

Twenty Years of ‘Law and Finance’: Time to Take Law Seriously

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ABSTRACT

This ‘state of the art’ essay provides a comprehensive discussion of the Law and Finance School (LFS) literature. We show that the first two decades of the LFS have focused on empirically investigating the question ‘does law matter?’ Yet, despite the centrality of law to the LFS, it is based on an incoherent theory of law, which leads to shortcomings in the conceptualisation and empirical testing of its hypotheses. We also observe that, rather than addressing this deficiency, the LFS has moved its focus to the contentious concept of ‘legal origin.’ We argue that the LFS needs to take law more seriously by returning to its initial focus on the substance of legal rules and by addressing the theoretical question ‘*how* does law matter?’ We propose venues for future research to develop a solid theoretical framework that would put the empirical investigation of law’s impact on economic outcomes on a more solid footing. [153 words]

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1. Introduction

Over the last twenty years, the so-called Law and Finance School (hereinafter LFS) has become an important stream of research in management and socio-economic studies. The LFS departs from a series of articles co-authored by Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny in 1997 (La Porta et al. 1997). At the academic level, the LFS is part of a broader trend of rediscovery since the 1980s of the importance of institutions in determining economic outcomes not just in economics (North 1990; Acemoglu and Robinson 2012), but also in political science (Hall and Taylor 1996), and organisation studies (DiMaggio and Powell 1984).

The influence of this school both in academia and economic policy can hardly be overstated. For instance, Schiehl and Martins' (2016) review shows that the two main explanatory variables from the LFS, 'legal origin' and the quality of law in terms of 'investor protection,' are by far the most common country-level factors used as independent variables in cross-country governance research in political economy, management, economics, and finance. Specifically, these two explanatory variables are widely used in empirical studies in various fields not only to explain patterns of corporate finance, ownership, and control structures (Volmer et al. 2007; Bedu and Montalban 2013; Colli 2013; Callaghan 2015; Lehrer and Celo 2016), but also public administration regimes (Tepe et al. 2010), features of national labour markets (Schneider and Karcher 2010; Emmenegger and Marx 2011; Darcillon 2015; all citing Botero et al. 2004), the nature and size of the informal sector (Adriaenssen and Hendrickx 2015), and more generally institutionalised trust (Witt and Redding 2013; Huo 2014; citing La Porta et al. 1998 and 2000). Thus, the LFS has become the dominant legal approach not only in comparative economics, but also in comparative management, international business and corporate governance research (for overviews see Jackson and Deeg 2008; Aguilera and Jackson 2010; Schiehl and Martins 2016).

However, despite its extraordinary influence, the LFS has also come under a great deal of criticism. Scholars have documented biases in the selection of legal variables, inaccurate and not rigorous coding of laws and endogeneity problems (e.g., Milhaupt and Pistor 2008; Aguilera and Williams 2009; Armour et al. 2009a; Spamann 2010). Another prominent line of criticism points out that the LFS exaggerates the importance of law and neglects the influence of other factors – such as history and politics – on corporate governance and finance patterns (e.g., Coffee 2000; Cheffins 2001; Roe 2006; Dam 2006; Roe and Siegel 2009).

Contrary to these well-known criticisms, we argue, based on a comprehensive review of the first twenty years of LSF scholarship, that the LFS's challenge is not that it takes law too seriously, but that, conceptually, it does not take law seriously enough. Indeed, possibly reacting to criticisms, the LFS has increasingly broadened the definition of 'law', retracting somewhat from the original claim that the *substantive* aspects of a country's laws matter for corporate governance and financial development. Instead, differences in enforcement as well as other broad features of a country's legal, political, and even 'ideological' system captured by their notion of 'legal origin' are considered the underlying explanatory factors (cf. e.g. La Porta et al. 2006 and 2008). Moreover, the definition of 'legal origin' has shifted from a narrow statement about the rooting of a country's law in one of four legal families to a much broader definition of a country's 'style of social control' of the economy (La Porta et al. 2008). As a result, the importance of the actual substance of the law – prominent in the earlier studies – has become relegated to the background.

Our systematic review unveils that the LFS, despite two decades of research confidently claiming that 'law matters,' fails to have a clear theoretical understanding about the impact of law on economic outcomes. It draws on various strands of legal scholarship yet ignores the critical fact that different legal theories offer at times contradictory arguments of how law deploys its impact on actors. Thus, as we will show, many LFS studies clearly adopt a position close to the 'coercive theory of law' where the threat of punishment is the only motivation for actors to obey the law. Yet, the LFS's empirical strategy is to investigate the impact of law on economic outcomes that are not directly targeted by the law in question. This is consistent with a normative theory of law – where law motivates actors by signalling appropriate behaviour – but not with the coercive theory. Similarly, as we will elaborate, the LFS explicitly adheres to a customary-evolutionary view of the law that stresses the need for organically grown and community-based legal rules, while explicitly advocating the fundamentally incompatible point of instrumentally using law and legal transplants for economic reform.

These are more than aesthetic flaws in the LFS's theoretical underpinnings as they affect the empirical application of the LFS thesis. Indeed, there is a tendency amongst empirically orientated scholars to underestimate the importance of theory (Deaton and Cartwright, 2010). This unfortunately leads to operationalise variables and specify statistical models in ways that are inconsistent across studies and not grounded in solid theoretical claims (Schiehll and Martins 2016). We argue that this oversight of legal theory greatly limits the

potential of the LFS to contribute to our understanding of the role of law in the economy. For this purpose, we assess the theoretical claims contained implicitly or explicitly in the LFS studies against key conceptual dimensions that we derive from several established theories of law in order to answer the question: *What theoretical assumptions regarding the nature, function, validity, and impact of law on economic outcomes inform the LFS research programme?*

This review article proceeds as follows: Section 2 sets the scene by summarising the key claims and empirical findings of the first twenty years of LFS studies and outlines different theories of law and their key dimensions. On this basis, Sections 3 to 5 analyse what the LFS literature has to say about what law is, what good law is, and how law impacts economic actors' behaviour. Section 6 concludes with a discussion of the implications of our findings. We advocate that future research should not abandon the investigation of how *substantive* differences in laws affect different economic outcomes. Rather, we propose to develop a more solid theoretical framework, which is unequivocal about the key assumptions regarding the role of law in the economy. We argue that this framework includes as a minimum explicitly conceptualising three dimensions of law: the law's nature and primary function; its necessary content (if any) and its relationship with morals; and how it deploys its behavioural effects on law-takers. Such a conceptualisation of law will allow researchers to design more robust empirical tests of whether and how law matters in the economy, addressing thus one of the key shortcomings of the first twenty years of Law & Finance research (see Schiehl and Martins 2016).

2. Setting the scene

2.1 Overview of the LFS: Quality of law and legal origins

We have conducted a comprehensive review of the LFS literature relevant to legal or institutional factors. To this effect, we compiled all articles published by the four original authors (La Porta, Lopez-de-Silanes, Shleifer, and Vishny) since 1997. We excluded articles that used legal or institutional factors as mere control variables, including those that focused on areas unrelated to socio-economic issues (e.g. Djankov et al. 2010a on disclosure by politicians). Several articles by other authors were added if considered to be closely related to the LFS tradition, because they either co-authored with La Porta et al. (e.g., Edward Glaeser, Simeon Djankov, Nicola Gennaioli) or because La Porta et al have repeatedly and approvingly cited their work (e.g., Paul Mahoney, Thorsten Beck, Ross Levine). We also added articles by scholars who co-authored articles with La Porta et al., but then also authored their

own articles in the LFS tradition. Overall, we reviewed 56 articles published between 1997 and 2017, which we consider to constitute the core of the LFS (see Table 2 in the Appendix).¹ The majority of them are empirical studies, while thirteen are theoretical, and one is a review paper.

Starting from the LFS's fundamental assumption that 'law matters' for economic outcomes, the early LFS publications developed two key claims: firstly, that the 'quality' – defined in terms of the strength of minority shareholder protection – of a country's company law determines key features of companies' and countries' corporate governance systems, such as ownership concentration, corporate finance choices, and the size of countries' stock markets (e.g. La Porta et al. 1997, 1998, 1999, 2000). This implies that law also impacts economic growth by favouring companies' growth prospects (Levine 1999; Beck et al. 2000; Claessens and Laeven 2003). Secondly, the LFS claims that the quality of law is not randomly distributed across countries, but rather is a function of the country's 'legal origin' in either common law, or different families of civil law (La Porta et al. 1997 among others).

The first of these claims is often referred to as the 'quality of law' (Armour et al. 2009a) or 'law matters' thesis (Deakin et al. 2011), which explains economic outcomes based on substantive features of a country's company law such as the level of property right protection (e.g. La Porta et al. 1997). However, rather quickly, the focus of the LFS shifted from measuring the *substantive* quality of different laws – and indeed law *per se* – to the second claim, namely that economic outcomes are determined by more fundamental historically-grown features of a country's legal and political system.

The LFS distinguishes four different 'legal origins' based on the grounding of countries' laws in four 'mother systems': English Common Law, French-, German-, or Scandinavian Civil Law. According to the LFS, these legal origins reflect or highly correlate with more fundamental differences between common law countries and other legal systems. For example, La Porta et al. (2008: 303, fn 12) initially express the view 'that legal origin theory is intimately related to the discussion of the varieties of capitalism,' but then also suggest that the notion of legal origins may well replace the one of varieties of capitalism as an 'objective measure of different types' of economic systems.

¹ Conversely, we did not review the vast empirical literature that applies or empirically tests the LFS concepts because such empirical studies do often not contain *any* theoretical development about the role of law and legal origin in the economy, but simply refer to the respective LFS articles (Schiehll and Martins 2016 provides a partial review of that literature).

Contrary to the narrow concept of ‘legal quality,’ ‘legal origins’ evolved into a more encompassing and even philosophical category distinguishing types of countries. Thus, Mahoney (2001: 511) claims that the difference boils down to common law countries defining ‘liberty’ based on the Humian-Lockian tradition as individual liberty, while civil law countries follow the Hobbesian-Rousseauist tradition of seeking to achieve liberty through collective goals pursued by the state. This, in turn, implies that the ‘legal origins theory’ is essentially about the level of state intervention in the economy (also La Porta et al. 2008).

The increasingly broad definition of legal origins also leads the LFS to the verge of rather culturalist arguments about the superiority of certain civilisations over others: La Porta et al. (1997b: 333) essentially suggest that Catholicism and Islam are inferior to Protestantism in terms of economic outcomes because these civilizations prevent the emergence of ‘horizontal trust’ among citizens. In fact, La Porta et al. (2004: 445) explicitly state that there are ‘significant benefits of the Anglo-American system of government for freedom.’

Despite this shift from the substance of legal rules to ‘legal origins’ in the scholarly LFS literature, practitioners in international financial institutions continue to develop reform programmes and policy advice that draw on the LFS’s original focus on legal reform as prime means of economic development. Thus, the World Bank’s Doing Business Reports (DBRs), annually updated since 2004, directly draw on the LFS regarding shareholder and creditor protection, while extending its logic to legal rules related to taxation, electricity, construction permits, cross-border trade and public procurement (The World Bank 2004-2017). The DBRs also provide country rankings on various dimensions. While common law countries top most of these rankings, civil law countries have implemented reforms that saw them rise in these rankings. However, it has recently been shown that these improvements in the rankings did not lead to improvements in the countries’ real economy (Oto-Peralías and Romero-Ávila 2017). Therefore, the link between legal reform and economic outcomes seems tenuous despite two decades of intensive LFS research. Below, we will argue that this is at least partly due to a lack of coherent theorisation of the role of law.

In the next sub-section, we review the empirical findings regarding the legal variables defined by the LFS and economic outcomes in more detail.

2.2 Empirical Findings of 20 years of LFS

Most of the attention of LFS scholars as well as the extensive scholarship criticising the approach has focused on the empirical side, including issues of measurement (Spamann 2010; Schnyder 2012), methodologies (Deakin et al. 2011), and interpretation of findings

(Deakin et al. 2018). In this section, we briefly review the empirical findings of the first twenty years of the LFS (see also the final column of Table 2 in the Appendix).

A first observation concerns the empirical implications of the above-mentioned change in the main legal variables used in the LFS studies from ‘quality of law’ to ‘legal origin.’ The earliest studies focussed on substantive legal rules on minority shareholder protection, such as the one-share, one vote rule and the so-called Anti-Director Rights Index (ADRI) (La Porta et al. 1997). ‘Legal origin’ was merely used as an instrument variable to control for endogeneity. Yet, over the next years, legal origins evolved into an explanatory variable in its own right and – in a process of ‘conceptual stretching’ (Sartori 1970) – became increasingly broadly defined. Thus, while the earliest studies defined legal origins simply as the origin of the country’s commercial law in one of four legal families, by 2008, La Porta et al. (2008: 286) define legal origins ‘as a style of social control of economic life (and maybe of other aspects of life as well).’ This broad definition of legal origins as ‘regulatory style’ is used as a catch-all category that covers many aspects of what La Porta et al. (2008: 308) call ‘legal infrastructure,’ including ideology and culture. Contrary to the substantive aspects of law, legal origins are considered to be less malleable and more stable over time (Deakin et al. 2011). In spite of its vagueness, it is legal origins – broadly defined – that has increasingly become the main focus of LFS studies, while substantive legal rules are relegated to the role of intermediary variables that are more malleable than the legal infrastructure but ultimately just epiphenomenal to legal origin. Thus, in a review of the first ten years of their main studies, La Porta et al. (2008: 292) list the following – broadly legal or political – intermediary variables that are explained by legal origins and in turn explain a range of economic outcomes: (i) procedural formalism, (ii) judicial independence, (iii) regulation of entry, (iv) government ownership of the media, (v) labour laws, (vi) conscription, (vii) company law, (viii) securities law, (ix) bankruptcy law, and (x) government ownership of banks.

In parallel, the dependent variables also become increasingly broad and varied. The initial focus was on investigating the impact of legal factors on economic outcomes. The main claim of the LFS was that the level of legal minority shareholder and creditor protection influences the financial development of a country (La Porta et al. 1998), which in turn has been shown to be linked to higher economic growth rates (cf. Levine 1999; Beck et al. 2000) and political and economic freedom (La Porta et al. 2004). Financial development was proxied by variables such as the overall stock market capitalisation divided by GDP, the value of stock traded to GDP, the number of listed firms as a proportion of the country’s population,

the number of initial public offerings as a proportion of the size of the economy, and the concentration of firm ownership (La Porta et al. 2008; Djankov et al. 2008). The range of political and economic outcomes explained by legal variables progressively increased. The ten-year review paper by La Porta et al. (2008: 292) states that legal aspects were shown to explain a large number of economic outcomes such as the control premium on sales of blocks of shares, private credit, interest rate spread, labour market participation rates, unemployment levels, corruption, the size of the unofficial economy, the time to evict a non-paying tenant, and the time to collect a bounced check.

Since this seminal 2008 article, the LFS has further broadened its scope by successively adding new aspects of a country's legal system to the explanatory model and applying this model to new outcome variables. Thus, Djankov et al. (2010) find an impact of tax law on investment and level of entrepreneurship. La Porta and Shleifer (2014) uncover evidence for cost of compliance with law on the size of the informal sector. Djankov et al. (2016) turn to the *perception* of the quality of government to explain Eastern European peoples' happiness. Moreover, while the LFS abstained for a long time from directly investigating GDP growth rates (Djankov et al. 2008; Deakin et al. 2011), a few studies progressively shifted towards more general measures of economic development including the impact of tax law on FDI, investment, and entrepreneurship (Djankov et al. 2010b), and the impact of legal trade restrictions on the volume of trade (Djankov et al. 2010c), regional income level convergence, and growth (Gennaioli et al. 2014).

A second stream of empirical studies developed in parallel, and took in legal factors as dependent variables. These studies investigate the impact of legal origins or societal characteristics (e.g. prevailing religion, level of trust in a society) on the shape and form of regulatory and judicial systems. They focus on variables such as the demand for state intervention and regulation (Aghion et al. 2010), the level of legal formalism (Balas et al. 2009), judicial discretion (Gennaioli and Shleifer 2008), biases in judicial decision making (Bordalo et al. 2015), perception of lawfulness (Glaeser et al. 2016), regulatory reform (Djankov et al. 2017). These studies complement the first group by investigating what features of a country lead to legal and judicial systems yielding superior economic outcomes.

The core LFS studies generally finds that in all these areas and regardless of the legal measure used, aspects of the legal and judicial system associated with the 'common law' tradition produce 'better' outcomes than those associated with 'civil law' countries (Djankov et al. 2008). However, this claim is contested by authors not associated with the LFS who use

their legal variables and coding in comparative studies. For example, a meta-analysis that investigated the use of LFS variables in comparative corporate governance research finds that ‘[a]lthough there is consistent evidence that investor protection has a fundamental effect on financial market development and firm ownership structure, its effect on the use of other firm-level governance mechanisms or their effectiveness is less convincing’ (Schiehll and Martins 2016: 189).

Others have gone beyond using LFS own measures in their empirical research. Instead, they revisit the LFS findings based on re-coded legal indices (Spamann 2010), different statistical methods, and longitudinal rather than cross-sectional data (Deakin et al. 2018). In general, these studies uncover findings that are much less consistent with the LFS claims about the impact of law on economic outcomes and in particular about the superiority of common law over civil law.

We join these critics in arguing that one reason for the discrepancies and lack of robustness in empirical findings has to do with the weak theorisation of the legal factors in the LFS. Thus, Schiehll and Martins (2016: 189) note a ‘wide variation’ in the operationalisation and interpretation of the LFS legal measures used in comparative studies. They conclude that a rigorous and globally relevant understanding of comparative corporate governance requires ‘a more conscientious match between theorized associations and empirical tests’ (Schiehll and Martins 2016: 195). Similarly, Deakin et al. (2011: 3) state that the absence of clear evidence for a direct link between legal origin and economic outcomes such as GDP growth suggests that ‘there are aspects of the relationship between the legal system and national economic performance which have yet to be unravelled.’

In this respect, moving from a focus on substantive features of law (the quality of law) towards much broader factors (legal origins) has led the LFS to dodge the theoretical question of the role of law in the economy, rather than to contribute to answering it. This is an unfortunate development, because it diverts our attention away from the key challenge of showing not just *that* law matters, but also *how* it matters. Rather than continuing the debate about legal origins (e.g. Oto-Peralías and Romero-Ávila 2017; Deakin et al. 2017b; Deakin and Pistor 2012; Siems 2007), we pledge that the LFS needs to renew its initial ambition to investigate the impact of legal rules on economic practices and outcomes.

As an important first step, we revisit the often-neglected weaknesses in the theoretical assumptions about law underpinning the LFS. We investigate this question by drawing on five classical legal theories to assess what the LFS has to say about law and to suggest ways

in which future research can develop a more solid theory of the role of law in the economy. This, we argue, would make the empirical application of the LFS more robust and is therefore a key area for future research.

2.3 Overview of different theories of law and their key dimensions

Legal theory is a vast area of research. Therefore, we selected the most relevant theories based on our aim to relate them to the LFS. Since the LFS emerged in the US in the late 20th century, we focus on modern Western and mainly Anglo-Saxon legal theories and neglect non-Western approaches to the law which are very unlikely to have constituted the basis for the LFS. In this regard, we follow Tamanaha's (2017) insight that theories of law have to be understood within the specific social context in which they have emerged.

Specifically, we focus on the following five theories of law, which have played a crucial role in Western scholarship and practice: natural law theory, exclusive/strong legal positivism, inclusive/weak legal positivism, legal realism, and Hayek's functional-evolutionary spontaneous order theory of law. Based on our reading of these legal theories, we identify three key dimensions that are necessary to theoretically fully define the concept of law: the 'nature and primary function of law', the 'content of law,' and the 'behavioural effect of law'.

Insert Table 1 about here

Table 1 illustrates the opposing views of legal theories as well as the linkages between the three dimensions. The table also presents an initial comparison with the general position of the LFS. In each of the following three sections, we first discuss where the LFS falls relative to each dimension of legal theories in more detail (sections 3.1, 4.1, and 5.1 below) and subsequently we offer suggestions regarding where future LFS research should focus its attention in order to 'take law seriously' (sections 3.2, 4.2 and 4.3 below).

3. Dimension 1: Nature and primary function of law

The term 'nature of law' is the most basic dimension of any theory of law. It describes what type of rule or order is considered as 'valid law'. In particular, it refers to the source of authority for law's validity. Table 1 summarises the different sources of legal validity, which

range from god or nature (in the natural law theory), sovereignty (strong legal positivists), social convention (weak/inclusive legal positivists), the judge's rulings (legal realists), to tradition (evolutionary theory).

In addition, we use the term 'primary function of law' to capture what different legal theories see as the fundamental purpose that law fulfils in a society. We call this the *primary* function, because it refers to a more fundamental function than specific laws' more immediate functions (such as a road code's function to prevent accidents). Furthermore, we distinguish the primary function of law from the role of law in the sense that the former is not necessarily an empirically verified claim, but rather a theoretical or even normative statement about the fundamental purpose of law in society. Conversely, we use 'role of law' to describe a broader range of empirically verifiable phenomena including the effect of law on actors' behaviours (our third dimension) and on overall economic outcomes.

3.1 Positioning the LFS towards the nature and primary function of law

There is no explicit reference to the source of validity of law in the LFS. However, related to the nature and validity of law, the LFS justifies law – including state law – based on its significance for the efficiency of particular outcomes, such as economic growth (see also section 2.2 above). This may sound obvious, but starkly contrasts with other streams of Law and Economics who – based on the Coase theorem (Coase 1960) – find that optimal solutions to allocation problems can usually be found merely based on market forces and private contracts, as long as the contracts are enforceable (Stigler 1964; Fama 1980; Easterbrook and Fischel 1991). On this account, no market regulation is required to achieve optimal outcomes; tort and contract law will suffice. The LFS on the other hand emphasises the significance of laws in general and even supports government regulation under certain conditions (La Porta et al. 2000a: 7). For example, Glaeser and Shleifer (2002: 1223) argue that

'[e]conomists generally agree that the state's main role in the economy is to protect property rights. [...] The trouble with this imperative is that it does not tell us exactly how the state can design a functional legal system, and what it takes to "protect property rights."'

This insight stems from the fact that the LFS, which Posner (2006: 412) calls the 'fourth generation' of Law and Economics, has shifted its focus towards the international and comparative analysis of law. The comparative analysis reveals that, depending on the local context, the primary function of law may be a more extensive and benign one than other

branches (or generations) of Law and Economics have acknowledged. Therefore, state law is not rejected *per se*; rather, identifying the circumstances under which law is the preferred institutional choice to protect property rights compared to private contracting is one of the LFS' main goals (see further section 4.2 below, concerning the content of the law).

We find three interrelated arguments in the LFS literature explaining when state law and public enforcement should be preferred to private contracting. First, state law may be more efficient than a system of pure private ordering in countries where the general level of 'law and order' is only 'moderate' (Glaeser and Shleifer 2003: 403). Second, depending on the 'enforcement environment,' public enforcement may be a better choice than private litigation. This is for instance the case when contracts are complex and judges may not have the required specialised skills to enforce them (Glaeser and Shleifer 2002; Djankov et al. 2003b: 605). Third, broad socio-economic factors may affect the choice of the optimal regulatory regime. High economic and political inequality favour the subversion of courts by powerful litigants, leading to a situation where the 'strong' not the 'just' win court cases (Glaeser and Shleifer 2002; Glaeser et al. 2003).

In other words, the LFS treats the choice of the optimal regulatory regime as an empirical question depending on the 'enforcement environment' and other factors, which leaves room even for state intervention and regulation. To be sure, state intervention is always a second-best solution and the domain of market failures making it necessary is 'extremely limited' (Shleifer 2005: 440; also Glaeser and Shleifer 2003). For example, La Porta et al. (2006) find that in securities law, private enforcement is preferred to public enforcement. Still, overall, the LFS ascribes to law a more important and potentially more benign function in society and the economy than related fields of research such as Posnerian Law and Economics (starting with Posner 1973).

Regarding the primary function of law, the focus of the LFS is on the protection of property rights widely understood (e.g. La Porta et al. 1997: 1149 and 1999: 222; Mahoney 2001: 523). For instance, the protection of minority shareholder rights through company law is necessary because of the risk of expropriation of shareholders by insiders (see Jensen and Meckling 1976). In such a situation, the law confers shareholders 'certain powers to protect their investment against expropriation by insiders' (La Porta et al. 2000b: 3), which in turn creates incentives for financiers to make external finance available to companies, leads to more developed stock markets, dispersed ownership structures (e.g. La Porta et al. 1997, 1998, 1999, 2000a) and ultimately faster growing firms (Levine 1999).

Milhaupt and Pistor (2008) have criticised the LFS for exclusively focussing on this protective function of law. However, some of the LFS articles do contain a somewhat more variegated view of the functions of law. For example, Djankov et al. (2003: 596) state that:

‘Since the days of the Enlightenment, economists have agreed that good economic institutions must secure property rights, enabling people to keep the returns on their investment, make contracts, and resolve disputes.’

Here, two additional functions of law are mentioned. First, the phrase ‘enabling people [...] to make contracts’ hints at the enabling or coordinative function of law rather than its protective one. This function consists in providing actors with instruments – such as contracts – that help them coordinate their economic activities with other actors while negotiating the precise allocation of property rights within the boundaries of the law (Milhaupt and Pistor 2008: 7). Second, solving disputes is a distinct function of law that mainly relates to the laws’ enforcement through litigation. The effectiveness of enforcement has also become an increasingly important concern for the LFS and will be discussed in section 5 below.

3.2 Discussion and suggestions for future research

It follows from the foregoing analysis that the LFS does not seem to adopt one clear definition of the nature and primary function of law. The protective function of law is most closely associated with strong legal positivism, in the sense that the latter narrowly defines the function of law in terms of preventing misbehaviour by threatening punishment. The enabling function, on the other hand, would suggest a certain proximity of the LFS’ theory of law with ‘inclusive positivism,’ because the latter conceives of legal rules not only as dissuading citizens from committing harmful actions, but also enabling them to do things they could not do without the law (e.g. concluding a contract) (see Table 1). The dispute-solving function, on the other hand, is key to ‘legal realism’ which defines law not as what the lawmaker says the law is, but what the judge actually enforces in the court of law (see Green 2005, as well as Table 1, above).

While more recent legal scholarship acknowledges that law may simultaneously fulfil more than one function (Milhaupt and Pistor 2008), the issue is that the LFS fails to discuss the implications for the causal link between law and economic outcomes of the multi-functionality of law that they implicitly acknowledge. Indeed, in the LFS the postulated impact of shareholder protection law on economic outcomes (stock market development) is exclusively

premised on the protective function. Yet, acknowledging that law also performs other functions (such as the coordinative-enabling function theorised in Hart's inclusive positivism), the postulated causal link between legal rules and economic outcome may not hold anymore. This is a serious oversight for a research programme on the impact of law on economic outcomes and may explain why empirical studies remain inconclusive. Indeed, as Schiehl and Martins (2016: 195) argue, the weak empirical evidence for a link between country-level variables – the most widely-used ones are legal origin and quality of law derived from the LFS – and economic outcomes is explained by the fact that 'country-level variables are conceived and applied differently across studies', therefore calling for a '[...] more conscientious match between theorized associations and empirical tests'.

The multiple functions of law also have critical implications for the measurement of the legal variables used in the LFS (see further section 5.2, below). Most of the LFS studies use simple aggregates of all legal variables, for example, related to shareholder protection, by summing up the values of any legal rules that protect shareholders (La Porta et al. 1997). However, recent studies suggest that the function of law may not just vary from one context to the other, or from one law to the other, but each legal rule may fall into a specific category. For example, Katelouzou and Siems (2015) distinguish 'enabling' from 'paternalistic rules' of shareholder protection and establish how preference for one or the other varies across time and countries. This latter study (unaffiliated with the LFS) can therefore be seen as an applied approach considering different functions of law. It also shows that acknowledging the multifunctionality of law can require empirical work to account for different types of legal rules, for example, by creating sub-indices that show different country preferences for different forms and notions of law.

4. Dimension 2: Content of Law

A second key dimension that distinguishes legal theories is a conception of whether or not law needs to have a certain content (either procedural or substantive) in order to be considered valid. This also relates to the question about laws relationship with morals. Two fundamentally opposing views exist. On the one hand, the natural law perspective posits that law must respect some extra-legal standards to be considered valid or 'good' law. This can be based on the notion that certain moral rules and principles (e.g., fairness) are objectively good (see for a 'modern' statement of this view, Finnis 2011[1980]). On the other hand, a strong

legal positivist view simply regards anything the sovereign decides to be law is law, independently of its content and form. Other legal theories adopt variations of these two views (see Table 1).

4.1 Positioning the LFS towards the Content of Law

The LFS rejects legal positivism. La Porta et al. (2008: fn 2) associate legal positivism with the socialist legal tradition that conceives of law as the ‘expression of the will of the legislator as supreme interpreter of justice’ (*ibid.*). Given that socialist legal origin countries tend to perform poorly in the empirical studies of the LFS and given the clear preference for decentralised over centralisation of political and judicial power (Djankov et al. 2003; Glaeser and Shleifer 2002), it follows that legal positivism is not the LFS’s preferred legal theory.

This is further supported by the LFS’s frequent and extensive borrowing from Hayek regarding the customary and evolutionary nature of efficient law (La Porta et al. 1999: 226; Mahoney 2001, Shleifer and Wolfenzon 2002; Glaeser and Shleifer 2002: 1220; Djankov et al. 2003a: 600; Djankov et al. 2003b: 458; La Porta et al. 2004: 445; Beck et al. 2005: 212) and the distinction between law and legislation (Shleifer 2005: 443). Hayek’s writings contain scathing criticisms of legal positivism, with Angner (2007) noting that his theory of law can be considered close to the natural law tradition. For example, Hayek (2011[1961]: 224) states that ‘[c]ommands that are called law merely because they emanate from a legislator are the “chief instrument of oppression” and the chief cause of the decline of liberty.’

Rejecting positivism and its claim that it is the sovereign who decides without extra-legal limitation what law is, implies accepting the alternative, non-positivist proposition that law must conform with certain extra-legal criteria to be valid. This is supported by the observation that the LFS extensively uses normative terms like ‘good law’, ‘good governance’, ‘good government’, ‘improve’, ‘better,’ to characterise legal systems (e.g., La Porta et al., 1997a: 1194; La Porta et al. 1999: 505; 2000: 6, 20; Glaeser et al. 2003: 272).

Furthermore, the LFS clearly distinguishes between ‘bad’ (undesirable, harmful) behaviours and illegal behaviours, a distinction that hints at the view that extra-legal criteria and not just the law determines what is and what is not considered legitimate behaviours. Johnson et al. (2000b: fn 1) notes that ‘many forms of stealing are actually legal in countries with weak legal environments.’ Similarly, Johnson et al. (2000a: 23) define ‘tunnelling’ as including ‘outright theft or fraud, which are illegal everywhere’ and other transactions (e.g., excessive executive compensation), which are not illegal in many countries. Further, Djankov et

al.'s (2008) Anti-Self-Dealing Index (ASDI) measures the extent to which minority shareholders can oppose self-dealing transactions by controlling shareholders where 'a controlling shareholder wants to enrich himself *while following the law*' (Djankov et al. 2008: 432; emphasis added).

From a legal positivist view, these statements are outside the domain of law, because they refer to extra-legal criteria to judge a given action. Indeed, certain behaviours and transactions are categorised as undesirable (or 'bad') *even when the positive laws of the country in question do not prohibit them*. The implication is that 'theft', 'fraud', etc. have an existence independent of the positive law in a given country.

The question arises on what normative basis the assessment is made that minority shareholders *ought* to have a right to prevent certain transactions. The most explicit passage is the one by Johnson et al. (2000: 11) stating that in civil law countries '[s]elf-dealing transactions are assessed in light of their conformity with statutes and not on the basis of their fairness to minorities.' Therefore, the reason why 'self-dealing' is considered inherently bad appears is a *substantive* one, namely that it is incompatible with the general principle of 'fairness to minorities,' which is independent of what the positive law says. The 'quality' of a country's laws is hence assessed against extra-legal standards, which are not explicitly part of the country's positive law (and maybe not even of its social norms). The LFS therefore acts on the assumption that laws must conform to certain normative principles (such as fairness) to be considered 'good' or even valid. Yet, it fails to specify from where extra-legal principles such as fairness derive their authority.

Conversely, another definition of good law in the LFS is based on a *non-substantive* criterion of 'goodness,' namely the ease with which a law is enforceable in a given context. For example, La Porta et al. (2000a: 22) state that

'(...) good legal rules are the ones that a country can enforce. The strategy for reform is not to create an ideal set of rules and then see how well they can be enforced, but rather to enact the rules that can be enforced within the existing structure.'

Importantly, enforceability is in turn related to the extent to which law reflects the community's customs and standards. Hay and Shleifer (1998), for instance, define 'good rules' via their social acceptability: 'good legal rules are those likely to be adopted by private parties [...] as well as used by courts' (Hay and Shleifer 1998: 401). The definition of 'good law' is here – contrary to the substantive claim – a purely pragmatic one (acceptance), which

does not presuppose any specific substantive content of legal rules. This hints at an – at times explicitly – customary-evolutionary theory of law. Despite the LFS’s strong emphasis on state law (see section 3, above), Shleifer (2005: 443) explicitly relativises the role of legislation compared to custom:

‘With courts, there is a role for impartial judges enforcing rules of good behaviour. These rules do not need to come from legislation, but may instead derive from custom or from judge-made common law and precedents.’

Similarly, Hay and Shleifer (1998: 402) claim, ‘[W]henever possible, laws must agree with prevailing practice or custom.’ Indeed, Glaeser and Shleifer (2002: 1202) suggest that the reflection of ‘community standards of justice’ in the legal system may be one of the reasons for the alleged superiority of English common law over civil law.

A final definition of good law in the LFS studies is functionalist and outcome-orientated in nature. For example, La Porta et al. (1999b: 223) explicitly define ‘good’ as what is ‘good-for-economic-development.’ Similarly, Hay and Shleifer (1998: 401) state in a passage defining ‘good law’ that ‘some rules facilitate trade better than others.’ The outcome of facilitating trade and economic activity more generally constitutes a criterion for good law.

In short, there are at least three different definitions of the content of law, as good law, in the LFS literature. A first one is narrow and focused on the extent to which law protects shareholders’ (property) rights, where rights are defined substantively following certain principles such as ‘fairness;’ a second one is focused on the efficacy and indeed *legitimacy* of law (in a normative sense)² with a view to its enforcement and hence effectiveness; a third assesses good law based on the economic outcomes it produces (growth, trade, functioning markets etc).

4.2 Discussion and suggestions for future research

The LFS does not explain how these different definitions of good law relate to each other. Indeed, analysing these definitions in light of legal theories reveals that they may be potentially incompatible. The first, ‘protective’ definition of good law seems closely related to natural law theory. Various LFS studies explicitly refer to the long pedigree of the ‘protective function’ of law, citing Smith (1776), Montesquieu (1748), and Locke (1690) as the main sources for the insight that ‘good economic institutions must secure property rights’ (Djankov

² Normative legitimacy, i.e. justification of power, is to be distinguished from sociological legitimacy, i.e. that laws are accepted to be binding, see Green 2013: 489.

et al. 2003a: 596; also Djankov et al. 2003b: 453; Glaeser et al. 2003: 200; 2004: 272; La Porta et al. 2004). Several of these classical authors have affinities with natural law theories (notably John Locke and Montesquieu; see also Table 1), which may suggest that the LFS view accepts certain assumptions of natural law theory.

The second definition of good law is based on the enforceability of law thanks to its proximity to community standards and hence its ‘acceptability’. As mentioned above, this also leads to the claim that the supposedly decentralised common law may be superior to the allegedly more centralised statute-based civil law. The focus on proximity with community standards and on acceptability recalls Hart’s (2012[1961]) ‘practice theory of rules.’ Hart’s positivism relies on the assumption that at least some of the rules in a legal system need to be ‘social rules’ in the sense that they are both commonly practiced and considered legitimate guides for action by most in the community. This pragmatic and non-cognitivist view of rules (Perry 2006) seems in line with the theory of law that the LFS adopts.

The customary/procedural definition of good law, as well as the third functionalist and outcome-orientated definition, that we found in the LFS can also be related to Hayek’s evolutionary-functionalist ‘spontaneous order’ theory of law. Several LFS studies make explicit reference to Hayek (see above). Djankov et al. (2003: 600) also cite Hayek’s evolutionary theory in support of their account of how efficient laws emerge. Hayek (2011[1960]: 115-6) conceives of law as a ‘spontaneous order’ that crystallises as a result of a process of ‘adaptive evolution’ through the survival of the fittest – customary – rules. More specifically, he insists on the end-neutrality of any valid law, i.e., law should simply be rules of ‘just conduct’ that do not impose duties on individuals, other than obliging them to *refrain* from interfering with other individuals in order to protect their liberty (Hayek 2013[1982]: 200; for Hayek as a legal theorist see also Ogus 1989).

This is broadly compatible with the LFS’s theory of law. That is, it is in line with its narrow definition of the quality of legal rules in terms of the protection they afford individuals against other individuals and against the state (Djankov et al. 2003a). At the same time, in different places, it becomes clear that Hayek supports a substantive definition of valid law, namely that its function is to favour markets and trade (Santos 2006). This is compatible with the LFS’s third definition of good law (conduciveness to trade and markets). The association between the LFS and the Hayekian theory of law seems hence close.

However, even in its use of the Hayekian theory the LFS is not always consistent. Hayek considers the evolutionary theory of law to be incompatible with an instrumental use

of law by the state to achieve specific collective goals. Such an instrumental use is the result of an erroneous naivety of ‘rational constructivism’ and ‘pragmatism’ (Hayek 2011[1960]). The LFS, on the other hand, contains a clear utilitarian, instrumentalist, and ultimately teleological slant, notably regarding the feasibility and desirability of legal reform (e.g., Hay and Shleifer 1998). As a result, the LFS notion of efficiency or optimality of a regulatory regime differs from Hayek’s. For instance, Glaeser and Shleifer (2002) and Djankov et al. (2003) consider the rise of the statute-based regulatory state in the US during the progressive era and the relative decline of a purely court-based private litigation system, as an efficient adaptation to a new, more complex economic and social environment. Hayek (2011[1960]; chapter 16) on the other hand saw this evolution as part of the regrettable ‘decline of the rule of law,’ due to the rise of ‘constructivist pragmatism’ and socialism, which once again hints at the LFS’s more benign view of regulations compared to economic liberals.

It follows that the LFS’s inconsistent and contradictory conceptualisation of law and its content is more than a concern for legal theorists but has very concrete implications for the validity of their empirical studies. Notably it can be seen that some of the LFS’s empirical tools do not reflect *any* of these definitions. Their use of a universal one-size-fits-all coding template of the black letter law (see previous sub-section) pays no attention to community standards and effective enforcement. Correspondingly, it has been found that much of the LFS templates are simply based on the existing rules of US law, regardless of whether the US model really represents standards of ‘good law’. For example, this US bias has been evidenced in empirical studies by Lele and Siems (2007) and Deakin et al. (2017b) (both unaffiliated with the LFS) which have applied alternative forms of legal measurement for the strength of shareholder protection and creditor rights.

We therefore suggest that future empirical research on law and finance needs to start with an explicit discussion of how ‘good law’ can be defined for a particular research question. Different projects can justify the use of different definitions. Indeed, researchers may aim to test which type of rules may have the desired characteristics or effects to be considered ‘good law’. For example, in response to the example mentioned in the previous paragraph, it may be tested whether US company law is the most promising international model, say, because it may attract US investors, or whether other means of shareholder protection can have the same effect. Consequently, taking theory seriously will allow researchers to develop measurements that are consistent with the theoretical model at hand.

5. Dimension 3: Behavioural Effect of Law

The two previous dimensions assume that law ‘matters’ but they do not specify the precise mechanisms through which law guides actors’ behaviours. Thus, this ‘behavioural effect’ of law designates the immediate effect of law on its subjects and is hence distinct from its impact on broader socio-economic outcomes (such as the development of stock markets, see section 2.2, above). Here, legal theories can essentially be divided into two groups (see Table 1): those that consider that law provides people with *objective* reasons to obey (moral obligation and practical reason) and focus hence on the normativity of law; and those that only consider *subjective* reasons for action (self-interest, fear of punishment, habit of obedience). This section seeks to identify the mechanisms that the LFS postulates and to which theory of law it corresponds most closely.

5.1 Positioning the LFS towards the Behavioural Effect of Law

A first observation is that there is no explicit discussion in the LFS of how exactly law makes actors do what it prescribes. However, there are some broad references to the *incentives* that law creates for different actors and influences their behaviour (e.g., La Porta et al. 1997, 1998). Incentives are the domain of rational calculation of the costs and benefits of (non-)compliance by self-interested actors and hence a ‘subjectivist’ explanation of the behavioural effect of law. The LFS therefore adopts an anthropology where actors do not follow the law for the sake of following it, but to avoid sanctioning. It is hardly surprising that the LFS would lean toward the subjectivist explanation, given that it draws on theories such as agency theory that are grounded in rational choice paradigm (e.g., the LFS studies of investor protection; see section 2.1, above). Such theories are in turn based on the *homo oeconomicus* ‘model of man’ who in their pursuit of maximal utility is not responsive to norms and duties, but only to cost-benefit considerations and incentives.

Several statements illustrate this point. Glaeser et al. (2003: 201) quite explicitly claim that the only reason why powerful actors would respect the law is the fear for sanctions: ‘If the politically strong expect to prevail in any court case brought against them, they would not respect the property rights of others’ (also Glaeser et al. 2001). Shleifer and Wolfenzon (2002) attempt to combine Becker’s (1968) economic model of crime with Jensen and Meckling’s (1976) agency theory. Accordingly, they define the quality of investor protection not through a list of legal shareholder rights, but as ‘likelihood that the entrepreneur is caught and fined for expropriating from shareholders’ (Shleifer and Wolfenzon 2002: 4).

This line of argument is remarkably close to Holmes's (1897) legal realist 'prediction theory of law' according to which law should be defined simply as the prediction of what the likelihood of sanctions will be (see Green 2005). In Holmes's famous words: 'If you want to know the law and nothing else, you must look at it as a bad man, who cares only for the material consequences which such knowledge enables him to predict' (Holmes 1897: 459). The proximity of modern economics' *homo oeconomicus* and the legal realist 'bad man' is remarkable and may explain why the LFS has been increasingly drawn towards this theory of law.

Indeed, since around 2007 we observe a 'legal realist turn' in the LFS. A series of articles of the LFS explicitly adopt a legal realist view (Gennaioli and Shleifer 2007a, 2007b, but also Balas et al. 2009; Niblett et al. 2010; Gennaioli et al. 2014). A key tenant of the realist position is the so-called 'decision theory' of law, which argues that law is what the *judge* decides not what the legislator says it is. Therefore, the LFS analyses adjudication in common law countries in detail, focussing on questions about the application of legal rules by judges--including their decisional biases, the role of precedents, 'overruling', 'distinguishing', and discretion in fact finding (Gennaioli and Shleifer 2007a, 2007b, 2008; Niblett et al. 2010).

The omission of objective reasons to obey the law may explain the LFS's strong focus on law enforcement (see Milhaupt and Pistor 2008: 5). Indeed, for the 'bad man,' without enforcement – or at least a credible threat of it –, there is no reason to obey the law. In the LFS, enforcement was initially only reflected in a 'rule of law' control variable (La Porta et al., 1997, 1998). Yet, subsequent studies developed the analysis of enforcement much further. Thus, La Porta et al. (1999) analysed the quality of government and its impact on enforcement. Later studies focussed on more specific factors such as the competence and incentives of judges (Glaeser et al. 2001; Glaeser and Shleifer 2002; Djankov et al. 2003b) and the degree of subversion of courts by particular interests (Glaeser et al. 2003; Glaeser and Shleifer 2003). Shleifer (2005: 442) even calls his approach to regulation an 'enforcement theory of regulation,' because the 'enforcement environment' determines the optimal system of social control of the economy between the two extremes of a purely court-based litigation system and public regulation.

5.2 Discussion and suggestions for future research

The previous subsection has shown that the LFS increasingly takes a legal realist stance of focussing on the importance of enforcement of the law. In this regard, it also shares its position with the strong positivist 'coercive view' i.e. that the threat or anticipation of

sanctions is the main motivation for people to obey the law (going back to Austin 1832). However, the strong positivist/realist view of the mechanisms through which law deploys its effects contradicts both the rejection of positivism regarding the source of valid law and the previously established proximity of the LFS with Hayek's theory of law (see section 4) as Hayek considered that habit and tradition were what drives compliance with law, while coercion only was a last resort (Hayek 2011[1961], chapter 9).³

More generally, the LFS's focus on subjectivist explanations of the behavioural effect of law leads it to neglect any other behavioural effects of the law, in particular normative ones. This makes the LFS theory of law incompatible with theories that are based on the notion that law creates 'objective reasons for action' (Table 1, column 7). Thus, the Beckerian-Holmesian view of human motivation starkly contrasts with Hart's theory, which is based on the law-abiding citizen rather than the 'bad man' (Hart 2012[1961]: 40). Hart observed that most citizens consider it their *duty* to obey the law for the sake of obeying the law, rather than as the result of a conscious calculation of costs and benefits associated with the likelihood of sanctions.

The omission of objective reasons for compliance is more than a theoretical issue as it may lead to miss-specify empirical research designs and related statistical models. Thus, the numerous studies that empirically investigate shareholder protection have exclusively focused on the incentives that investors have to invest or refrain from investing in stock due to effective protection of their property rights or the absence thereof. While this is certainly part of the story, this conceptualisation disregards the other main addressees of legal rules on shareholder protection, namely the 'insiders' (directors, managers and blockholders) who are, according to agency theory, the ones doing the expropriating. The LFS assumes that insiders comply with legal rules of shareholder protection due to the fear of sanctions.

However, this may not be the only channel through which law deploys its effect on economic actors. For example, company law may reflect prevalent ethical standards which are mediated through market forces. As such, law may work through a signalling effect that invokes actors' moral dispositions by signalling the appropriate behaviour. The strength of this effect may be quite independent of enforcement (cf. Deakin et al. 2017a; for the way regulation affects corporate governance; see also Aguilera et al. 2013).

³ This idea also resonates with Max Weber (1968[1921]: 81) who argued that the public's belief in the legitimacy of the law is crucial as the state is unlikely to be able to enforce all violations of the law by force.

Neglecting these theoretical limitations is not just an aesthetic flaw, but leads to misconceptions and misspecification of empirical research designed to test law and finance hypotheses. This can be seen in studies that use general measures of legal minority shareholder protection, such as the Anti-Director Rights Index (ADRI) and the Anti-Self-Dealing Index (ASDI), regardless of whether it contains any legal rules directly affecting the practices under investigation. For example, Schnepfer and Guillen (2004) use the ADRI to investigate the impact of law on hostile takeover activity, although this legal measure does not contain any rules on hostile takeovers. Similarly, Cuomo et al. (2012) investigate the link between legal reforms and companies' corporate governance practices in Italy. They use the ADRI and other country-level measure of legal shareholder protection, but do not focus on the same aspects of corporate governance as dependent firm-level variables as the ADRI does not contain any measures for ownership structures, the existence of pyramid structures, or syndicate agreements among shareholders, which are the control-enhancing mechanisms the study aims to investigate.

Strictly speaking, such studies are therefore incompatible with the coercive view of law, which would suggest a relative limited impact of law on corporate practices. That is, if threat of punishment is the only motivation actors have to follow the law, *ceteris paribus*, legal change would only lead to change in a corporate practice if it is directly targeted by the legal change in question. Consequently, if the coercive effect were the only effect of legal rules on corporate practices, empirical studies should focus on investigating the direct correspondence between legal variables and firm-level variables. Surprisingly, however, very few studies adopt this empirical strategy corresponding to their implicit conceptualisation of legal rules, as coercive and authoritative orders. This illustrates the mismatch between the implicit assumptions about how law is expected to matter, and the empirical procedure used to test whether law matters (for a similar point see Schiehl and Martins 2016).

It follows from the foregoing analysis that future LFS research needs to understand more fully how law guides actors' behaviour. The rich literature on behavioural law and economics (Zamir and Teichman 2014; Mathis 2015) may be particularly suitable to achieve this. In addition, Friedman (2016) rightly points out that the way law affects behaviour is a cross-disciplinary topic with extensive research in political science, sociology, economics, criminology, law, and psychology. Similarly, socio-legal and regulatory studies show that modern states combine different types of regulatory tools – including laws – that deploy their

impact on the ‘law takers’ in ways that are different from the Austinian ‘command-and-control’ idea (Schneiberg and Bartley 2008). It is hence doubtful that the narrow focus on sanctions, enforcement, and rational utility maximisation appropriately captures the way in which law impacts economic actors. This is where future LFS studies can make great contributions.

6. Conclusion

In this essay, we review the first twenty years of the so-called Law and Finance School (LFS) literature. We show that the focus of this literature has been mostly on investigating the empirical link between different legal variables and an increasingly broad set of economic, social, and political outcome variables with a view to answer the question ‘does law matter?’ Yet, beyond the large body of empirical work, the development of a coherent theory of law to underpin the empirical efforts has been largely neglected.

Our critical review constitutes the first study analysing in detail the legal theoretical assumptions underlying LFS studies. Drawing on concepts from five of the most influential Western legal theories as a benchmark, we reach the surprising conclusion that the LFS actually has very little to say about what law is and how it affects economic actors and outcomes. Indeed, the LFS mostly applies economic theory and econometric methods to legal phenomena rather than the other way around. Our analysis does reveal certain recurring themes that constitute an embryo of legal theory in the LFS, yet, this theoretical understanding is tentative, underdeveloped, and at times contradictory.

The key question that arises from this observation however is: do these theoretical shortcomings matter? Is it not sufficient for a theory in the area of applied economics to correctly predict the outcomes of interest (cf. Friedman 1966[1953])? These questions are relevant because the LFS has been challenged not just on theoretical, but also on empirical grounds. The predictive power of the theory does not seem anywhere near as strong as it may appear based on the popularity of the theory (e.g. Aguilera and Williams, 2009; Deakin et al. 2018; Spamann 2010; Armour et al. 2009b). Indeed, it has been shown that the lack of theorisation of the associations between legal explanatory and economic outcome variables may be responsible for a mismatch between theory and empirical research design which makes results difficult to interpret and compare across studies (Schiehl and Martins 2016).

We therefore suggest that while the first twenty years of the LFS focused on showing empirically *that* law matters, the next phase in the development of this field of study needs to focus on answering the theoretical question of ‘how does law matter?’. Here drawing more

systematically on the existing legal theory literature is an important step. This will allow designing more theoretically informed empirical approaches that may produce more robust findings, which also contributes to furthering our understanding of the role of law in the economy.

Beyond our literature reviewed, our analysis hints at the importance of theory in the social sciences. With statistical and empirical methods becoming more and more sophisticated, it is tempting to succumb to the illusion that sophisticated methods can dispense researchers from proper theory development. Indeed, there may be a tendency in economics and other social sciences to consider that the more sophisticated the method, the less care needs to go into theorisation of associations (see for the case of randomised control trials Deaton and Cartwright 2017). Yet, this is a false believe that leads to inconsistent empirical strategies in observational settings (see the meta-review by Schiehl and Martins 2016). Therefore, we suggest, the third decade of LFS studies should have a core focus on theory building around the question of *how law matters* in addition to empirically testing whether law matters. We hope that our analysis of the LFS literature provides promising ways of starting to address this question.

References

- Acemoglu, D. and Robinson, J. A. (2012) *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York: Crown Business.
- Adriaenssens, S. and Hendrickx, J. (2015). ‘Can Informal Economic Activities be Explained by Social and Institutional Factors? A Comparative Analysis’, *Socio-Economic Review*, **13**(4), 627–649.
- Angner, E. (2007). *Hayek and Natural Law*. Abingdon: Routledge.
- Aguilera, R. V., Goyer, M. and Kabbach-Castro, L. R. (2013). ‘Regulation and Comparative Corporate Governance’. In: M. Wright, D. S. Siegel, K. Keasey, and I. Filatotchev (eds.) *Handbook of Corporate Governance*, Oxford: Oxford University Press.
- Aghion, P., Algan, Y., Cahuc, P. and Shleifer, A. (2010). ‘Regulation and Distrust’, *Quarterly Journal of Economics*, **125**(3): 1015-1049.
- Aguilera, R. V. and Jackson, G. (2010). ‘Comparative and International Corporate Governance’, *The Academy of Management Annals*, **4**(1): 485-556.
- Aguilera, R. and Williams, C. (2009). “‘Law and Finance’”: Inaccurate, Incomplete, and Important’, *Brigham Young University Law Review* **2009**(6): 1413-1434
- Armour, J., Deakin, S., Lele, P., and Siems, M. (2009a). ‘How Do Legal Rules Evolve? Evidence from a Cross-Country Comparison of Shareholder, Creditor and Worker Protection’, *American Journal of Comparative Law* **57**: 579-629.
- Armour, J. Deakin, S., Sarkar, P., Siems, M., and Singh, A. (2009b). ‘Shareholder Protection and Stock Market Development: An Empirical Test of the Legal Origin Hypothesis’, *Journal of Empirical Legal Studies*, **6**(2): 343-380.
- Austin, J. (1832). *The Province of Jurisprudence Determined*. London: John Murray.
- Balas, A., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2009) ‘The Divergence of Legal Procedures’, *American Economic Journal: Economic Policy*, **1**(2): 1-45.
- Beck, T., Demirgüç-Kunt, A. and Levine, R. (2003). ‘Law and Finance: Why Does Legal Origin Matter?’, *Journal of Comparative Economics*, **31**: 653-675.
- _____. (2005). ‘Law and Firms’ Access to Finance’, *American Law and Economics Review* **7**(1): 211-252
- Beck, T., Levine, R., and Lozyza, N. (2000). ‘Finance and the Sources of Growth’, *Journal of Financial Economics*, **58**: 261-300.
- Becker, G. (1968). ‘Crime and Punishment: An Economic Approach,’ *Journal of Political Economy*, **76**(2): 169-217.
- Bedu, N. and Montalban, M. (2014). ‘Analysing the Uneven Development of Private Equity in Europe: Legal Origins and Diversity of Capitalism’, *Socio-Economic Review*, **12**(1): 33–70.
- Bordalo, P., Gennaioli, N. and Shleifer, A. (2015). ‘Salience Theory of Judicial Decisions’, *Journal of Legal Studies*, **44**(1): S7-S33.
- Botero, J. C., Djankov, S., Porta, R. La, Lopez-De-Silanes, F. and Shleifer, A. (2004). ‘The Regulation of Labor’, *The Quarterly Journal of Economics*, **119**(4): 1339–1382.
- Callaghan, H. (2015). ‘Who Cares about Financialization? Self-Reinforcing Feedback, Issue Salience, and Increasing Acquiescence to Market-Enabling Takeover Rules’, *Socio-Economic Review*, **13**(2): 1–20.

- Cheffins, B. R. (2001). 'Does Law Matter? The Separation of Ownership and Control in the United Kingdom', *Journal of Legal Studies* **30**(2): 459-484.
- Claessens, S. and Laeven, L. (2003). 'Financial Development, Property Rights, and Growth', *the Journal of Finance* **58**(6): 2401-2436.
- Coase, R. (1960). 'The Problem of Social Cost', *Journal of Law and Economics*, **3**: 1-44.
- Coffee, J. C. (2000). 'The Rise of Dispersed Ownership: The Role of Law in the Separation of Ownership and Control', *Columbia Law and Economics Working Paper* **182**(2): 1-95.
- Colli, A. (2013). 'State of the Art. Family Firms Between Risks and Opportunities: A Literature Review', *Socio-Economic Review*, **11**(3): 577-599.
- Cuomo, F., Zattoni, A. and Valentini, G. (2012). 'The Effects of Legal Reforms on the Ownership Structure of Listed Companies', *Industrial and Corporate Change* **22**(2): 427-458.
- Dam, K. (2006) *The Law-Growth Nexus: The Rule of Law and Economic Development*, Washington DC: Brookings Institution Press.
- Darcillon, T. (2015). 'How Does Finance Affect Labor Market Institutions? An Empirical Analysis in 16 OECD Countries', *Socio-Economic Review* **13**(3): 477-504.
- Deakin, S. and Pistor, K. (eds.) (2012). *Legal Origin Theory*, Cheltenham: Edward Elgar.
- Deakin, S., Sarkar, P., and Singh, A. (2011). 'An End to Consensus? The (Non) Impact of Legal Reforms on Financial Development' *CBR Working Paper*, 423: 1-34.
- Deakin, S., Gindis, D., Hodgson, G., Huang, K. and Pistor, K. (2017a). 'Legal Institutionalism: Capitalism and the Constitutive Role of Law', *Journal of Comparative Economics* **45**: 188-200.
- Deakin, S., Mollica, V. and Sarkar, P. (2017b). 'Varieties of Creditor Protection: Insolvency Law Reform and Credit Expansion in Developed Market Economies', *Socio-Economic Review* **15**(2): 359-384.
- Deakin, S., Sarkar, P., and Siems, M. (2018). 'Is There a Relationship between Shareholder Protection and Stock Market Development?', *Journal of Law, Finance, and Accounting* **3**(1): 115-146.
- Deaton, A. and Cartwright, N. (2017) 'Understanding and Misunderstanding Randomized Controlled Trials', *Social Science & Medicine*, doi: 10.1016/j.socscimed.2017.12.005.
- DiMaggio, P. and Powell, W. (1984). 'The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality', *American Sociological Review* **42**(2) 726-768.
- Djankov, S., Glaeser, E., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2003a). 'The New Comparative Economics', *Journal of Comparative Economics*, **31**(4): 595-619.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2003b). 'Courts', *Quarterly Journal of Economics*, **118**(2): 453-517.
- Djankov, S., McLiesh, C. and Shleifer, A. (2007). 'Private Credit in 129 Countries', *Journal of Financial Economics* **12**(2): 77-99.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2008). 'The Law and Economics of Self-Dealing', *Journal of Financial Economics* **88**(3): 430-465.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2010a). 'Disclosure by Politicians', *American Economic Journal: Applied Economics* **2**:179-209.

- Djankov, S., Ganser, T., McLiesh, C., Ramalho, R. and Shleifer, A. (2010b). ‘The Effect of Corporate Taxes on Investment and Entrepreneurship’, *American Economic Journal: Economic Policy*, **2**(3): 31-64.
- Djankov, S., Freund, C. and Pham, C. S. (2010c). ‘Trading on Time’, *Review of Economics and Statistics*, **92**(1): 166-173.
- Djankov S., Nikolova, E. and Zilinsky, J. (2016). ‘The Happiness Gap in Eastern Europe’, *Journal of Comparative Economics*, **44**(1): 108-124
- Djankov, S., Georgieva, D. and Ramalho, R. (2017) ‘Determinants of Regulatory Reform’, LSE Discussion Paper No 765.
- Easterbrook, F. and Fischel, D. R. (1991). *The Economic Structure of Corporate Law*, Harvard, Harvard University Press.
- Emmenegger, P. and Marx, P. (2011). ‘Business and the Development of Job Security Regulations: The Case of Germany’, *Socio-Economic Review*, **9**(4): 729–756.
- Fama, E. (1980). ‘Agency Problems and the Theory of the Firm’, *Journal of Political Economy*, **88**: 288-307.
- Finnis, J. (2011[1980]). *Natural Law and Natural Rights*, Oxford, Oxford University Press.
- Friedman, L. M. (2016), *Impact: How Law Affects Behavior*, Cambridge, Harvard University Press.
- Gennaioli, N. and Shleifer, A. (2007a). ‘Overruling and the Instability of Law’, *Journal of Comparative Economics* **35**(2): 309-328.
- Gennaioli, N. and Shleifer, A. (2007b) ‘The Evolution of Common Law’, *Journal of Political Economy* **115**(1): 43-68.
- Gennaioli, N. and Shleifer, A. (2008). ‘Judicial Fact Discretion’, *Journal of Legal Studies* **37**(1): 1-35.
- Gennaioli, N., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2014). ‘Growth in Regions’, *Journal of Economic Growth*, **19**: 259-309.
- Glaeser, E., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2004). ‘Do Institutions Cause Growth?’, *Journal of Economic Growth*, **9**(3): 271–303.
- Glaeser, E. Scheinkman, J., and Shleifer, A. (2003). ‘The Injustice of Inequality’, *Journal of Monetary Economics* **50**: 199-222.
- Glaeser, E. and Shleifer, A. (2003) ‘The Rise of the Regulatory State’, *Journal of Economic Literature* **41**(2): 401-425.
- Glaeser, E. and Shleifer, A. (2002). ‘Legal Origins’, *The Quarterly Journal of Economics*, **117**: 1193-1229.
- Glaeser, E., Ponzetto, G., and Shleifer A. (2016). ‘Securing Property Rights,’ NBER Working Paper No. 22701.
- Green, L. (2013). ‘Should Law Improve Morality?’, *Criminal Law and Philosophy*, **7**: 473-494.
- Green, M. (2005). ‘Legal Realism as Theory of Law’, *William & Mary Law Review* **46**(6): 1915-2000.
- Hall, P.A. and Taylor, R. C. R (1996). ‘Political Science and the Three New Institutionalisms’, *Political Studies*, **44**(5): 936-957.
- Hart, H. (2012[1961]). *The Concept of Law*, Oxford, Oxford University Press.

- Hay, J. and Shleifer, A. (1998). 'Private Enforcement of Public Laws: a Theory of Legal Reform', *American Economic Review Papers and Proceedings*, **88**: 398-403.
- Hayek, F. (2013[1982]). *Law, Legislation and Liberty*, London: Routledge.
- Hayek, F. (2011[1960]). *The Constitution of Liberty. The definitive edition*, (ed. Hamowy, R.), The Collected Works of F. A. Hayek Vol. XVII. Chicago: University of Chicago Press.
- Holmes, O. (1897). 'The Path of the Law', *Harvard Law Review*, **10**(8): 457-478.
- Huo, J. (2014). 'Insider and Public Information in Varieties of Capitalism', *Socio-Economic Review*, **12**(3): 489-515.
- Jackson, G. and Deeg, R. (2008). 'Comparing Capitalisms: Understanding Institutional Diversity and its Implications for International Business', *Journal of International Business Studies* **39**(4), 540-561.
- Jensen, M. C., and Meckling, W. H. (1976). 'Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure', *Journal of Financial Economics*, **3**(4): 305-360.
- Johnson, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2000a). 'Tunneling', *American Economic Review*, **90**(2): 22-27.
- Johnson, S, Boone, P., Breach, A. and Friedman, E. (2000b). 'Corporate Governance in the Asian Financial Crisis', *Journal of Financial Economics* **58**: 141-186.
- Katelouzou, D. and Siems, M. (2015) 'Disappearing Paradigms in Shareholder Protection: Leximetric Evidence for 30 Countries, 1990-2013', *Journal of Corporate Law Studies*, **15**(1): 127-160.
- Kelsen, H. (1967). *The Pure Theory of Law*. Berkeley: University of California Press.
- La Porta, R. and Shleifer, A. (2008). 'The Unofficial Economy and Economic Development', *Brookings Papers on Economic Activity* 1-65.
- La Porta, R. and Shleifer, A. (2014). 'Informality and Development', *Journal of Economic Perspectives*, **28**(3): 109-126.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. (1997a). 'Legal Determinants of External Finance', *Journal of Finance* **52**(3): 1131-1150.
- _____ (1997b). 'Trust in Large Organizations', *AEA Papers and Proceedings*, **87**(2): 333-338.
- _____ (1998). 'Law and Finance', *Journal of Political Economy* **106**(6): 1113-1155.
- _____ (1999). 'The Quality of Government', *Journal of Law, Economics and Organization*, **15**(1): 222-279.
- _____ (2000a). 'Investor protection and Corporate Governance', *Journal of Financial Economics*, **58**: 3-27.
- _____ (2000b). 'Agency Problems and Dividend Policies around the World', *Journal of Finance*, **55**(1): 1-33.
- La Porta, R., Lopez-de-Silanes, F., Pop-Eleches, C. and Shleifer, A. (2004). 'Judicial Checks & Balances', *Journal of Political Economy*, **112**(2): 445-470.
- La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. (1999). 'Corporate Ownership Around the World', *Journal of Finance* **54**(2): 471-517
- La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2006). 'What Works in Securities Laws?', *Journal of Finance*, **61**(1): 1-32.

- _____ (2008). 'The Economic Consequences of Legal Origins', *Journal of Economic Literature* **46**(2): 285-332.
- Lehrer, M., and Celo, S. (2016). 'German Family Capitalism in the 21st Century: Patient Capital Between Bifurcation and Symbiosis', *Socio-Economic Review*, **14**(4): 729–750.
- Lele, P. and Siems, M. (2007). 'Shareholder Protection: A Leximetric Approach', *Journal of Corporate Law Studies*, **7**(1): 17-50.
- Levine, R. (1999). 'Law, Finance, and Economic Growth', *Journal of Financial Intermediation*, **8**: 8-35.
- Levine, R. (2005). 'Law, Endowments and Property Rights', *Journal of Economic Perspectives*, **19**(3): 61-88.
- Mahoney, P. (2001). 'The Common Law and Economic Growth: Hayek Might Be Right', *The Journal of Legal Studies*, **30**(2): 503-525.
- Mathis, K. (2015) *European Perspectives on Behavioural Law and Economics*. Cham: Springer.
- Milhaupt, C. J. and Pistor, K. (2008). *Law & Capitalism: What Corporate Crises Reveal about Legal Systems and Economic Development around the World*. Chicago, Chicago University Press.
- North, D. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- Oto-Peralías, D. and Romero-Ávila, D. (2017). 'Legal Reforms and Economic Performance: Revisiting the Evidence', World Development Report 2017, Background Paper, available at <http://pubdocs.worldbank.org/en/193351485539892515/WDR17-BP-Revisiting-Legal-Origins.pdf>.
- Ogus, A. (1989). 'Law and Spontaneous Order: Hayek's Contribution to Legal Theory', *The Journal of Law and Society* **16**(4): 393-409.
- Perry, S. (2006). 'Hart on Social Rules and the Foundations of Law: Liberating the Internal Point of View', *University of Pennsylvania Law School Faculty Scholarship*. **2006**: 1107-1209.
- Pistor, K. (2009). 'Rethinking the "Law and Finance" Paradigm', *BYU Law Review* **2009**: 1647-1670.
- Posner, R. A. (2006). A Review of Steven Shavell's Foundations of Economic Analysis of Law. *Journal of Economic Literature*, **XLIV**: 405–414.
- Posner, R. (1973). *Economic Analysis of Law*. Boston: Little-Brown.
- Roe, M. J. (2006). 'Legal Origins, Politics, and Modern Stock Markets', *Harvard Law Review* **120**(2): 460-527.
- Roe, M. J. and Siegel, J. (2009) 'Finance and Politics: A Review Essay Based on Kenneth Dam's Analysis of Legal Traditions in *The Law–Growth Nexus*', *Journal of Economic Literature*, **47**(3): 781-800.
- Sartori, G. (1970). Concept Misformation in Comparative Politics. *American Political Science Review*, **64**(4): 1033–1053.
- Schiehll, E. and Martins, H. (2016). 'Cross-National Governance Research: A Systematic Review and Assessment,' *Corporate Governance: An International Review*, **24**(3): 181-199.

- Schneiberg, M. and Bartley, T. (2008). ‘Organizations, Regulation, and Economic Behavior: Regulatory Dynamics and Forms from the Nineteenth to Twenty-First Century’, *Annual Review of Law and Social Science*, **4**(1): 31–61.
- Schneider, B. R. and Karcher, S. (2010). ‘Complementarities and Continuities in the Political Economy of Labor Markets in Latin America’, *Socio-Economic Review*, **8**(4): 623–651.
- Schneper, W. D. and Guillén, M. F. (2004). ‘Stakeholder Rights and Corporate Governance: A Cross-National Study of Hostile Takeovers’, *Administrative Science Quarterly*, **49**(2): 263-295.
- Schnyder, G. (2012). ‘Measuring Corporate Governance: Lessons from the “Bundles Approach”’, Cambridge Centre for Business Research Working Paper no. 438.
- Shleifer, A. (2005). ‘Understanding Regulation’, *European Financial Management* **11**(4): 439-451.
- Shleifer, A. and Vishny, R. W. (1997). ‘A Survey of Corporate Governance’, *Journal of Finance* **52**(2): 737-783.
- Shleifer, A. and Wolfenzon, D. (2002) ‘Investor Protection and Equity Markets’, *Journal of Financial Economics* **66** (1): 3-27.
- Siems, M. (2007). ‘Reconciling Law & Finance and Comparative Law’, *McGill Law Journal*, **52**: 55-81.
- Spamann, H. (2010). ‘The ‘Anti-Directors Rights Index’ Revisited’, *Review of Financial Studies* **23**(2): 467-486.
- Stigler, G. J. (1964). ‘Public Regulation of the Securities Market’, *Journal of Business*, **37**: 117–142.
- Tamanaha, B. Z. (2017). *A Realistic Theory of Law*. Cambridge: Cambridge University Press.
- Tepe, M., Gottschall, K. and Kittel, B. (2010). ‘A Structural Fit Between States and Markets? Public Administration Regimes and Market Economy Models in the OECD’, *Socio-Economic Review*, **8**(4): 653–684.
- The World Bank. (2004-2017). *Doing Business*. The World Bank: Washington DC. Available at: <http://www.doingbusiness.org/>
- Volmer, P. B., Werner, R. and Zimmermann, J. (2007). ‘New Governance Modes for Germany’s Financial Reporting System: Another Retreat of the Nation State?’, *Socio-Economic Review*, **5**(3): 437–465.
- Weber, M. (1968[1921]) *Economy and Society*. Berkeley: University of California Press.
- Witt, M. A. and Redding, G. (2014). ‘Asian Business Systems: Institutional Comparison, Clusters and Implications for Varieties of Capitalism and Business Systems Theory’, *Socio-Economic Review*, **11**(2): 265–300.
- Zamir, E. and Teichman, D. (2014) *The Oxford Handbook of Behavioral Economics and the Law*. Oxford: Oxford University Press.

Table for main text

Table 1: Key Dimensions of Different Theories of Law Compared to the LFS

		1st Dimension: Nature and primary function of law		2nd Dimension: Content of law		3rd Dimension: Behavioural effect of law
	Modern Representatives	Source of authority/criterion for validity	Importance and primary function of legal rules in the economy	Relationship between law and morals	Definition of 'good law'	Law-takers motivation to obey the law
Natural Law Theory	J. Finnis	God/nature	Important for human society (specificity, clarity, predictability) and property rights	Moral standards as criteria for moral validity of positive law	<i>Substantive:</i> Congruence with natural law	<i>Objective:</i> Practical reason/moral obligation to obey the law
Exclusive (Strong) Legal Positivism	J. Austin H. Kelsen	Sovereignty Basic Rule (<i>Grundnorm</i>)	Commands important for guiding behaviour/settling disputes/exercising control	Separate	None	<i>Subjective:</i> Habit of obedience/ Fear of sanction
Inclusive (Weak) Legal Positivism	H. L. A. Hart	Social Rule of Recognition	Legal rules important for guiding behaviour/settling disputes/exercising control	Separate	<i>Procedural:</i> Acceptance	<i>Objective:</i> Normativity of law
Legal Realism	O. W. Holmes K. Llewellyn J. Frank	Judges' decisions	Legal rules unimportant (rule-skepticism) – adjudication and its anticipation important to avoid socially undesirable outcomes	Separate	None	<i>Subjective:</i> Fear of sanction imposed by courts (cost-benefit calculation)
Spontaneous Order (Functional-Evolutionary) Theory of Law	F. A. Hayek	Tradition Efficiency (as measured by survival)	Important for protection of individual (economic and political) liberty	Law ought to be based on historically grown community standards	<i>Meta-legal requirements:</i> Generality Universality Known Certain <i>Substantive:</i> Negativity Market-supporting	<i>Subjective:</i> Habit of obedience & Tradition Coercion in the last instance
Law & Finance School (general position, for variations see text in Sections 3 to 5)	La Porta et al.	Efficiency of outcomes	Important for protection of property rights	Unclear: mainly separate but some studies refer to role of community standards	Unclear whether (i) protecting property rights, (ii) enforceability or (iii) favouring growth	<i>Subjective:</i> Fear of sanction (cost-benefit calculation)

Table for appendix

Table 2: The Law and Finance School: Core Studies Analysed for this Paper

Year	Authors	Reference	Legal variable of interest	Main economic and political dependent variables
1997	La Porta, R., F. Lopez-de-Silanes, A. Shleifer, & R. Vishny	'Legal Determinants of External Finance', <i>Journal of Finance</i> (JoF), 52(3): 1131-1150	Anti-director rights index (ADRI) One share – one vote rule Legal origin (used as instrument variable)	External stock market capitalisation/GNP Domestic firms/population IPOs/population Debt/GNP
	La Porta, R., F. Lopez-de-Silanes, A. Shleifer, & R. Vishny	'Trust in Large Organisations', <i>AEA Papers and Proceedings</i> , 87(2): 333-338	Efficiency of judiciary (as one of the dependent variables in the category 'government efficiency')	Government efficiency (see previous column). Success of large firms (20 largest listed firms sales as percentage of GNP). Civic participation in professional associations.
1998	La Porta, R., F. Lopez-de-Silanes, A. Shleifer, & R. Vishny	'Law and Finance', <i>Journal of Political Economy</i> (JPE), 1006(6): 1113-1155.	ADRI Legal origin (instrument variable)	Corruption Risk of expropriation Repudiation of contracts by government Accounting standards
	Hay, J. & A. Shleifer	'Private Enforcement of Public Laws: a Theory of Legal Reform', <i>AEA Review Papers and Proceedings</i> , 88, 398-403.	Legal reform: what facilitates private enforcement of public rules?	<i>Theoretical paper; general aim is to identify when institutional reforms are effective/ineffective</i>
1999	La Porta, R., F. Lopez-de-Silanes, A. Shleifer, & R. Vishny	'The Quality of Government,' <i>Journal of Law, Economics and Organization</i> , 15(1): 222-279.	Legal origin (used as a proxy for political system (interventionism) alongside a second political variable (ethno-linguistic heterogeneity)	Dispersed shareholder ownership (as proxy for stock-market development)
	La Porta, R., F. Lopez-de-Silanes, & A. Shleifer	'Corporate Ownership Around the World,' <i>JoF</i> 54(2): 471-517	ADRI Legal origin (instrument variable)	Ownership concentration of firms

	Levine, R.	'Law, Finance, and Economic Growth', Journal of Financial Intermediation, 8: 8-35.	Legal origin Creditor rights Efficiency of the legal system in enforcing contracts Accounting standards	Liquid liabilities to GDP Deposit money bank credit divided by deposit money bank plus central bank credit Ratio of claims on the nonfinancial private sector to total domestic credit and to GDP
2000	La Porta, R., F. Lopez-de-Silanes, A. Shleifer, & R. Vishny	'Investor protection and Corporate Governance', Journal of Financial Economics (JFE), 58: 3-27.	Shareholder and creditor protection	<i>Theoretical paper; general aim is to summarise the economic consequences of legal differences across countries and to assess strategies of corporate governance reform.</i>
	Johnson, S, La Porta, R., F. López-de-Silanes, A. Shleifer, & R. Vishny	'Tunnelling,' American Economic Review (AER), 90(2): 22-27	Use of general legal principles in court: Duty of care Duty of loyalty	<i>Theoretical paper; aim is to analyse legal forms of 'tunnelling' in civil-law countries.</i>
	Johnson, S, Boone, P., Breach, A., Friedman, E.	Corporate Governance in the Asian Financial Crisis, JoFE, 58: 141-186	ADRI Rule of law	Variation in exchange rates Stock market performance
	La Porta, R., F. Lopez-de-Silanes, A. Shleifer, & R. Vishny	'Agency Problems and Dividend Policies Around the World', JoF, 55(1): 1-33.	Investor protection: Dummy based on ADRI sample median	Dividend policy
	Beck, T., R. Levine, & N. Lozyza	'Finance and the Sources of Growth', JFE, 58: 261-300	Legal origin	Growth rate of real per capita GDP and of physical per capita capital. Productivity growth
2001	Mahoney, P. G.	'The Common Law and Economic Growth: Hayek Might Be Right,' The Journal of Legal Studies (JLS), 30(2): 503-525	Legal origin	Average annual growth in real per capita GDP, 1960-92
	Glaeser, E, S. Johnson & A. Shleifer	'Coase versus the Coasians', The Quarterly Journal of Economics (QJE) (2001) 116 (3): 853-899.	Type of contract/law enforcement regime (court based vs. public regulator)	Market capitalisation to GDP. Number of issues listed. Capital raised through public issues.

2002	Djankov, S., La Porta, R., Lopes-de-Silanes, F., & Shleifer, A.	'The Regulation of Entry,' QJE, 117: 1-37.	Entry regulation: Number of procedures Min. time and min cost to establish a business Legal origin	Social outcomes, e.g. compliance with ISO 9000 certifications, water pollution, deaths from accidental poisoning, size of the unofficial economy, product market competition. Corruption (based on perception index).
	La Porta, R., F. Lopez-de-Silanes, A. Shleifer, & R. Vishny	'Investor Protection and Corporate Valuation' JoF 57(3): 1147-1170.	ADRI Legal origin	Tobin's q (as well as industry-adjusted Tobin's q)
	La Porta, R., F. Lopez-de-Silanes & A. Shleifer	'Government Ownership of Banks', JoF, 57(1): 265-301.	ADRI Legal origin (proxy for state intervention) Rule of law	Government ownership of commercial banks. Measures of growth, e.g. GDP per capita, stock market capitalisation/GDP, credit/GDP etc.
	Shleifer, A. & D. Wolfenzon	'Investor Protection and Equity Markets', JFE 66 (1): 3-27.	Investor protection measured: Likelihood of punishment	<i>Theoretical paper; aims to show 'patterns of capital flows between rich and poor countries and on the politics of reform of investor protection'</i>
	Glaeser, E. & A. Shleifer	'Legal Origins', QJE 117 (4): 1193-1229.	Extent of centralisation of sovereign control over judiciary	<i>Theoretical paper; reference to 'observed social and economic outcomes' of previous studies.</i>
2003	Djankov, S., E. Glaeser, R. La Porta, F. Lopez-de-Silanes, & A. Shleifer	'The New Comparative Economics', Journal of Comparative Economics (JCE), 31(4), 595-619.	'Disorder' (expropriation by 'neighbours') v. 'dictatorship' (expropriation by government) trade-off	<i>Theoretical paper; aims to show general differences in economic development.</i>
	Djankov, S, R. La Porta, F. Lopez-de-Silanes, & A. Shleifer	'Courts,' QJE 118(2): 453-517.	Legal formalism (in eviction procedures and in collection of bounced checks)	Indices of formalism and their components as dependent variables; economic variables, Legal origin etc. as explanatory variables

	Glaeser, E., & A. Shleifer	'The Rise of the Regulatory State', Journal of Economic Literature (JEL) 41 (2): 401-425.	Type of law enforcement regime: i. Private litigation ii. Government regulation iii. Combination of i and ii iv. Do nothing	<i>Theoretical paper; ultimate aim is to further understanding of secure property rights.</i>
	Glaeser, E. J. Scheinkman, & A. Shleifer	'The Injustice of Inequality' Journal of Monetary Economics 50 (1): 199-222.	Subversion of institutions (courts) Aspects of Legal origin: Judicial independence, judicial review	<i>Theoretical paper; aim is to understand differences in capital accumulation and growth.</i>
	Beck, T., A. Demirguc-Kunt, & R. Levine	'Law and Finance: Why does Legal Origin Matter?' JCE 31: 653-675.	Aspects of Legal origin: Adaptability of legal system Political independence of the judiciary	Private credit Stock market development (as total value of outstanding equity shares /GDP) Property rights
2004	Glaeser, E., R. La Porta, F. Lopez-de-Silanes & A. Shleifer	'Do institutions cause growth?' Journal of Economic Growth (JEG) 9: 271-303.	Polity's constraints on executive power Legal origin	Growth rates of GDP per capita for different periods
	Botero J., S. Djankov, R. La Porta, F. Lopez-de-Silanes & A. Shleifer	'The Regulation of Labor,' QJE, 119: 1340-1382.	Labour regulations Legal origin	Elements of labour regulations as dependent variables Legal origin, GDP/per capita etc. as explanatory variables
	La Porta, R., F. Lopez-de-Silanes, C. Pop-Eleches, & A. Shleifer	'Judicial Checks & Balances', JPE, 112(2): 445-470.	Judicial independence and constitutional review Legal origin	Property rights index Employment law index Court procedures Democracy Political rights index Human rights index
2005	Mulligan, C., & A. Shleifer	'The Extent of the Market and the Supply of Regulation,' QJE 120 (4): 1445-1473	Regulatory density (number of pages of regulation in different US states)	Regulatory density as dependent variable; explanatory variables e.g. number of lawyers, income differences

	Shleifer, A.	'Understanding Regulation,' European Financial Management 11 (4): 439-451.	Enforcement theory of regulation choice: Trade-off between disorder and dictatorship	<i>Theoretical paper; aim is to further understanding of 'efficient institutional choice', e.g. social control of securities markets.</i>
	Beck, T., Demirguc-Kunt, A. & Levine, R.	'Law and Firms' Access to Finance', American Law and Economics Review 7(1): 211-252	Aspects of Legal origin: Adaptability of legal system Political independence of the judiciary	Survey responses to questions about 'general financing obstacle', 'long-term loans', 'collateral requirements', and 'paperwork/bureaucracy'
	Levine, R.	'Law, Endowments and Property Rights', Journal of Economic Perspectives (JEP), 19(3): 61-88.	Protection of property rights Legal origin	Property rights as dependent variable; legal origin, religion, ethnic fragmentation etc as explanatory variables
2006	La Porta, R., F. Lopez-de-Silanes & A. Shleifer	'What Works in Securities Laws?,' JoF 61: 1-33.	Security law rules: prospectus disclosure, liabilities etc	Market capitalisation Domestic firms/capita Value of IPOs Block premium Access to equity Ownership concentration Stock market volume/GDP
2007	Gennaioli, N. & A. Shleifer	'Overruling and the Instability of Law', JCE 35 (2): 309-328.	'Overruling' as one mechanism of revising precedents under common law	<i>Theoretical paper; aim is to assess and understand efficiency of common law</i>
	Gennaioli, N. & A. Shleifer	'The Evolution of Common Law', JPE 115 (1): 43-68.	'Distinguishing' a mechanism of revising precedents under common law	<i>Theoretical paper; aim is to assess and understand efficiency of common law</i>
	Djankov, S., C. McLiesh, and A. Shleifer.	'Private Credit in 129 Countries', JFE 12 (2): 77-99.	Legal creditor rights Private & public registries (information-sharing institutions) Legal origin	Private credit to GDP Data on public credit registry and/or private bureau as credit institutions
2008	La Porta, R., F. Lopez-de-Silanes, A. Shleifer	'The Economic Consequences of Legal Origins' JEL 46(2): 285-332.	Review paper Legal origin ADRI	<i>Review paper summarising variables of other papers</i>

	Djankov, S., R. La Porta, F. Lopez-de-Silanes & A. Shleifer	'The Law and Economics of Self-Dealing', JFE 88 (2008) 430-465.	Anti-Self-Dealing Index (ASDI)	Stock market capitalisation to GDP Block premium Listed firms per capita IPOs-to-GDP Ownership concentration
	La Porta, R. & A. Shleifer	'The Unofficial Economy and Economic Development', Brookings Papers on Economic Activity: 1-65.	Rule of law Cost of complying with labour laws	Various proxies for size of the unofficial economy, e.g., on tax evasion, self employment, registered firms Value added per employee; sales per employee; output per employee
	Djankov, S., O. Hart, C. McLiesh, & A. Shleifer	'Debt Enforcement around the World' JPE 116 (6): 1105-1150.	Measure of efficiency of debt enforcement (case: bankruptcy of a hotel) Legal origin	Efficiency of debt enforcement as dependent variable; legal origin as one of the explanatory variables
	Gennaioli, N., & A. Shleifer	'Judicial Fact Discretion,' JLS 37 (1): 1-35.	Judicial discretion in fact finding	<i>Theoretical paper; aim is to assess and understand efficiency of common law; here based on the evolution of accidents under tort law.</i>
2009	Balas, A., R. La Porta, F. Lopez-de-Silanes, & A. Shleifer	'The Divergence of Legal Procedures' American Economic Journal: Economic Policy (AEJEP), 1(2): 1-45.	Formalism of legal procedure (Djankov et al. 2003 extended to a 1950-2000 period)	Procedural formalism as dependent variable; legal origin as one of the explanatory variables
2010	Aghion, P., Y. Algan, P. Cahuc, and A. Shleifer.	'Regulation and Distrust,' QJE 125 (3): 1015-1049.	Determinants of demand for regulation	Regulation of entry and labour market (based on prior studies) Survey responses to questions about trust
	Djankov, S., T. Ganser, C. McLiesh, R. Ramalho & A. Shleifer	'The Effect of Corporate Taxes on Investment and Entrepreneurship,' AEJEP, 2(3): 31-64.	Corporate tax rates	Investment per GDP FDI per GDP Business density per capita Number of companies Size of informal economy Debt to equity ratio

	Djankov, S., C. Freund & C. S. Pham	'Trading on Time', Review of Economics and Statistics, 92(1): 166-173.	Restrictions to cross-border trade	Data on the number of days it takes to move standard cargo from factory gate to ship
	Niblett, A., R. Posner & A. Shleifer.	'The Evolution of a Legal Rule', JLS 39(2): 325-358	Evolution towards efficiency of legal rule (economic loss rule)	Evolution of economic loss rule in construction disputes
2013	Botero, J., A. Ponce & A. Shleifer.	'Education, Complaints, and Accountability,' Journal of Law & Economics 56(4): 959-996.	Education Quality of government	Complaints by citizens on topics such as policy abuse, burglary, assault etc.
	Gennaioli, N., R. La Porta, F. Lopez-de-Silanes, A. Shleifer.	'Human Capital and Regional Development' QJE 128(1): 105-164	Institutional variables, e.g., on corruption, costs of security, government predictability	Regional GDP per capita Sales minus expenditure on raw materials and energy Regional income per GDP
2014	La Porta, R. & A. Shleifer	'Informality and Development,' JEP, 28(3): 109-26.	Rule of law Cost of complying with labour laws	Number of employees per establishment, per capita and working in large firms
	Gennaioli, N., R. La Porta, F. Lopez-de-Silanes & A. Shleifer	'Growth in Regions' JEG 19: 259-309.	Legal/regulatory barriers to factor mobility across regions Legal origin (control)	Measures of living standards such as availability of electricity, TV, radio etc.
2015	Bordalo, P., N. Gennaioli, & A. Shleifer	'Salience Theory of Judicial Decisions,' JLS, 44(1): S7-S33	Judicial decisions (decision-making biases – notably salience)	<i>Theoretical paper; aim is to assess and understand the efficiency of case law, notably analysis of damage awards in torts</i>
2016	Glaeser, E., G. Ponzetto, & A. Shleifer	'Securing Property Rights,' NBER WP	Subversion of justice	Survey responses on resolution of contract disputes and perceptions of lawfulness
	Djankov S., E. Nikolova, & J. Zilinsky	'The Happiness Gap in Eastern Europe', JCE, 44(1): 108-124	Perceived corruption and government performance	Survey responses on life satisfaction
2017	Djankov, S. D. Georgieva, & R. Ramalho	'Determinants of Regulatory Reform' WP	Regulatory reform (based on Doing Business Reports) as dependent variable	Fiscal imbalances
	Giambona, E., Lopez de Silanes, F., & Matta, R.	'Stiffing the Creditor: The Effect of Asset Verifiability on Bankruptcy' WP	Creditor protection in context of changes of US law	Bankruptcy filings and debt capacity of low- verifiability firms