

Comparative Law and Finance:
Past, Present and Future Research

by

Mathias Siems and Simon Deakin

Abstract: “Comparative Law and Finance” quantifies differences in the laws governing the business enterprise in various countries. The resulting data can be used to test which legal institutions (if any) matter for financial development. Until recently only cross-sectional data were available. We report the results of a new approach to coding which has produced longitudinal datasets on shareholder, creditor and worker protection.

Keywords: law and finance, legal origins, leximetrics, numerical comparative law, corporate governance, shareholder protection, legal convergence, LLSV

JEL classification: G30, G38, K22, K31, N20, N40, O16, P50

**Final version published in
Journal of Institutional and Theoretical Economics (JITE)
Vol. 166 (2010), pages 120-140**

Table of contents

<i>1. Introduction</i>	2
<i>2. The world according to LLSV</i>	3
<i>3. A legal response</i>	4
3.1 Classification: what are LLSV doing?	5
3.2 Doubts about the quantification of the law	6
3.3 Doubt about the specific numbers	7
3.4 Doubts about legal origins	8
3.5 Conclusion	10
<i>4. New time-series evidence on shareholder, creditor and worker protection</i>	10
4.1 Index construction	10
4.2 How well are shareholders, creditors and workers protected?	12
4.3 How much do legal systems differ?	14
4.4 Does law matter?	16
<i>5. Research topics for a “new comparative law and finance”</i>	17
<i>References</i>	18

Comparative Law and Finance: Past, Present and Future Research

by

MATHIAS SIEMS AND SIMON DEAKIN^{*}

“Lawyers don’t do empirical work.
They just argue with each other.”
(Andrei SHLEIFER [2005])

1 Introduction

Does law matter for financial development? There are various ways in which we could attempt to answer this question. For example, historical studies can unearth the factors behind the development of financial markets in particular countries (e.g. CHEFFINS [2008] and DEAKIN [2009] for the UK). Another approach is to interview market participants and policy makers in order to understand the institutional and political-economy factors shaping firms’ access to finance (e.g. ARMOUR AND LELE [2009] for India). Most influential, however, is a line of research which this article refers to as “comparative law and finance”. This research method codes how well the laws of different countries protect certain interests, such as those of shareholders or creditors. The resulting data can then be used in order to test which legal institutions (if any) matter for the growth of financial markets.

The “comparative law and finance” approach is not without problems. Section 2 of this article outlines how this line of research has been conducted by financial economists including La Porta, Lopez-de-Silanes, Shleifer, and Vishny (henceforth LLSV). Section 3 presents “a legal response” to these studies. This response, which is partly based on our previous work, argues that LLSV have often misunderstood the content and operation of legal rules across countries. However, section 4 makes clear that we do not dismiss the “comparative law and finance” approach as such. In this section we report the main results of our own research, which has produced new longitudinal datasets for shareholder, creditor and worker protection. Section 5 concludes with further questions that will be tackled in our future research.

^{*} Norwich Law School, University of East Anglia (corresponding author) and Centre for Business Research, University of Cambridge, UK. We gratefully acknowledge funding from the ESRC’s “World Economy and Finance” Programme, the Newton Trust, and the EU Sixth Research and Development Framework Programme (Integrated Project “Reflexive Governance in the Public Interest”).

2 The World According to LLSV

The first LLSV studies examined the importance of shareholder and creditor protection across countries (LA PORTA et al. [1997], [1998], and LA PORTA, LOPEZ-DE-SILANES, AND SHLEIFER [1999]). The main hypothesis was – and still is – that the greater the protection afforded to shareholders and creditors by a country’s legal system, the more external financing firms in that jurisdiction will be able to obtain. If good legal institutions can reduce the risk of investor expropriation *ex post*, then investors will be more willing to advance funds *ex ante*.

A key step in the empirical methodology has been to *quantify* variations, across countries, in the extent to which certain types of legal rule exist. The resulting indices make it possible to correlate indicators capturing aspect of legal rules and institutions with relevant economic variables. For instance, in the 1998 “Law and Finance” study LLSV used eight variables as proxies for the strength of shareholder protection in 49 countries. These variables coded the law for “one share, one vote,” “proxy by mail allowed,” “shares not blocked before the meeting,” “cumulative voting,” “oppressed minorities mechanism,” “pre-emptive rights to new issues,” “share capital required to call an extraordinary shareholder meeting,” and “mandatory dividend.” Next, the authors drew on the aggregate value of these proxies as the independent variable in statistical regressions. Their main finding was that greater shareholder protection leads to more dispersed shareholder ownership, which can be seen as a proxy for developed capital markets (LA PORTA et al. [1998, pp. 1151f.]).

In the last ten years LLSV and other researchers developed further indices for a range of different aspects of the law relating to the business enterprise. For instance, there are now also datasets relating to the quality of government (LA PORTA, LOPEZ-DE-SILANES, AND SHLEIFER [1999]), regulations governing firm start-up (DJANKOV et al. [2002]); contract enforcement (DJANKOV et al. [2003]); securities regulation (LA PORTA, LOPEZ-DE-SILANES, AND SHLEIFER [2006]); labour regulation (BOTERO et al. [2004]); private credit (overlapping with the earlier “creditor rights” index) (DJANKOV et al. [2007]); and self-dealing rules (overlapping with the earlier “antidirector rights” index) (DJANKOV et al. [2008]).

The main finding of all of these studies is that legal rules have a quantifiable effect on financial development. Thus, LLSV and others therefore often drew on indicators of stock market development as dependent variables. In some studies, however, other dependent variables were used such as the duration of court proceedings (DJANKOV et al. [2002]) or the unemployment rate (BOTERO et al. [2004]).

A secondary finding is that the quality of legal institutions varies systematically with the “origin” of a country’s legal system, that is, whether it falls into the English “common law”, or French, German or Scandinavian “civil law” systems (see also GLAESER AND SHLEIFER [2002], ROE [2006]). LLSV contend that legal origins thus determine the financing of corporate growth, and through that and other channels, the nature of the financial system and ultimately, perhaps, overall economic growth. Econometrically, the first studies used legal origin as an instrumental variable in order to address the problem of endogeneity since the direction of causation between law and economic variables was not clear (see still LA

PORTA, LOPEZ-DE-SILANES, AND SHLEIFER [2006, p. 27]). However, LLSV now take the view that legal origin cannot be regarded as a good instrument for the effects of legal rules, since it is likely to influence economic outcomes through a variety of mechanisms, of which the content of legal rules is just one. Instead, legal origin, they suggest, should simply be regarded as an exogenous or causal variable in its own right (LA PORTA, LOPEZ-DE-SILANES, AND SHLEIFER [2008, p. 298]). The usual result is that the belonging of a country to the “common law” family is positively related to financial development.

The importance of these studies cannot be underestimated. The LLSV articles are among the most cited papers in economics and law.¹ Moreover, the EU Commission’s impact assessment on the Directive on Shareholders’ Rights explicitly referred to them in order to justify their recent reform (EU COMMISSION [2006]). In contrast to traditional comparative law (see SIEMS [2007b]) the LLSV studies also have a considerable political impact because the World Bank uses them in order to assess and promote a particular way of legal development. Based on the numerical benchmarks of its Doing Business Report (WORLD BANK [2008]) it puts pressure on developing and transition economies, which often depend on the World Bank’s funding. In addition, developed countries too take the Doing Business Report seriously, for instance, France where the government has set up its own programme on the “Attractivité économique du droit” in order to challenge the World Bank’s findings.²

3 *A Legal Response*

LLSV and their co-authors are financial economists. However, at its core they conduct a legal analysis because they are interested in the functioning of legal rules and the classification of legal systems. To be sure, their methodology is fundamentally different from doctrinal legal research. Thus, it was only a matter of time until LLSV and legal research “clashed”.

¹ The 1998 article by LLSV on “Law and Finance” displays 763 citations in RePEc, making it one of the top 1% articles (<http://ideas.repec.org/top/top.item.nbcites.html>). In SSRN there are even 1358 citations (<http://ssrn.com/abstract=139134>). In the legal database “Westlaw” there are 260 hits (search for “La Porta et al.” & “Law and Finance” in WORLD-JLR on 12 April 2008); see SIEMS [2008c, pp. 355f.].

² See <http://www.gip-recherche-justice.fr/aed.htm>.

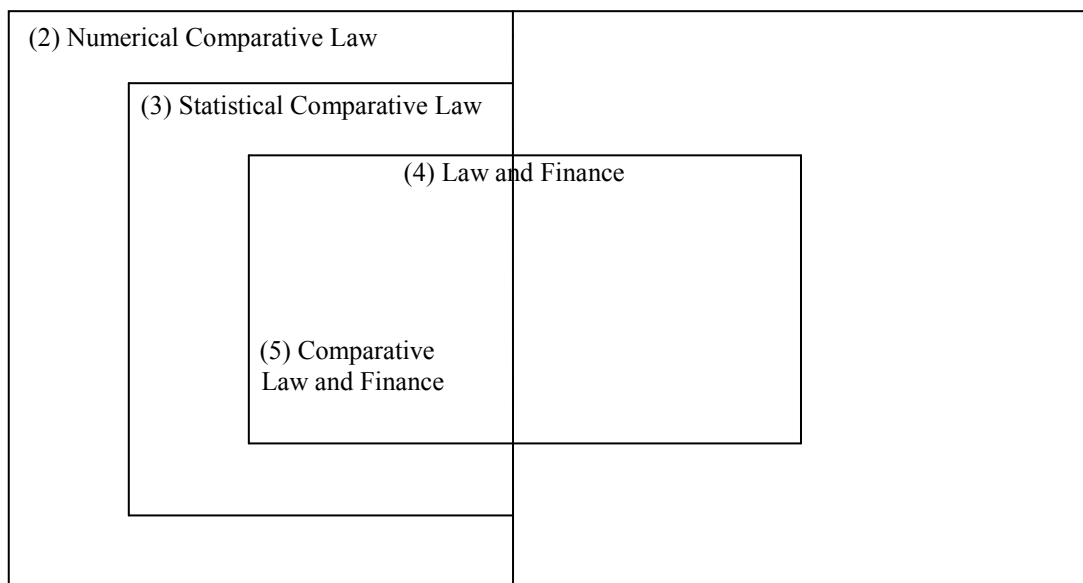
3.1 Classification: What are LLSV Doing?

A lawyer interested in LLSV's research would first try to distinguish their approach from related methods. In Figure 1 (below) LLSV's approach is called "Comparative Law and Finance", being a subcategory of other forms of leximetrics, numerical and statistical comparative law, and law and finance.

Figure 1

Classification of LLSV's research

(1) Leximetrics



"Leximetrics" is the widest term because it refers to every quantitative measurement of law (LELE AND SIEMS [2007a] borrowing from COOTER AND GINSBURG [2003]). This research can be based on a comparison between different countries but it would also be possible to focus on one country only, for instance, by coding the law across time. The LLSV studies fall into the former category and therefore belong to "Numerical Comparative Law", which denotes every quantitative comparative methodology using legal data (see SIEMS [2005a]). But again, numerical comparative law covers two types of research: it can refer to an analysis which tries to establish a causal link between law and other variables, or it can concern simple counts, for instance, citation counts between courts of different countries (e.g. SIEMS [2009b]). LLSV's regressions try to establish a causal link, and therefore they belong to the former category, which can also be called "statistical comparative law" (see SIEMS [2008c]).

Finally, it remains to be clarified how "Statistical Comparative Law" is related to "Law and Finance", the term used by LLSV themselves. These two categories are not identical. On the one hand, statistical comparative law is not always about law and finance; thus research has examined whether differences in criminal law have an impact on the crime rate in different countries (e.g. DONOHUE AND LEVITT

[2001]). On the other hand, law and finance research is not always comparative. For example, one can refer to event studies which tried to establish whether and how a specific legal change influenced the stock market in the same country (see BHAGAT AND ROMANO [2007]). The LLSV research is situated at the overlap between statistical comparative law and law and finance, which can be merged into the term “Comparative Law and Finance”.

3.2 *Doubts about the Quantification of the Law*

LLSV deserve the credit for initiating systematic research on the relationship between a country’s legal institutions and its financial system. However, the reception by the legal academia has been somewhat cool. This should not be a surprise because legal academics are typically hesitant about methods which require a reduction of complexity. For instance, criticising law and economics, KRONMAN [1993, p. 153] holds that law and other academic fields are different because law’s “dominant mood is [...] one of skepticism and doubt rather than the optimistic faith in abstraction that animates every genuinely scientific branch of study”. And BARONDES [1995, pp. 174, 225] objects that copying statistical methods from science only leads to an inconsistent pseudo-science, and reflects an incomplete effort to incorporate an analysis from another discipline into legal scholarship.

Moreover, comparative law and finance can be challenged from a comparative law perspective (see SIEMS [2005a]). LLSV and colleagues focus on the coding of legal rules. However, according to the established methodology (for the following see ZWEIGERT AND KÖTZ [1998, pp. 38, 43], DE CRUZ [1999, pp. 213, 218, 227, 230]) comparative law should not be done by simply listing the legal similarities and differences. Comparative law gives rise to particular methodological issues, because, for instance, linguistic and terminological problems, cultural differences between legal systems, the potential for arbitrariness in the selection of objects of study, and the danger of ignorance of extralegal rules have to be considered. The starting point of comparative law is, therefore, the test of functionality. The initial question should not just refer to the law of one legal system, but should be posed in purely functional terms. Yet, in comparative law and finance it is typically just asked whether one specific legal rule does or does not exist in different countries. This disregards other legal solutions whose effect is similar, but use different ways of reaching the same goal. In addition, extralegal factors have to be considered. The comparative method has to go beyond purely legal devices, because a specific function may be performed by a legal rule in one country and by an extralegal phenomenon in another country. It is necessary to understand the “law in context”. Because the legal system is a subsystem of the society, the comparative lawyer has to evaluate the solution to a legal problem in terms of its particular historic, social, cultural, and economic background. The simplicity offered by comparative law and finance may, therefore, be misleading.

3.3 *Doubt about the Specific Numbers*

More specifically, lawyers found it highly problematic how LLSV and colleagues have selected and coded particular legal variables. Thus, it is doubted whether their legal indices provide an accurate numerical description of the laws of different countries.

To elaborate, the first problem is that these studies are often based on very limited numbers of variables, which do not provide a meaningful picture of the specific area of law. This is most apparent for the coding of shareholder protection (see LELE AND SIEMS [2007a, pp. 19ff.]). LLSV just use eight variables (see section 2, above) in order to determine the strength of shareholder protection in different countries. However, these variables do not capture the most significant aspects of the law. For instance, although some of their variables deal with different aspects of shareholders' voting power, they miss the more crucial question of the extent of this power, i.e. the issues over which the shareholders in a general meeting can exercise decision-making power. LLSV's choice of variables also suffers from a US bias. This fact has been nicely illustrated in a study in which a German scholar (BERNDT [2002, pp. 17f.]) constructed an "alternative minority protection index", on the basis of what he believed to be more important rules for minority shareholder protection. He omitted "shares not blocked" and the "oppressed minorities mechanism" and instead included two new variables: "minority protection regarding authorised capital" and "minority protection regarding share repurchases". It is little surprise that, on the resultant index, Germany performed better than the US.

To be fair, some of the more recent studies consider a wider range of variables: BOTERO et al.'s [2004] index of labour regulation, for example, consists of 60 variables, and has been shown to produce outcomes which are consistent with indices drawn up using different methodologies, such as large-scale surveys of the opinion of lawyers and industrial relations practitioners (CHOR AND FREEMAN [2005]). However, the LA PORTA, LOPEZ-DE-SILANES, AND SHLEIFER [2006] index on securities law can again be challenged because its variables are wholly derived from US law without looking at alternative approaches of other countries (SIEMS [2005b, p. 301]). Thus, the LLSV research is often just a "hidden benchmarking", which measures which legal systems most closely resemble the US model.

Secondly, for any index to be a meaningful representation of the effects of legal rules across different jurisdictions, it must contain coding that is transparently accurate and consistent. On a general level the problem is that the definitions of some of the LLSV variables are not precise enough, for instance, because it is not made clear whether to code only mandatory or also default rules (LELE AND SIEMS [2007a, pp. 21, 26f.]). More specifically, when the coding of LLSV's index on shareholder protection was checked by independent experts, numerous coding errors were revealed (BRAENDLE [2006, pp. 263ff.], COOLS [2005, pp. 697–736]). SPAMANN [2006] and [2008] even re-coded the entire shareholder protection index with the result that most of the claimed effects disappeared. In the light of this finding, even some of the original authors of the studies accepted that this index was not entirely robust (DJANKOV et al. [2008]).

A third problem is that the variables of each index are usually simply aggregated. This raises the question if all variables are really equally important. Going further, it is possible to argue that the scores given to particular variables or groups of variables should be weighted on a country-by-country basis to reflect the comparative law principle of functional equivalents: the same variable may play a completely different functional role in different countries, or different variables may play the same role, with their relative importance varying from one context to another (AHLERING AND DEAKIN [2007, p. 884]). To take an example: self-regulatory takeover codes are generally thought to play a major role in underpinning minority shareholder rights and encouraging the dispersion of ownership in some common law systems, such as the UK and Australia, but this type of regulation is absent in the United States, where certain specific rules of securities law, the law of fiduciary duties and a more permissive approach to shareholder-led litigation play a similar role (ARMOUR AND SKEEL [2007]).

This problem of aggregation can also be seen in the World Bank's Doing Business Report. This report (see section 2 above) includes an "ease of doing business index" which aggregates various indices in order to rank all the legal systems in the world in terms of their efficiency in fostering business. According to this "aggregate of everything" Taiwan, Tonga, Slovakia and Saudi Arabia rank similarly (ranks 34–38). However, given the differences between these countries, it is doubtful whether this really tells us anything about these legal systems (see SIEMS [2007b]).

3.4 *Doubts about Legal Origins*

LLSV and colleagues have usually found that the quality of legal institutions varies systematically between common law and civil law countries, and that belonging to the "common law" family is positively related to financial development (see section 2, above). This revival of "legal families" (or "legal origins") may surprise modern comparative lawyers, who increasingly emphasise the limitations of this categorisation.

First, some legal scholars doubt whether the distinction between "common law" and "civil law" can be justified from an historical perspective (VOGENAUER [2005, p. 483], ZIMMERMANN [1998, p. 281]). More specifically, VAGTS [2000, pp. 598f.] criticized the use of the civil law v. common law distinction by LLSV, because, with respect to commercial and corporate law, international trade and legal transplants had always existed, and therefore a strict division between legal families did not fit. Indeed, the origins of company law were very similar in all "origin countries," namely the establishment of colonial corporations by English, Dutch, and French merchants (SIEMS [2008b, pp. 18f.]. And later on, interconnections between the different countries continued, and thus it is no surprise that by the end of the nineteenth century the most important features of company law were relatively uniform across countries (HANSMANN AND KRAAKMAN [2001, pp. 439f.]).

Secondly, modern trends make the common law/civil law distinction even less persuasive. Today we cannot talk about national legal systems which just exist side by side. Since law is becoming international, transnational, or even global,

looking at legal families is seen as less important (e.g., ÖRÜCÜ [2004, p. 361], HUSA [2004]). This impact of globalisation and internationalisation is particularly important for commercial laws. For example, cross-border listings, cross-border investments, international corporate governance codes, and international stock-exchanges are not captured by the old distinction of legal families.

Thirdly, LLSV and colleagues assume that we can easily classify all countries of the world into common law and civil law countries. This is based on the belief that the laws of the origin countries simply spread throughout the world through conquest, colonisation, and imitation (see also BECK AND LEVINE [2005, pp. 258ff.]). However, this idea of a mere copying disregards: the ongoing influence of their pre-transplant law; the mixtures and modifications at the moment when some copying of foreign law occurs; and the post-transplant period, in which the transplanted law may be altered (or at least applied differently from the origin country). It can therefore be shown that LLSV and colleagues have assigned many Eastern European, Asian, African and Latin American legal systems to a particular legal origin without any sound basis, making the claim about the superiority of the common law highly doubtful (SIEMS [2007a, pp. 62–70]).

Fourthly, it is not clear why in substance we may expect differences between civil law and common law countries. The main assumption of LLSV is that the common law tradition is characterised by independent judges and juries, relatively weaker reliance on statutes, and the preference for contracts and private litigation as a means of dealing with social harms, whereas the civil law tradition is characterised by state-employed judges, great reliance on legal and procedural codes, and a preference for state regulation over private litigation (see e.g. LA PORTA, LOPEZ-DE-SILANES, AND SHLEIFER [2006, p. 14]).

LLSV base this claim on mainstream comparative law books (e.g. DAVID AND BRIERLEY [1995], ZWEIGERT AND KÖTZ [1998]). However, this ignores that the same books vigorously emphasise the limits of the common law/civil law divide. According to DAVID AND BRIERLEY [1995, p. 21] “it is no more than a didactic device”; and according to ZWEIGERT AND KÖTZ [1998, p. 72] “any division of the legal world into families is a rough and ready device. It can be useful for the novice by putting the confusing variety of legal systems into some kind of loose order, but the experienced comparatist will have developed a ‘nose’ for the distinctive style of national legal systems”.

In particular in commercial law, which is the main concern of the LLSV studies, it is hard to justify an epistemological distinction between common law and civil law countries. For instance, the sources of company law, securities law, insolvency law, and labour regulation, are mainly codified in the entire world, even in common law countries (e.g. LELE AND SIEMS [2007b, p. 5]). It is also not self-evident that court-decisions play a larger role in common law than in civil law countries. For example, case law is not very important in English securities law, whereas, despite the lack of any specific provision, the German Supreme Court has recently established the possibility that in case of securities fraud investors can sue the deceiving directors for damages (see SIEMS [2005b, p. 304]).

3.5 Conclusion

The foregoing critique may lead some lawyers to the conclusion that the “comparative law and finance” approach should not be pursued. This reaction may not surprise LLSV and colleagues since one of them already complained that “lawyers don’t do empirical work. They just argue with each other” (SHLEIFER [2005]). However, a more reasonable response is that it has to be possible to “do better” than LLSV. The next section addresses how we have tried – and are still trying – to achieve this.

4 New Time-Series Evidence on Shareholder, Creditor and Worker Protection

This section derives from a project on “Law, Finance, and Development” based at the Centre for Business Research (CBR) of the University of Cambridge. The overall aim of the CBR project is to review the mechanisms by which legal institutions influence financial systems and thereby affect economic development. It is an interdisciplinary project combining qualitative and quantitative research methodology to yield a uniquely complete set of empirical results. The research is being carried out by a team of economists and lawyers working closely together. The following will focus on the quantitative part of our research.³

4.1 Index Construction

In the CBR project we construct new time-series indices on shareholder, creditor and worker protection in order to test which legal rules (if any) affect financial development. This is conducted in two steps. In a first step we have produced longitudinal datasets covering the period 1970–2005 for France, Germany, India, the UK and the US. These indices cover a wide range of variables: 60 for shareholder protection, 44 for creditor protection and 40 for worker protection. In total, these three indices therefore code for $(60 + 44 + 40) \times 36 \times 5 = 25,920$ observations.

In a second step we extend our research to 25 countries. The countries represented are a range of developed systems (Canada, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, Switzerland, UK, US); developing countries (Argentina, Brazil, Chile, India, Malaysia, Mexico, South Africa); and transition systems (China, Czech Republic, Latvia, Russia, Slovenia, Turkey). However, we only examine the period 1995–2005 and we also reduce the number of variables. The period was chosen in order to identify a period of time in respect of which all systems were undergoing a general move to liberalise their economies, as part of which legal reforms aimed at improving legal rules were on the agenda. The ex-

³ For our qualitative and theoretical research see e.g. BUCHANAN AND DEAKIN [2008] (on Japan); SCHNYDER [2008] (on Sweden and Switzerland); ARMOUR AND LELE [2009] (on India); CANKAR, DEAKIN, AND SIMONETI [2007] (on Slovenia); DEAKIN [2009] and SIEMS [2007a] (on legal origins); AHLERING AND DEAKIN [2007] (on institutional complementarity); SIEMS [2006b] (on legal adaptability).

tended shareholder index has just been completed; the datasets for creditor and worker protection are currently being constructed.

The full text of these indices and datasets, plus detailed explanations, can be found online.⁴ Here, for purposes of illustration, it is sufficient to present extracts of the shareholder protection index (Table 1) and of the UK coding (Table 2).

Table 1

Shareholder Protection Index (extract)

Variables	Description ⁵
<i>I. Protection against Board and Management</i>	
<i>I. Powers of the general meeting</i> ...	The following variables equal 0 if there is no power of the general meeting and 1 if there is a power of the general meeting. (1) Amendments of articles of association (2) Mergers and divisions (3) Capital measures ...

Table 2

Shareholder Protection United Kingdom (extract)

Variable	Years												
	70	71	72	73	74	75	76	77	78	79	80	81	82
<i>II</i>	1 ⁶	1	1	1	1	1	1	1	1	1	1	1	1
	1 ⁷	1	1	1	1	1	1	1	1	1	1	1	1
	1/2 ⁸	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1 ⁹	1	1

These new datasets are based on coding methods which have sought to address limitations inherent in the LLSV studies. First, the selection of variables has considered that the same functional role may be performed in different jurisdictions by rules with different formal classifications. Consequently, our main aim was that our indices should get as close as possible to representing a coherent and meaningful characterisation of the law in any given jurisdiction. This choice of variables can never be entirely objective. However, we believe that even in the smaller set of variables (the “second step”) we have chosen good proxies for the main types of shareholder, creditor and worker protection of different legal systems.

⁴ At <http://www.cbr.cam.ac.uk/research/programme2/project2-20.htm>.

⁵ Even where the description of the variables does not mention it specifically, we have given intermediate scores wherever necessary.

⁶ CA 1948, ss. 10, 23; CA 1980 Sch. 3 paras 2, 6.

⁷ CA 1948, ss. 206, 209; CA 1985, ss. 425, 427.

⁸ CA 1948, ss. 61(2), 66(1); CA 1985, 121, 135 for alteration and reduction of capital.

⁹ CA 1980, s. 14; CA 1985 s. 80 for allotment of shares.

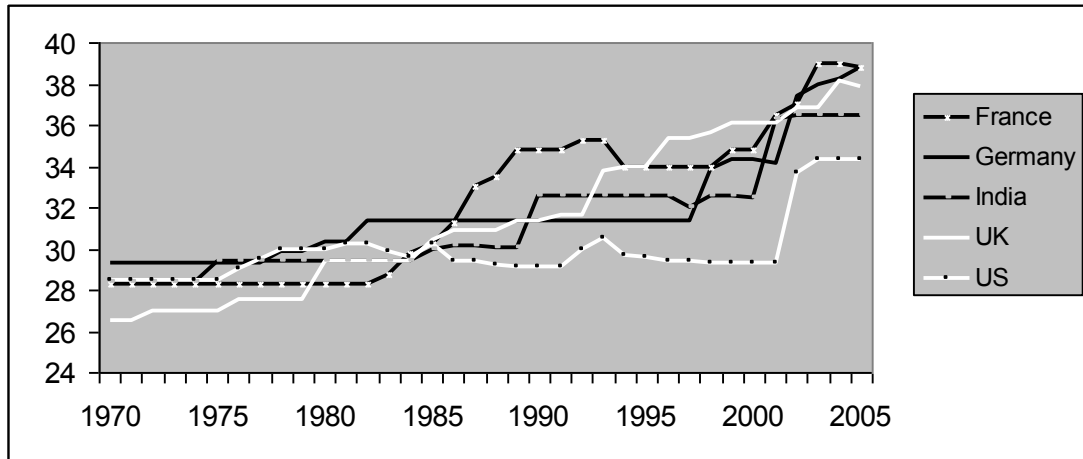
Secondly, our indices take into account a wider range of legal information. Whereas LLSV focused almost exclusively on “positive” legal rules, we include self-regulatory codes and other sources of norms which have de facto binding effect. We therefore include norms deriving from takeover and corporate governance codes which only feature to a marginal extent in the LLSV indices. We also code for particularly significant judicial decisions. Moreover, we code for a wider range of values when considering the effects of a given rule. Many of the LLSV codings use binary variables, assuming that a given rule either applies or it does not. In practice, many rules of company and securities law are “default rules” which may apply or not depending on how the parties to particular transactions choose to deal with them. The norms of corporate governance codes which follow the “comply or explain” approach offer an illustration of this: companies have a choice of either conforming to the relevant norm, or disclosing their reasons for not complying with it. But this is also a feature of many statutory rules of core company law. To code for these variations we use a wider range of values within the 0–1 scale.

Thirdly, our indices are all longitudinal. We code for legal rules as they have evolved over time. This is a far from straightforward process. It means that we have to rely on the tools of legal research to examine the state of law going back a number of years; evidence on the state of law as seen by practising lawyers, a source of information which has usefully supplemented the core LLSV indices (see, e.g., DJANKOV et al. [2008]) is not available on an historical basis. However, the advantage is that we are able to capture the dynamics of legal change over time. Such an approach may shed light on several of the contested issues, namely: how, if at all, the structure of legal institutions influences the content and efficacy of legal rules; whether the differences between legal systems are reducing over time; and whether legal reforms stimulate financial and economic development, or vice versa.

4.2 *How Well are shareholders, Creditors and Workers Protected?*

In order to determine the strength of shareholder, creditor and worker protection one can simply aggregate all variables from each of our indices. For instance, Figure 2 represents how shareholder protection law has developed in France, Germany, India, the UK and the US from 1970 to 2005. Equivalent pictures have been created for creditor and worker protection (see ARMOUR et al. [2009a], DEAKIN et al. [2007]). Table 3 summarises the results of all five-country aggregates.

Figure 2
Aggregate Shareholder Protection (60 variables)



Source: LELE AND SIEMS [2007a].

Table 3
Summary of Five-Country Aggregates

	Shareholder protection	Creditor protection	Worker protection
Strongest protection	UK, Germany, France	UK, Germany	Germany, France
Weakest protection	US	France and India	US
Direction of change	improved protection in all countries	“uneven” development in all countries	improved protection in most countries (but “uneven” in UK)
Pace of change	often incremental steps in all countries	some leaps in most countries	some leaps in UK and France; incremental steps in other countries

Source: ARMOUR et al. [2009a].

There are a number of surprises regarding the strength of protection, for instance, the weak protection of shareholders in the US, and the mixture between common law and civil law countries in the creditor protection index. Only with respect to worker protection we have the expected result that Germany and France, but not the common law countries, provide strong protection, reflecting the more extensive welfare systems of these countries. Of course, these overall aggregates only provide a very general picture. Thus, our research also reports

various sub-indices on shareholder protection (LELE AND SIEMS [2007a], [2007b], SIEMS AND LELE [2009], SIEMS [2006a], ARMOUR et al. [2009a]); worker protection (DEAKIN, LELE, AND SIEMS [2007]; ARMOUR et al. [2009a]) and creditor protection (ARMOUR et al. [2009a]).

With respect to the direction of legal change, one also has to distinguish between the different areas of law. Shareholder protection has increased in all countries whereas the development of creditor protection and labour regulation has been more “uneven”. This general pattern is remarkably consistent across both civil and common law countries. Moreover, we examined whether there are correlations between shareholder, creditor and worker protection in the individual countries. The result is that, as far as we find statistical significance, there is a positive correlation between the three areas of law, except in the UK where there is an inverse relationship between shareholder and creditor protection, on the one hand, and labour regulation on the other (DEAKIN AND SARKAR [2008]). Thus, the fact that countries react to the pressure of international capital markets by improving the protection of shareholders is not negatively correlated to changes in the protection accorded to creditors or, the UK aside, to workers.

The pace of legal change is also different between shareholder protection on one hand and creditor and worker protection on the other. Since shareholder protection has changed in more incremental steps, this confirms the impact of a corresponding market pressure, whereas path dependencies have been more pronounced in the other two areas of law. This is the case for all countries. We did not find that in some countries the legislators or courts acted more adaptable to external changes.

The extended shareholder protection index (see section 4.1, above) confirms that most countries have improved the protection of shareholders (SIEMS [2008a]; ARMOUR et al. [2009b], [2009c]). Since this index has been coded more countries, we can also distinguish between different groups of countries. For instance, it can be observed that developed countries perform better than developing countries. Further, in average, English-speaking countries perform better than the other countries of our sample. However, this should not lead to the conclusion that the common law produces more efficient results (for this claim see section 2 above). Rather, it matters that common law countries, but typically not civil law countries, share a common language and therefore it is more likely that English-speaking transplant countries continue to take developments in their origin country into account (SIEMS [2008a, pp. 137–144]; see also SPAMANN [2009]).

4.3 How Much do Legal Systems Differ?

In order to determine the differences between countries, one may just examine at the aggregates of shareholder, creditor and worker protection. Then Figure 2 (see section 4.2, above) may give the impression that in 2001 the laws of the UK, India, France and Germany were identical because all four countries had approximately the same score of 38 out of 60 variables. This would, however, not be a fair assessment. As this Figure simply shows the aggregate of all the variables, it is perfectly possible and indeed is the case, that different variables have led to similar scores for the UK, India, France and Germany. Therefore to highlight the

differences between the countries with a view to identifying trends of convergence or divergence we have calculated the differences between each variable in the law of a particular legal system and the same variable in the law of the other countries. Subsequently, the absolute values of these differences have been added together.

The results of this exercise have first been reported for shareholder protection (see LELE AND SIEMS [2007a] for the five-country index and SIEMS [2008a] for the extended shareholder protection index). In a second step, equivalent mathematical operations have been used for the five-country creditor and worker protection indices. The result is that the 25,920 observations of the initial three indices (see section 4.1, above) are transformed into $36 \times 10 \times 3 = 1,080$ observations which indicate the differences between these five countries (SIEMS [2009a]). In particular, this data can be used in order to determine whether these legal systems have converged or diverged.

Table 4
Convergence or Divergence of Laws

	Shareholder protection		Creditor protection		Worker protection		Total	
	conv.	div.	conv.	div.	conv.	div.	conv.	div.
France	2	2	2	2	1	3	5	7
Germany	2	2	2	2	1	3	5	7
India	2	2	2	2	1	3	5	7
UK	4	0	3	1	1	3	8	4
US	4	0	1	3	0	4	5	7
Total	14	6	10	10	4	16	28	32

	Shareholder protection			Creditor protection			Worker protection			Total		
	conv.	id	div.	conv.	id	div.	conv.	id	div.	conv.	id	div.
1970–1978	0	2	8	2	6	2	2	0	8	4	8	18
1979–1987	4	0	6	4	0	6	1	1	8	9	1	20
1988–1996	4	0	6	8	0	2	6	1	3	18	1	11
1997–2005	9	0	1	4	0	6	4	3	3	17	3	10

Source: SIEMS [2009a].

Table 4 shows that the laws have converged in shareholder protection, that they have diverged in worker protection, and that in creditor protection converging and diverging trends even out. It can also be seen that convergence is a recent phenomenon. In the 1970s and 1980s, even shareholder protection diverged, whereas now there is even some convergence in worker protection. Distinguishing between the five countries, France, Germany and India have fairly balanced figures in all three categories. The UK law on shareholder and creditor protection has converged with most of the other countries. US shareholder protection law has

also converged, whereas US creditor and worker protection law has diverged from the others (see SIEMS [2009a], for explanations).

4.4 Does Law Matter?

The CBR-project also examines the “comparative law and finance” claim that the quality of the law is reflected in a country’s financial development. The methods are described in detail in the papers cited in Table 5 (below). In a nutshell, our econometric methodology can be explained as follows. With respect to the 36-year time series we analysed the effects of shareholder protection in each of the countries separately, examining whether there is cointegration, i.e. a common long-run trend in legal and economic variables. Since the growing wealth of a country can have a positive effect on other economic data (such as stock market development), we included GDP (log or growth rate) as a control variable. The 11-year time series has only been completed for shareholder protection (see section 4.1, above). Here, we did not examine each country individually but used a panel data analysis. This enables us to test whether countries with high levels of shareholder protection had, as a result, more developed capital markets. It is of course the case that a number of other factors could have contributed to the development of stock markets. Therefore we have controlled for factors such as the dot-com bubble, the legal origin of a country and the quality of legal enforcement.

Table 5
Preliminary Econometric Results

	Dependent variable	Preliminary results
Shareholder protection	stock market development	France, Germany, India, UK, US (FAGERNÄS, SARKAR, AND SINGH [2008], SIEMS AND LELE [2009]): (i) <i>negative</i> relationship between shareholder protection and stock market turnover ratio in France and the UK; (ii) <i>no</i> statistically significant relationship in other countries. Twenty-country index (ARMOUR et al. [2009c]): (i) <i>negative</i> relationship between shareholder protection and number of listed firms per capita; (ii) <i>no</i> statistically significant relationship regarding the other dependent variables.
Creditor protection	Bank credit	India (DEAKIN, DEMETRIADES, AND GREGORY [2008]): <i>positive</i> relationship between banking system development and the law on creditor contracts.
Worker protection	Employment growth and labour	France, Germany, UK, US (DEAKIN AND SARKAR [2008]): (i) employment growth: <i>positively</i> related to French working time law, <i>negatively</i> related to US labour regulation; (ii) labour productivity: <i>positively</i> re-

	productivity	lated to German working time and dismissal law, and to US labour regulation; (iii) <i>no</i> statistically significant relationship in other respects.
--	--------------	--

Some of the results of Table 5 confirm the “quality of law” hypothesis. It was to be expected that the strengthening of the rights of secured creditors has helped to promote banking development in India. And it is also plausible that employment protection and working time legislation promote employment growth and labour productivity.¹⁰ However, it may be a surprise that some of our data show a negative relationship between shareholder protection and stock market development. Two specific explanations can be offered. On the one hand, this may reflect an excessive level of protection, as some studies of the impact of the US Sarbanes–Oxley Act have pointed out (LITVAK [2007]). On the other hand, an increase in shareholder protection may lead to a higher level of merger and acquisition activity, with the result that the number of listed companies decreases (for the UK see COSH AND HUGHES [2009]).

More generally, however, the question remains why in most instances we have not found any statistically significant relationship. Thus, one needs to reflect the general relationship between legal change, political economy factors, and economic growth. The absence of a significant relationship can suggest that local conditions may be setting limits to the effectiveness of legal transplants, and/or that formal convergence of laws might be masking persistent underlying diversity. This perspective is consistent with a broader shift in the literature on law and development. It can be shown that, in contrast to the assumption by LLSV and colleagues, legal rules are, to a significant degree, *endogenous* to the economic and political economy context of the systems in which they operate (see DEAKIN [2009]). However, we are still some way from fully understanding the processes involved in the law–economy relation.

5 Research Topics for a “New Comparative Law and Finance”

The insight that legal rules are endogenous to the economic and political context opens up a number of further questions. Building on the themes in our existing work, the first question which we plan to address is what factors shape legal and institutional change at national level. For instance, a “new comparative law and finance” needs to understand how far diversity across legal systems can be explained by political-economy factors such as the level of democratisation, the nature of voting systems, particular interest group configurations, and the extent of trade and market openness. Further topical sub-questions are how different legal and institutional systems respond to “shocks” such as financial crises and corporate governance scandals as drivers of legal change, and how policy-makers might

¹⁰ In an interesting paper not affiliated with our project ACHARYA, BAGHAI-WADJI, AND SUBRAMANIAN [2009] have found that there is a positive relationship between stringent labour laws and innovation.

factor these elements into more successful legal and policy frameworks for long-run financial development.

Secondly, we are going to consider the role of forces which potentially affect all systems in a globalised economy. Here, important questions are how far regulatory competition and harmonisation of norms lead to a reduction over time in the extent of cross-national diversity of legal systems, and whether there are significant differences in the effectiveness and adaptability of legal systems according to the extent to which they have been the recipients of legal transplants.

Thirdly, “new comparative law and finance” is still interested in the impact of legal and policy change on the development of financial and other markets. Following our research on shareholder, creditor and worker protection, we will therefore consider the following questions: What has been the economic impact of the increase in shareholder protection through law which most countries have experienced over the past decade? Have recent changes in the law affecting creditor rights, in particular in the areas of secured credit and insolvency procedures, in several countries, had an impact on private credit, banking development and other credit market indicators? What are the impacts of labour law changes in term of productivity, equality and growth? And finally: How do legal reforms operate in systems where the legal infrastructure is comparatively new and where legal protections for contract and property rights are of recent origin? In such systems, are legal reforms and administrative interventions substitutes for each other, or do they operate in a mutually complementary way? These are some of the issues for future research to address.

References

- ACHARYA, V., R. BAGHAI-WADJI, AND K. SUBRAMANIAN [2009], “Labor Laws and Innovation,” CEPR Discussion Paper No. DP7171, <http://www.cepr.org/pubs/dps/DP7171.asp>.
- AHLERING, B., AND S. DEAKIN [2007], “Labour Regulation, Corporate Governance and Legal Origin: A Case of Institutional Complementarity?” *Law & Society Review*, 41, 865–898.
- ARMOUR, J., S. DEAKIN, P. LELE, AND M. SIEMS [2009a], “How Legal Rules Evolve: Evidence from a Cross-Country Comparison of Shareholder, Creditor and Worker Protection,” *The American Journal of Comparative Law*, 57, 579–630.
- , —, V. MOLLIKA, AND M. SIEMS [2009b], “Law and Financial Development: What we are Learning from Time-Series Evidence,” *BYU Law Review*, forthcoming.
- , —, P. SARKAR, M. SIEMS, AND A. SINGH [2009c], “Shareholder Protection and Stock Market Development: An Empirical Test of the Legal Origins Hypothesis,” *Journal of Empirical Legal Studies*, 6, 343–381.
- AND P. LELE [2009], “Law, Finance, and Politics: The Case of India,” *Law & Society Review*, 43, 491–526.
- AND D. SKEEL [2007], “Who Writes the Rules for Hostile Takeovers, and Why? The Peculiar Divergence of US and UK Takeover Regulation,” *The Georgetown Law Journal*, 95, 1727–1794.
- BARONDES, R. [1995], “The Limits of Quantitative Legal Analyses: Chaos in Legal Scholarship and FDIC v. W.R. Grace & Co.,” *Rutgers Law Review*, 48, 161–225.

- BECK, T., AND R. LEVINE [2005], "Legal Institutions and Financial Development," pp. 251–278 in: C. Ménard and M. M. Shirley (eds.), *Handbook of New Institutional Economics*, Springer: Dordrecht.
- BERNDT, M. [2002], *Global Differences in Corporate Governance Systems*, Deutscher Universitätsverlag: Wiesbaden.
- BHAGAT, S., AND R. ROMANO [2007], "Empirical Studies of Corporate Law," pp. 945–1012 in: A. M. Polinsky and S. Shavell (eds.), *Handbook of Law and Economics*, Elsevier: Amsterdam.
- BOTERO, J., S. DJANKOV, R. LA PORTA, F. LOPEZ-DE-SILANES, AND A. SHLEIFER [2004], "The Regulation of Labour," *The Quarterly Journal of Economics*, 119, 1340–1382.
- BRAENDLE, U. [2006], "Shareholder Protection in the USA and Germany: On the Fallacy of LLSV," *German Working Papers in Law and Economics*, <http://www.bepress.com/gwp/default/vol2006/iss1/art18>.
- BUCHANAN, J., AND S. DEAKIN [2008], "Japan's Paradoxical Response to the New 'Global Standard' in Corporate Governance," *Zeitschrift für Japanisches Recht/Journal of Japanese Law*, 13, 59–84.
- CANKAR, N., S. DEAKIN, AND M. SIMONETI [2007], "The Reflexive Properties of Corporate Governance Codes: The Transplantation and Reception of the 'Comply or Explain' Approach in Slovenia," CBR Working Paper series, <http://www.cbr.cam.ac.uk/pdf/WP371.pdf>.
- CHEFFINS, B. R. [2008], *Corporate Ownership and Control: British Business Transformed*, Oxford University Press: Oxford.
- CHOR, D., AND R. FREEMAN [2005], "The 2004 Global Labour Survey: Workplace Institutions and Practices around the World," NBER Working Paper No. 11598.
- COOLS, S. [2005], "The Real Difference in Corporate Law between the United States and Continental Europe: Distribution of Powers," *The Delaware Journal of Corporate Law*, 30, 697–766.
- COOTER, R., AND T. GINSBURG [2003], "Leximetrics: Why the Same Laws are Longer in Some Countries than Others," U. Illinois Law & Economics Research Paper No. LE03-012, <http://ssrn.com/abstract=456520>.
- COSH, A., AND A. HUGHES [2009], "Takeovers after 'Takeovers'," pp. 215–236 in: P. Arestis and J. Eatwell (eds.), *Issues in Finance and Industry: Essays in Honour of Ajit Singh*, Palgrave Macmillan: Basingstoke.
- DAVID, R., AND J. E. C. BRIERLEY [1995], *Major Legal Systems in the World Today*, 3rd ed., Free Press: New York.
- DE CRUZ, P. [1999], *Comparative Law in a Changing World*, 2nd ed. Cavendish Publishing: London.
- DEAKIN, S. [2009], "Legal Origin, Juridical Form and Industrialisation in Historical Perspective: The Case of the Employment Contract and the Joint-Stock Company," *Socio-Economic Review*, 7, 35–65.
- , P. DEMETRIADES, AND J. GREGORY [2008], "Creditor Protection and Banking System Development in India," 21st Australasian Finance and Banking Conference Paper, <http://ssrn.com/abstract=1208866>.
- , P. LELE, AND M. SIEMS [2007], "The Evolution of Labour Law: Calibrating and Comparing Regulatory Regimes," *International Labour Review*, 146, 133–162.
- AND P. SARKAR [2008], "Assessing the Long-Run Economic Impact of Labour Law Systems: A Theoretical Reappraisal and Analysis of New Time Series Data," *Industrial Relations Journal*, 39, 453–487.

- DJANKOV, S., O. HART, C. MCLEISH, AND A. SHLEIFER [2007], "Private Credit in 129 Countries," *Journal of Financial Economics*, 84, 299–329.
- , R. LA PORTA, F. LOPEZ-DE-SILANES, AND A. SHLEIFER [2002], "The Regulation of Entry," *The Quarterly Journal of Economics*, 117, 1–37.
- , —, —, AND — [2003], "Courts," *The Quarterly Journal of Economics*, 118, 453–517.
- , —, —, AND — [2008], "The Law and Economics of Self-Dealing," *Journal of Financial Economics*, 88, 430–465.
- DONOHUE, J., AND S. LEVITT [2001], "The Impact of Legalized Abortion on Crime," *The Quarterly Journal of Economics*, 116, 379–420.
- EU COMMISSION [2006], "Impact Assessment on the Proposal for a Directive on the Exercise of Shareholders' Voting Rights," SEC(2006)181, <http://register.consilium.eu.int/pdf/en/06/st05/st05217-ad01.en06.pdf>
- FAGERNÄS, S., P. SARKAR, AND A. SINGH [2008], "Legal Origin, Shareholder Protection and the Stock Market: New Challenges from Time Series Analysis," pp. 20–53 in: B. Yurtoglu and K. Gugler (eds.), *The Economics of Corporate Governance and Mergers*, Edward Elgar Publishing: Cheltenham.
- GLAESER, E., AND A. SHLEIFER [2002], "Legal Origins," *The Quarterly Journal of Economics*, 117, 1193–1229.
- HANSMANN, H., AND R. KRAAKMAN [2001], "The End of History for Corporate Law," *The Georgetown Law Journal*, 89, 439–468.
- HUSA, J. [2004], "Classification of Legal Families Today: Is it Time for a Memorial Hymn?" *Revue internationale de droit comparé*, 2004, 11–38.
- KRONMAN, A. [1993], *The Lost Lawyer*, The Belknap Press of Harvard University Press: Cambridge, MA.
- LA PORTA R., F. LOPEZ-DE-SILANES, AND A. SHLEIFER [1999], "Corporate Ownership around the World," *The Journal of Finance*, 54, 471–517.
- , — AND — [2006], "What Works in Securities Laws?" *The Journal of Finance*, 61, 1–32.
- , —, AND — [2008], "The Economic Consequences of Legal Origins," *Journal of Economic Literature*, 46, 285–332.
- , —, —, AND R. VISHNY [1997], "Legal Determinants of External Finance," *The Journal of Finance*, 52, 1131–1150.
- , —, —, AND — [1998], "Law and Finance," *Journal of Political Economy*, 106, 1113–1155.
- LELE, P., AND M. SIEMS [2007a], "Shareholder Protection: A Leximetric Approach," *The Journal of Corporate Law Studies*, 7, 17–50.
- AND — [2007b], "Diversity in Shareholder Protection in Common Law Countries," *DICE-Report: A Quarterly Journal for Institutional Comparisons*, 5, 3–9.
- LITVAK, K. [2007], "Sarbanes–Oxley and the Cross-Listing Premium," *Michigan Law Review*, 105, 1857–1898.
- ÖRÜCÜ, E. [2004], "Family Trees for Legal Systems: Towards a Contemporary Approach," pp. 359–375 in: M. van Hoecke (ed.), *Epistemology and Methodology of Comparative Law*, Hart Publishing: Oxford.
- ROE, M. [2006], "Legal Origins, Politics and Modern Stock Markets," *Harvard Law Review*, 120, 460–527.
- SCHNYDER, G. [2008], "Does Social Democracy Matter? Corporate Governance Reforms in Switzerland and Sweden (1980–2005)," CBR Working Paper No. 370.

- SHLEIFER, A. [2005], cited in N. Thompson, "Common Denominator," *Legal Affairs*, http://www.legalaffairs.org/issues/January-February-2005/feature_thompson_janfeb05.msp.
- SIEMS, M. [2005a], "Numerical Comparative Law: Do we Need Statistical Evidence in Law in Order to Reduce Complexity?" *Cardozo Journal of International and Comparative Law*, 13, 521–540.
- [2005b], "What does Not Work in Comparing Securities Laws: A Critique on La Porta et al.'s Methodology," *International Company and Commercial Law Review*, 300–305.
- [2006a], "Shareholder Protection across Countries – Is the EU on the Right Track?" *DICE-Report: A Quarterly Journal for Institutional Comparisons*, 4, 39–43.
- [2006b], "Legal Adaptability in Elbonia," *International Journal of Law in Context*, 2, 393–408.
- [2007a], "Legal Origins: Reconciling Law & Finance and Comparative Law," *McGill Law Journal*, 52, 55–81.
- [2007b], "The End of Comparative Law," *The Journal of Comparative Law*, 2, 133–150.
- [2008a], "Shareholder Protection around the World ('Leximetric II')," *The Delaware Journal of Corporate Law*, 33, 111–147.
- [2008b], *Convergence in Shareholder Law*, Cambridge University Press: Cambridge.
- [2008c], "Statistische Rechtsvergleichung," *Rabels Zeitschrift für ausländisches und internationales Privatrecht (RabelsZ)*, 72, 354–390.
- [2009a], "Shareholder, Creditor and Worker Protection: Time Series Evidence about the Differences between French, German, Indian, UK and US Law," Working Paper, <http://ssrn.com/abstract=1329997>.
- [2009b], "Citation Patterns of the German Federal Supreme Court and the Court of Appeal of England," Working Paper, <http://ssrn.com/abstract=1305185>.
- AND P. LELE [2009], "Der Schutz von Aktionären im Rechtsvergleich: Eine leximetrische und ökonometrische Untersuchung," *Zeitschrift für das gesamte Handels- und Wirtschaftsrecht (ZHR)*, 173, 119–141.
- SPAMANN, H. [2006], "On the Insignificance and/or Endogeneity of La Porta et al.'s 'Anti-Director Rights Index' under Consistent Coding," ECGI Law Working Paper No. 67/2006.
- [2008], "'Law and Finance' Revisited," Harvard Law School John M. Olin Center, Discussion Paper No. 12, <http://ssrn.com/abstract=1095526>.
- [2009], "Contemporary Legal Transplants – Legal Families and the Diffusion of (Corporate) Law," *BYU Law Review*, forthcoming.
- VAGTS, D. [2000], "Comparative Company Law – The New Wave," pp. 595–605 in: R. Schweizer, H. Burkert, and U. Gasser (eds.), *Festschrift für Druey*, Schulthess Verlag: Zürich.
- VOGENAUER, S. [2005], "An Empire of Light? Learning and Lawmaking in the History of German Law," *The Cambridge Law Journal*, 65, 481–500.
- WORLD BANK [2008], *Doing Business Report*, <http://www.doingbusiness.org>.
- ZIMMERMANN, R. [1998], "Savignys Vermächtnis," *Juristische Blätter (JBl)*, 1998, 273–293.
- ZWEIGERT, K., AND H. KÖTZ [1998], *Introduction to Comparative Law*, 3rd ed., transl. by T. Weir, Oxford University Press: Oxford.