining preeminence in global competition in high-technology manufacturing industries requiring complementary investments of this kind. A shift in the UK legal framework away from the current emphasis on prioritising liquid capital markets and flexible labour markets, in favour of a ‘productive coalition’ approach to corporate governance, could help build a larger and more sustainable manufacturing sector going forward.

The UK has been more successful recently in generating venture capital funding for start-ups in sectors such as IT and biotech. Whether a shift in the regulatory framework towards a productive coalition model could only be achieved at the cost of deterring venture capital and related forms of start-up financing for high-tech firms is an open question, but it should not be assumed that this would be the case. Levels of venture capital funding are higher in per capita terms in several European countries which do not have the same kind of legal underpinning for financial and labour markets as the UK (Lahr and Mina, 2011). Liberal personal bankruptcy laws and fiscal support for early-stage financing (on which see Armour and Cumming, 2005, 2006) may be more important determinants of the size of the venture capital sector than laws on shareholder and employee protection.

Even in the context of a liberal-market system such as the UK, it may be that existing levels of legal support for shareholder rights are too high and, conversely, that employment protection laws are too weak to provide necessary stimuli to firm-level innovation. In the US context, the downside of a liquid capital market which supports venture-capital based financing for high-tech start-ups is a significant degree of financial speculation in the shares of firms in sectors such as biotech (Lazonick and Sakinc, 2011). Speculation in and over-valuation of shares, leading to bubble effects, can have negative economic consequences, arising from the distortion of investment decisions and misdirection of productive resources (Jensen, 2005). UK listed firms are possibly even more exposed to these pressures than those in the US are, thanks to the operation of the Takeover Code and the increasing pro-shareholder orientation of corporate governance codes, coupled with the tendency of investors to overvalue formal compliance with standards on board structure and director independence (Arcot and Bruno, 2007). In the UK, mature high-tech firms which have undergone an IPO are not able, as their US equivalents currently are (prominent examples include Google and Facebook), to use weighted voting structures and poison pills to shield management from pressure for short-term returns. Although UK company law does not prohibit such devices, it could be argued that it does not do enough to discourage firms from following a strategy of share-price maximisation at the expense of long-term investment in produce and process innovation. Laws governing fiduciary relationships in the investment chain, similarly, do little at present to counter a widespread practice of evaluating the performance of fund managers by reference to short-term performance benchmarks.

These issues have not so far been addressed by systematic reforms. Changes to the law have occurred in the form, for example, of the reformulation of directors' duties under section 172 of the Companies Act 2006, which, while stressing the obligation of the board to have regard to non-shareholder interests to the degree necessary to ensure the long-term success of the company, is best seen as a clarification of existing law and practice rather than a fundamental change in approach. Recent changes to the Takeover Code have also been made which could point the way to a rebalancing of the relative positions of shareholders and the board (see House of Commons BIS Committee, 2011). These include the strengthened provisions relating to disclosure of the strategies of bidder and target firms which were introduced as part of the implementation in the UK of the Thirteenth Directive, and a modification to the rules governing statements of intent by bidders, which are a response to the issues raised by the Kraft-Cadbury bid. Again, these changes, while potentially useful in reducing the likelihood of value-destroying bids, mark only a minor shift of position.

In the area of creditor rights, the UK's generally permissive laws on personal bankruptcy appear to support small firm start-ups (Armour and Cumming, 2005, 2006), and the flexible nature of corporate insolvency law, as exemplified by the development of the 'pre-pack' form of insolvency, could also be a source of legal support for innovative firms, as it enables firms with complementary human and technological assets to be kept together during the process of corporate rescue (Polo, 2012). On this basis there is a good case for the law continuing to take a broadly flexible attitude towards pre-packs.

In relation to employment protection, there is growing evidence of a strong and consistent relationship between legal regulation of termination of employment and a pro-innovation environment at firm level. Acharya et al. (2012a), for example, find that the modest strengthening of unfair dismissal law in the UK in the late 1980s, which was brought about by a tightening, through case law, of procedures governing termination of employment, was correlated with a small but non-trivial increase in patenting activity ('an increase of 0.0378 in the dismissal law index corresponds to an increase in annual number of patents, citations, and standard deviation of citations by 1.3%, 1.6%, and 2.2% respectively'). In the US context they find large effects associated with the adoption of the 'implied good faith' exception to employment at will in states such as California, and with the introduction of the federal-level WARN law, mandating redundancy notice and severance pay ('we find that the adoption of the good-faith clause led to an increase in the annual number of patents and citations by 12.2% and 18.8% respectively'; 'the adoption of the good-faith clause in a state led to an increase in the entry of establishments by 12.4% in that state when compared to the control group of states which did not adopt this particular [wrongful discharge law]'; 'after passage of the WARN Act, all affected firms file about one additional patent every two years after the passage of WARN. Furthermore, these firms receive 14 additional citations in all': Acharya et al., 2012b). These findings are particularly noteworthy because they relate to innovative firms, including start-ups, and so they suggest that a hire-and-fire regime is not necessarily optimal for VC-funded firms. The relationship between job security and innovation is replicated in studies which use alternative measurements of innovation, such as new products brought to market (Zhou et al., 2011) and in cross-national studies (Belloc, 2012). Cross-national studies which show that the benefits of increased product market competition, in terms of enhanced productivity and performance of firms, depend on the continuing presence of strict employment protection laws (Amable, Demou and Gatti, 2007; Gatti, 2009), also have a bearing on the labour law deregulation debate. This body of work holds out little or no prospect of increased innovation deriving from policies of labour market deregulation; if anything, they imply that British employment protection legislation should be strengthened to bring it more into line with the north European mainstream.

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