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## **Sources and Effectiveness of Financial Development**

What We Know  
and What We Need to Know

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### **Abstract**

Drawing on recent literature, the paper argues that institutions and political economy factors hold the key to understanding why some countries have succeeded in developing their financial systems while others have not. The paper also reviews new evidence which suggests that institutional quality may influence the effectiveness of financial development in delivering economic growth. These new findings highlight the possibility that poor countries may be stuck in a bad equilibrium, in which weak institutions inhibit growth both directly and indirectly, through under-developed, low-quality finance. In addition, the paper identifies a number of unanswered questions in the financial development literature, including the precise role of important institutions like law in finance, and the influence of geographical factors.

Keywords: financial development, growth, institutions, banking

JEL classification: O16

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## 1 Introduction

There is a broad consensus in the finance-growth literature that, with few exceptions, there exists a positive long-run association between financial development and economic growth. This relationship is fairly robust to how financial development is measured – be it using indicators of banking or capital market development – and estimation methods, the latter ranging from cross-country to time-series and panel data techniques. Importantly, financial development has been shown to be one of the most robust determinants of economic growth, alongside most of the alternatives (e.g. King and Levine 1993). Thus, financial development may hold the key to economic prosperity and may, consequently, be a powerful mechanism for reducing poverty worldwide.<sup>1</sup> As a result of this widespread consensus, the finance-growth literature has recently begun to shift its attention towards understanding why some countries have been able to develop their financial systems while some others have not.

Interestingly, both the strength and the causal nature of the relationship between financial development and growth appear to vary substantially both across countries and over time.<sup>2</sup> Thus, if international policy makers are looking for easy solutions that work in all countries and at all times ('one-size fits all' type answers), they are likely to be disappointed. An important, albeit disturbing, example of this is recent findings by Rioja and Valev (2004) and Demetriades and Law (2004) which suggest that the relationship between finance and growth is very weak in low-income countries. Thus, financial development may well be ineffective in promoting growth and, because of this, may be ineffective in alleviating poverty in those countries where poverty is particularly concentrated or acute. However, even in these cases it is important to understand why financial development is ineffective, which may help inform policymaking.

This paper aims to improve our understanding of both the sources and effectiveness of financial development, with due consideration of how both may vary across countries and over time. To do so, the paper takes stock of what we already know and identifies areas where further research is needed. The paper is organised as follows. Section 2 reviews relevant literature on the likely sources of financial development, highlighting areas of further research. Section 3 offers some new insights on the sources of financial development, based on some recent findings by Demetriades and Law (2005). Section 4 reviews what we know on the effectiveness of financial development in promoting growth, speculating as to why it may vary across countries and highlighting areas of further research. Finally, Section 5 summarises and concludes.

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<sup>1</sup> Dollar and Kraay (2001) provide extensive evidence which suggests that economic growth worldwide has been a powerful mechanism for reducing poverty.

<sup>2</sup> For a recent survey see Demetriades and Andrianova (2004).

## 2 Sources of financial development

It is instructive to categorise the likely sources of financial development as follows:

- policy measures such as financial liberalisation and bank privatisation;
- institutions, such as rule of law and prudential regulation;
- political economy factors, such as opposition to reform and openness of industrial and banking incumbents.

While the above taxonomy is somewhat arbitrary – for example some political economy factors may well be the reason why some countries choose not to liberalise their financial systems – it is still helpful to utilise it for expositional purposes, while recognising that there may well be inter-linkages between the various sources.

### 2.1 Policy measures

The early literature on financial development (e.g. McKinnon 1973 and Shaw 1973), highlights ill-conceived government interventions, such as interest rate controls, high reserve requirements and capital controls, as the main source of financial underdevelopment. McKinnon and Shaw argued that ceilings on deposit and/or lending rates, because of high inflation rates, frequently resulted in negative real rates of interest, discouraging saving and leading to an excess demand for loanable funds. Consequently, the volume of investment declined. The problem was exacerbated by governments that interfered in credit allocation, providing credit to ‘priority sectors’, frequently a euphemism for cronyism and corruption. Thus, the productivity of capital declined. Governments also imposed excessively high reserve requirements on banks, usually at low or even zero interest rates, in order to finance their own deficits cheaply. This acted as a tax on the banking system, resulting in further depression of deposit rates, thereby creating greater disincentives for financial saving. Removing interest rate ceilings, reducing reserve requirements and abolishing priority lending – in other words, freeing the financial system from government interventions – was seen as critical in delivering financial development. For a time, these policies became the mantra of the IMF and the World Bank, whose officials prescribed (and frequently imposed) ‘financial liberalisation’ to many developing countries.

The reality of financial liberalisation in the 1970s and early 1980s was, however, different from what was predicted by the McKinnon-Shaw literature. Real interest rates soared to unprecedented levels (sometimes in excess of +20 per cent), as a result of fierce competition for funds and excessive risk-taking by both firms and banks. When borrowers became unable to repay their loans, many banks failed. Governments were therefore forced to (re-)nationalise them, resulting in very large fiscal costs. Instead of greater financial development, there was financial fragility; instead of more prosperity there was more poverty. In a classic paper entitled ‘Good-bye Financial Repression, Hello Financial Crash’, Diaz-Alejandro (1985) provides a first attempt at analysing the failure of financial liberalisation in Latin America. Subsequent analysis of what went wrong in these reforms (Villanueva and Mirakhor 1990) highlights adverse preconditions, such as macroeconomic instability (large fiscal deficits and high inflation) and inadequacies in banking supervision. McKinnon (1991) suggests that incorrect sequencing of reforms was at the root of the problem. He suggests that financial liberalisation should be preceded by real sector reforms, including

privatisation of state enterprises, aimed at ensuring that relative prices adequately reflect economic scarcities. He also advocates reducing deficits and inflation before embarking on reforms, so that price distortions that may be associated with high inflation are removed. At the same time, domestic financial liberalisation (i.e. interest rate deregulation and lowering of reserve requirements) should precede liberalisation of capital flows, with restrictions on long-term flows, such as FDI, being lifted first while those on volatile short-term flows being lifted last.

McKinnon (1991) also suggests that adequate regulation and supervision of banks is necessary in order to contain moral hazard problems in the banking system. Adverse selection and moral hazard problems are exacerbated in the aftermath of interest rate liberalisation, especially when banks are not sufficiently well capitalised. Under-capitalised banks have incentives to take excessive risks, especially if they are protected by government safety nets. It is often believed that such safety nets encourage banks to behave imprudently, since they allow them to benefit from a one-way (unfair) bet against the government. By making speculative loans at very high interest rates they stand to make very large profits, assuming of course that the borrowers do not default. If the borrowers do default, the bank will not suffer the full cost of these defaults if it is bailed out by the government. Even if the bank is allowed to fail, the depositors may not suffer if they are protected by deposit insurance. Thus, depositors have no incentives to monitor bank managers when they are protected by deposit insurance. Bank shareholders have no incentive to monitor bank managers either when they do not have much capital at stake. In the extreme, bank shareholders may even benefit from gambling behaviour by the managers, if they have little or no capital at stake (i.e. when the bank has little or no net worth). In such circumstances it may be in their interests to instruct bank managers to gamble (with taxpayer's money) this is sometimes referred to as 'gambling for resurrection' (Llewellyn 1999).

Several papers provide empirical evidence that substantiates the uncanny relationship between financial liberalisation and financial crises. Demirgüç-Kunt and Detragiache (1998) analyse the determinants of the probability of banking crises in 53 countries during 1980-95. They find that financial liberalisation has a very large and statistically significant positive effect on the probability of banking crisis, even after controlling for many other possible determinants of banking crises. The magnitudes are quite startling: the probability of a banking crisis increases up to five times following financial liberalisation. The increase in this probability is lower in more developed economies or when institutional quality is high. Their institutional quality indicators include law and order, bureaucratic delay, contract enforcement, quality of bureaucracy and corruption. The authors argue that the influence of financial liberalisation on financial fragility works its way through reduced bank franchise values. Financial liberalisation intensifies competition which reduces the value of a banking license to shareholders and exacerbates moral hazard in the form of excessively risky lending. They also present evidence which suggests that while financial liberalisation has a positive effect on financial development, banking crises have a negative effect. They find that the two effects offset each other in countries that liberalise from a position of positive real interest rates, while in those that started from a repressed position the effect of financial liberalisation on financial development outweighs that of the banking crisis. They conclude by arguing in favour of gradual financial liberalisation, to be accompanied or preceded by institutional development.

Kaminsky and Reinhart (1999) carry out an empirical analysis of the ‘twin’ – banking and currency – crises, in which they argue that financial liberalisation and/or increased access to international capital markets played a major role in the first phase of such crises. Specifically, they examine the empirical regularities and the sources of 76 currency crises and 26 banking crises. They find that banking and currency crises are closely linked in the aftermath of financial liberalisation, with banking crises beginning before currencies collapse. Currency collapse exacerbates the problems in the banking system further, making the ‘twin crises’ a lot more severe than crises that occur in isolation. Financial liberalisation or increased access to international capital markets fuel the boom phase of the boom-bust cycle that precedes crises. This phase is associated with increased access to financing and the formation of asset price bubbles. The bust is attributed to overvalued exchange rates, declining exports, and a rising cost of credit, all of which create vulnerabilities in the financial system. The authors see the draconian reductions in reserve requirements that accompany financial liberalisation as one of the main factors that trigger lending booms. They also suggest that high interest rates result in increased risk taking, in line with earlier literature. The authors conclude that there is a compelling case for strengthening banking regulation and supervision to ‘allow countries to sail smoothly through the perilous waters of financial liberalization’. And that the Asian crisis of 1997-98, like earlier crises ‘remind us that capital inflows can on occasion be too much of a good thing’ (Kaminsky and Reinhart 1999: 496).

Stiglitz (2000) offers further insights into the Asian financial crisis of 1997-98, as well as on other recent crises, including Russia and Latin America, drawing on his experience as Chief Economist of the World Bank. He suggests that premature financial and capital market liberalisation – in the sense of not first putting in place an effective regulatory framework – was at the root of these crises. He also suggests that global economic arrangements are fundamentally weak. Stiglitz’s analysis highlights some of the difficulties that the sequencing literature has in explaining the East Asian crisis, which ensued soon after these countries liberalised their financial systems. By conventional definitions, these countries had good economic policies and sound financial institutions. They did not have fiscal deficits; they enjoyed very high growth rates for long periods, and their inflation rates were low. Their macroeconomic fundamentals were (or at least appeared to be) very strong. They were also thought to have reasonably respectable systems of banking regulation and supervision. Stiglitz emphasises the destabilising influence of short-term capital flows in his analysis, arguing that ‘there is not only no case for capital market liberalization, [...] there is a fairly compelling case *against* full liberalization’ (Stiglitz 2000: 1076). His analysis of why capital market liberalisation produces instability, not growth, identifies the following fallacy in the pro-liberalisation arguments, namely that ‘financial and capital markets are essentially different from markets for ordinary goods and services’. He points out that capital and financial markets are ‘information-gathering’ markets, which mean that standard results for competitive markets derived from models with perfect information are not applicable. He also argues that capital flows are pro-cyclical; therefore the argument that the opening of capital markets would allow diversification and enhance stability is deficient. Finally, he challenges the notion that any destabilising effects emanating from capital account liberalisation are transitory, while the benefits are permanent, by alluding to the unit root literature, which suggests that shocks to output can be long-lasting. The debate has now shifted, Stiglitz argues, to the type of interventions that might be necessary in order to stabilise short-term capital flows, rather than their desirability as such, with these actions being endorsed by the IMF itself.

Stiglitz (1999) elaborates on the weaknesses of the institutional financial architecture, which amplifies the destabilising effects of financial liberalisation. Specifically, he highlights the role of the tight monetary policies recommended by the IMF to Asian crisis countries, in the aftermath of the crisis. Moreover, these policies, which were aimed at stabilising exchange rates, had the opposite effect. This was because high interest rates raised the probability of corporate bankruptcies. This, in turn, made international lenders more reluctant to renew or rollover their loans to highly leveraged East Asian corporations. There have been several attempts to address the issue of weak financial architecture, many of these from World Bank and IMF economists. However, a major empirical issue that needs to be tackled when addressing this question is that in any reasonable economic model interest rates and exchange rates are simultaneously determined. Hence, identifying the effects of policy tightening is extremely difficult. Caporale *et al.* (2005) exploit the heteroskedasticity properties in the relevant time-series for these variables in order to identify the system. Using a bivariate vector autoregression model, they find that while tight monetary policy helped to defend the currencies concerned during tranquil periods, it had the opposite effect during the Asian crisis.

A number of authors continue, however, to propagate the benefits of financial liberalisation, focusing primarily on the effects of capital account liberalisation on stock returns and the cost of equity capital, using event studies. Bekaert and Harvey (2000), for example, measure how capital account liberalisation has affected the equity return-generating process in 20 emerging markets. They use a variety of methods to determine liberalisation dates, including official liberalisation dates, dates of first issues of country funds or American Depository Receipts, which may signal a change in access to international capital markets, and econometric methods to identify structural breaks in the series. They find that dividend yields decline after liberalisations, but the effect is always less than 1 per cent on average. They also find that there is no significant impact of liberalisation on unconditional volatility. In a series of other studies (see Bekaert and Harvey 2003), they challenge Stiglitz' critique of capital account liberalisation, dubbing as 'odd' the whole discussion concerning increased volatility. They review evidence which suggests that the ratio of investment to GDP increases following liberalisation, while the ratio of consumption to GDP does not increase. Durham (2000), however, finds that many of the results in this literature are sensitive to (i) alternative liberalisation event dates and (ii) conditioning on other determinants of stock returns suggested by the literature on stock market anomalies.

Evidence from time-series studies on the effects of financial liberalisation on financial development is mixed. While it is quite common to find that the real interest rate has a small positive effect on financial development, there is also evidence to suggest that the direct effects of 'repressive' policies on financial development are sometimes positive and quite large. Demetriades and Luintel (2001) provide time-series evidence from South Korea – one of the fastest growing economies in the world – in which an index of financial repression is found to have a large positive effect on financial development. They explain this finding by arguing that the Korean banking system behaved like a cartel when interest rates were deregulated. Using a monopoly-bank model they show that mild repression of lending rates increases the amount of financial intermediation. It is also worth noting that domestic financial liberalisation in South Korea was not followed by financial instability. The Korean crisis occurred well after domestic interest rates were liberalised; it followed the opening up of short-term capital flows, which destabilised the banking system. In sharp contrast to their findings on South Korea in an earlier study of the Indian banking system, Demetriades and Luintel (1997) find that

financial repression had large negative effects on financial development, over and above the retarding influence of low real rates of interest. The difference in results is attributed as reflecting institutional differences and differences in the severity of repression. While mild financial repression may turn out to have positive effects under certain conditions, severe financial repression is likely to result in financial under-development not only due to large negative real interest rates, but also because of other disincentive effects. This is also further evidence that ‘one-size fits all’ may not work: policies which promote financial development in a certain context may not work in other contexts.

Another form of government intervention in the financial system that may have implications for financial development and growth is government ownership of banks. Government owned (henceforth ‘state’) banks provide an effective means for politicians to influence the allocation of credit, allowing them to support firms and enterprises that may further their political interests. This view, known as the ‘political view of state banks’, has a clear policy implication: privatising state banks can improve the efficiency of credit allocation and, consequently, can have positive effects on the quality and quantity of investment. Privatisation of state banks is also likely to promote financial development, since private banks would be in a better position to attract funds into the banking system than inefficient state banks. La Porta *et al.* (2002) examine the relationship between government ownership of banks, financial development and economic growth using a cross-country data set. They find that government ownership of banks is negatively correlated with both financial development and growth. The estimated coefficients are quite large: they suggest that a 10 per cent reduction in the share of banking assets owned by the government is associated with an increase in growth by 0.25 per cent per annum. Assuming that the relationships are causal, the clear policy implication is that the privatisation of government owned banks would yield very large benefits in terms of additional financial development and economic growth. La Porta *et al.* also report bi-variate regressions that suggest that government ownership of banks is higher when institutional indicators, including property rights and government efficiency, are weak. However, this highlights the possibility of reverse causation: if government ownership of banks is the result of institutional weaknesses, then lower growth rates and financial under-development may be the result of the same institutional weaknesses. Thus, privatising state banks without addressing the institutional deficiencies that brought them about may not have the positive effects of growth predicted by La Porta *et al.* (2002).

Andrianova *et al.* (2003; henceforth ADS), provide further insights into the relationship between institutions, state banks and financial development using a locational model of banking in which there are two types of private banks – ‘honest’ and ‘opportunistic’ – and a state bank. Private banks are assumed to offer more competitive interest rates to depositors than the state bank. In the absence of deposit-contract enforcement problems they are therefore always preferred by depositors. However, if deposit contract enforcement is weak and the number of opportunistic banks is large, then some depositors would prefer to place their savings in the state bank, which offers a risk-free, albeit lower, rate of return. ADS derive three types of equilibria in their model: (i) a ‘high’ equilibrium in which institutions are strong, only private banks exist and opportunistic banks honour their contract; (ii) an ‘intermediate’ equilibrium in which private banks and the state bank co-exist and opportunistic banks find it profitable to breach their deposit contracts, because of relatively weaker contract enforcement, and (iii) a ‘low’ equilibrium in which only the state bank exists because contract enforcement is weak and the proportion of opportunistic banks is high. They show that

in the intermediate region the proportion of state bank deposits declines when institutional quality increases. They also show that privatisation of the state bank in the low equilibrium region results in financial disintermediation: i.e. no private bank would emerge to fill the gap, as depositors will not trust it. ADS extend their model to allow for politically motivated subsidies to the state bank. They show that the higher the level of these subsidies, the smaller the 'high' equilibrium region. Thus, state banks may feature in equilibrium, even when there are no enforcement problems, because they are able to offer more competitive deposit rates than some private banks. ADS also provide a variety of empirical tests of the relationships predicted by their model, using data from 83 countries. They find that institutional quality indicators, including financial regulation, rule of law and disclosure rules, are much more strongly and robustly correlated to the share of state banks than proxies for politically-driven subsidies. They conclude that the privatisation of state banks is, at best, unnecessary since it is better to build institutions that foster the development of private banks and remove subsidies from state banks. At worst it is detrimental since, when institutions are weak, it will almost certainly lead to financial disintermediation.

The conclusion that can be drawn from the analysis of policy measures is that the case for less government intervention in the financial system resulting in greater financial development is far from proven. It presupposes the presence of an institutional framework that aims at containing market imperfections, such as moral hazard and adverse selection. Thus, institutions and political economy factors, not less government intervention, may well be the true fundamental determinants of financial development.

## 2.2 Institutions

An effective system of financial regulation and supervision would ensure that banks have adequate risk management systems and that bank shareholders are penalised if banks take excessive risks. Capital requirements that accurately reflect risk-taking by banks are one mechanism for achieving this. Increased transparency regarding banks' risk management systems, as well as increased disclosure concerning exposure to large risks, can help to increase market discipline on bank managers and may well contain such risk taking. Institutions such as contract enforcement and the rule-of-law also matter, since they have implications for the protection of investors' property rights. Much of the literature on institutions, however, examines their effects on growth, not on financial development.<sup>3</sup>

La Porta *et al.* (1998; henceforth LLS), examine legal rules covering the protection of (minority) shareholders and creditors, and the quality of their enforcement in 49 countries. They draw on the work of comparative legal scholars, who classify national legal systems into major families of law, even though national differences remain within the same families. These scholars identify two broad legal traditions: civil law and common law. The civil law tradition, which is the oldest and most influential, originates in Roman law. It relies heavily on legal scholars to ascertain and formulate rules, statutes and comprehensive codes, as a primary means of settling disputes. Within the civil law

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<sup>3</sup> For example, Mauro (1995), Svensson (1998), and Acemoglu *et al.* (2001) provide macroeconomic evidence that suggests a negative impact of insecure property rights on economic growth and investment.

tradition, there are three common families of laws: French, German and Scandinavian. The French Commercial code was written in 1807 and was 'exported' by Napoleon's armies to other countries in central Europe; eventually it was also exported to French colonies in Africa, Asia and the Caribbean. The German Commercial Code, written in 1897, had an influence in Central and Eastern Europe, Japan, Korea and Taiwan. The Scandinavian family, considered less a derivative of Roman law than French and German law, is considered sufficiently distinct from the other families by legal scholars, but has no influence outside the Nordic countries. The common law family, which originates in the law of England, is formed by judges in the resolution of specific disputes. Precedents from judicial decisions, not contributions by scholars, form the basis of common law. Common law has spread to the former British colonies, including the US, Canada, Australia, India, South Africa, Nigeria, Kenya, Ireland, Hong-Kong, etc. LLS find that common-law countries generally have the strongest shareholder protection, while civil-law countries have the weakest. Within the civil law group, French civil law countries offer the worst legal protection to shareholders. Similar results are found for the protection of creditors. French civil law countries compensate for weak investor protection, through mandatory dividend to shareholders and legal reserves. LLS also find that legal origins have a significant influence on legal enforcement, with common law countries and Scandinavian civil law countries having the best quality of law enforcement while French civil law countries having the worst. They do, however, find that the main determinant of legal enforcement is GDP per capita: richer countries have higher quality of law enforcement. Thus, rich countries within the French civil law group, such as France and Belgium, could well offer better law enforcement than poor common law countries.

La Porta *et al.* (1997) examine the influence of legal origins on financial development, mainly focusing on the development of capital markets. They use the same sample of 49 countries as LSS and find that French civil law countries have the least developed capital markets, especially as compared to common law countries. Their indicators of financial development include: stock market capitalisation/GNP, number of firms relative to population size, initial public offerings (IPOs) relative to population and debt/GDP. Their empirical findings suggest that civil law countries have lower levels of capital market development than common law countries. However, there are no significant differences in relation to banking sector development. In the regressions that use debt/GDP as the dependent variable, once the authors control for creditor rights, only the Scandinavian civil law dummy is negative and statistically significant at conventional levels.

What could be concluded from La Porta *et al.* (1997, 1998) is that civil-law countries, which seem to offer less legal protection to minority shareholders and creditors, have less developed capital markets and greater concentration of ownership at both industry and firm level. However, the implications of legal origins for the development of the banking system, which is perhaps the most important part of the financial system for many developing countries, are less clear cut. Indeed, Rajan and Zingales (2003) find that French civil code countries were no less financially developed in 1913 and 1929 than common law countries, and only started to lag behind after the Second World War. Moreover, legal traditions may themselves be determined by historical, cultural, socio-economic and political factors, so it is not easy to draw out any policy implications from these results. Legal origins are, in fact, highly correlated with a number of other institutional quality indicators, including the efficiency of the judiciary, bureaucratic quality, generalised level of trust, etc., so it is difficult to disentangle the effects of legal origins on financial development from those of other institutions (Zingales 2003).

Finally, even if we were to accept that it is the legal system that determines financial development and ultimately growth, there remains the question of how to transform a legal system from the supposedly inferior French civil code to the supposedly superior common law one. There are, therefore, many unanswered questions as regards the relationship between law and finance, offering fertile ground for more research.

### **2.3 Political economy factors**

The key to solving the puzzle of why many countries remain financially underdeveloped, according to Rajan and Zingales (2003), is the lack of political will, or the capture of politicians by interest groups opposed to financial openness. In other words, financial development comes about only if the ruling elite welcome it. The economic argument constructed by Rajan and Zingales in support of this conjecture is as follows. Openness to either international trade or international capital, while beneficial for the country's welfare in stimulating the development of its financial and product markets, breeds competition and thus threatens the rents of incumbents. When financial markets are underdeveloped, two types of incumbents enjoy rents and therefore may oppose openness and financial development. Established industrial firms, or 'industrial incumbents', are in a privileged position when obtaining external finance due to their reputational capital and their ability to provide collateral. Their rents are generated because new firms with profitable business projects have to team up with an industrial incumbent in order to obtain financing. 'Financial incumbents', in turn, capitalise on their informational advantage which stems from relation-based financing and become monopolists in providing loans to firms when problems of poor disclosure and weak contract enforcement raise fixed costs of new financial entrants. Financial development improves transparency and enforcement, thus, reducing the barriers to entry and undermining not just the profits of incumbents who have to operate in a more competitive environment, but the source of their rents since entrants are able to effectively operate without any help from incumbents. Despite the benefits it brings (after all, better disclosure rules improve operating conditions for all firms – existing and new), financial development threatens both the profits and the positional rents of the incumbents.

The way to remove incumbents' opposition to financial development, Rajan and Zingales argue, is to simultaneously open product and capital markets. More intense competition from foreign entrants, following liberalisation of either trade or capital flows alone, will only intensify incumbents' opposition to financial development. For example, trade liberalisation under protected capital markets would reduce industrial incumbents' competitiveness and profits, thus, increase their demand for cheaper and larger loans to defend their domestic market position. Their opposition to financial development – which, if came about, would further undermine incumbents' competitiveness, this time vis-a-vis the domestic entrants – would now be even stronger. Incumbent financiers' resistance to financial development, when capital markets are protected while product markets are liberalised, is likely to remain the same: after all, relation-based financing favours dealing with existing large clients and these are incumbent industrialists. Similarly, protected product markets in combination with free international capital flows, create a stronger resistance to financial development from the incumbent financiers (who are forced now to compete for their best and largest industrial clients with foreign financial institutions) while leaving industrial incumbents' incentives for financial development unchanged. There is little use in additional external finance available from tapping international capital markets when the economy is closed to trade. In contrast, trade liberalisation

accompanied by freeing of capital flows, forces the incumbent industrialists and financiers to make the best of the liberalised markets in order to cope with the competitive pressure from foreign and domestic entrants. Lower profits at the industrial incumbents and their greater need for external finance now force them to explore possibilities of tapping the international capital markets. If unsuccessful, these industrialists would in fact now support financial innovations that aid greater transparency, thus, improving their own access to domestic finance. Incumbent financiers, being forced to lose some of their best clients to foreign competition and at the same time to accept lower profitability of their remaining clientele, are now forced to seek new lending opportunities among young industrial firms which are less known and possibly more risky. Financing these new firms is likely to be unattractive to foreign financiers, but would create incentives for domestic incumbent financiers to support the improvements in, and development of, domestic financial markets. In sum, trade and capital liberalisation aligns the interests of industrial and financial incumbents with those of the rest of the economy and financial development becomes possible.

The empirical evidence provided by Rajan and Zingales focuses on a variety of relationships which suggest that the combination of trade and capital openness are, indeed, correlated with greater financial development. Their findings, while consistent with their conceptual arguments, provide, at best, indirect evidence about the importance played by interest-group politics in financial development. Moreover, their sample of countries, driven by data availability in the pre-Second World War period, is rather limited, and in some of the regressions the sample size is as low as 17 observations. Thus, while the ideas in Rajan and Zingales (2003) by themselves undoubtedly advance our understanding of political economy factors, the empirical evidence that is provided by the same authors is less than convincing, leaving ample scope for further empirical research. Further questions that need to be addressed, both theoretically and empirically, include the following. How do special interest groups come into existence? What institutions and policies – ‘political pre-conditions’ for institutions and financial development – moderate the influence of interest groups? If the most effective way to curb incumbents’ opposition to financial development is by means of increased openness and competitiveness, then what is the best combination of policies that could pave the way for rapid institutional development? What is the role of the state for shaping the institutional infrastructure in a way that limits the power of the interest groups and the scope for capture of the government policies by special interests? These are all exciting questions that await researchers’ attention.

### **3 Sources of financial development: some new evidence**

Demetriades and Law (2005) draw on the literature reviewed in section 2 to specify the following financial development equation:

$$FD = f(RGDPC, R, ROL, LO, DEMOC, POL, BC, OP) \quad (1)$$

where FD is financial development; RGDP is real GDP per capita; R is the real interest rate; ROL is rule of law; LO is legal origin; DEMOC is democracy score, POL is political stability; BC is bank concentration and OP is openness, which is measured by total trade (imports + exports) over GDP. The specification of the equation reflects all the considerations outlined in section 2. Real GDP per capita is a conditioning

variable that purports to filter out the influence of general economic development on the level of financial development; in a growing economy, the financial sector may grow faster relative to the size of the economy because the demand for financial services grows more than proportionately to income (finance may be a luxury good). The financial policy stance, including financial liberalisation, is usually captured by the presence of the real interest rate in the equation. A positive coefficient will signify the McKinnon-Shaw effect: higher real rates of interest enhance financial development. Rule of law and legal origin would capture the influence of institutions, while democracy, political stability and to a certain extent openness would capture the influence of political economy factors. Finally, bank concentration, which captures the influence of banking market structure, may also to some extent reflect political economy considerations: less competitive banking systems may be the result of powerful ruling elites that restrict entry and contain financial development.

Equation (1) is estimated by utilising the cross-country OLS robust standard estimator. The data set utilised consists of cross-country observation for the period 1990–2001. Two different categories of financial development indicators are employed, namely banking sector development and capital market development. The banking sector indicators are the ratios of liquid liabilities, private sector credit and domestic credit provided by banking sector to GDP. The capital market development indicators are the ratio of stock market capitalisation to GDP and the ratio of the number of companies listed to total population. Both capital market indicators are only available for high-income and middle-income countries. The main sources of these annual data are the *World Development Indicators*.<sup>4</sup> The data set for the rule of law indicator employed in this study was assembled by the Centre for Institutional Reform and Informal Sector (IRIS) of the University of Maryland from the International Country Risk Guide (ICRG),<sup>5</sup> a monthly publication of Political Risk Services (PRS). The democracy score and political stability (‘durable’) variables are obtained from Polity IV datasets, which is made available by Center for International Development and Conflict Management (CIDCM).<sup>6</sup> The above three variables are scaled from 0 to 10 which indicate that higher values imply better rule of law, democracy score and political stability. The bank concentration is measured by the ratio of total assets of the three largest banks in each country to total banking sector assets, which is obtained from Beck *et al.* (2003b).<sup>7</sup> The annual data of real GDP per capita, real deposit interest rate (deflated by inflation) and total labour force, are collected from the *World Development Indicators*.

Table 1 reproduces some of the results from Demetriades and Law (2005). It reports OLS regressions of Equation (1) with all the variables included. In all five models real GDP per capita enters with the expected positive coefficient and is statistically

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<sup>4</sup> World Bank CD-ROM 2003.

<sup>5</sup> The website of the ICRG is <http://www.icrgonline.com>. The ICRG’s risk ratings have been cited by experts at the IMF, World Bank, United Nations and many other international bodies as a standard against which other ratings can be measured.

<sup>6</sup> The website of the CIDCM is <http://www.cidcm.umd.edu/inscr/polity>.

<sup>7</sup> Demirgüç-Kunt and Levine (2000), Levine (2000) and Beck *et al.* (2003a) have employed this data set in the empirical analysis.

Table 1 OLS regressions with robust standard errors  
 Dependent variable: financial development (sample period: 1990–2001)

	Model 1: Liquid Liabilities	Model 2: Private Sector Credit	Model 3: Domestic Credit	Model 4: Market Capitalisation	Model 5: Number of Companies Listed
Constant	0.78 (1.05)	-1.20 (-1.01)	-0.20 (-0.18)	-9.34 (-3.63)	-15.25 (-5.55)
Real GDP Per Capita	0.20 (3.02)***	0.32 (4.14)***	0.13 (1.68)*	0.26 (1.99)*	0.50 (3.85)***
Real Interest Rate	0.07 (1.45)	0.06 (1.28)	0.12 (1.97)*	-0.09 (-1.51)	-0.12 (-1.46)
Rule of Law	0.27 (2.56)**	0.32 (3.77)***	0.25 (2.48)**	0.26 (3.14)**	0.05 (2.43)**
Bank Concentration	-0.09 (-0.59)	-0.33 (-1.54)	-0.07 (-0.42)	-0.34 (-1.20)	1.15 (2.16)**
Democracy Score	0.30 (1.87)*	0.19 (1.78)*	0.55 (1.65)	0.43 (1.12)	0.20 (0.98)
Political Stability	0.16 (2.12)**	0.33 (1.89)*	0.26 (1.54)	0.40 (2.29)**	0.46 (2.34)**
Openness	0.32 (2.38)**	0.34 (2.42)**	0.21 (1.09)	0.73 (2.47)**	0.32 (1.38)
English	0.21 (1.48)	0.18 (2.23)**	0.25 (1.55)	0.33 (2.34)**	0.41 (2.02)*
French	-0.30 (-1.45)	-0.22 (-0.98)	-0.33 (-1.24)	-0.28 (-2.46)**	-0.20 (-1.54)
German	-0.17 (-0.90)	-0.23 (-1.50)	-0.19 (-0.65)	-0.10 (-1.32)	0.22 (1.61)
R-square	0.66	0.70	0.64	0.68	0.65
N	64	64	64	54	41

Notes: Figures in the parentheses are the t-statistics. \*\*\*, \*\* and \* denote significant at 1%, 5% and 10%, respectively.

Source: Demetriades and Law (2005).

significant, though only at the 10 per cent level in Models 3 and 4, in which domestic credit and stock market capitalisation are the dependent variables, respectively. The real interest rate enters with a positive coefficient in the three models that utilise banking development indicators, as expected, but it is statistically insignificant in Models 1 and 2 and significant at the 10 per cent level in Model 3. Thus, the McKinnon-Shaw hypothesis that higher real interest rates resulting from financial liberalisation will enhance financial development receives little, if any, support by the data. Rule of law enters with a positive and statistically significant coefficient in all five models, suggesting that institutions are important determinants of financial development. Bank concentration is generally not significant, except in Model 5 where it suggests that less competitive banking systems are positively linked to firms resorting to the stock market to obtain finance. The democracy score seems to have a mild positive influence on financial development, but is significant only in Models 1 and 2 and at the 10 per cent level. Political stability is positive and significant at the 5 per cent level in three models, suggesting that political instability is a deterrent to financial development. Openness is positive and significant in three of the models, which is consistent with the Rajan-Zingales hypothesis. Finally, the legal origin variables are by and large insignificant except for English legal origin, which has a positive and significant coefficient in Models 2 and 4, which utilise private sector credit and stock market capitalisation, respectively, as the dependent variables.

These findings indicate that both institutions and political economy factors may be the true fundamental sources of financial development. However, as usual, OLS cross-country results may suffer from reverse causality. Indeed, in additional regressions, Demetriades and Law (2005) use the initial values of rule-of-law and find that the significance of this variable is lost. This suggests that both rule-of-law and financial development may be jointly determined by another variable. Recent work by Beck *et al.* (2003a) examining the historical determinants of financial development, suggests that the variable in question may be geographical in nature. Specifically, Beck *et al.* test the endowment hypothesis of Acemoglu *et al.* (2001), which postulates that geography and the disease environment encountered by European settlers were critical in shaping institutional development. Alongside this, they also test the law and finance hypothesis of LLS. Using a sample of 70 former colonies, they find that the initial endowment theory of Acemoglu *et al.* explains more of the cross-country variation in financial development than the law and finance hypothesis. While this research advances our understanding of the historical origins of financial development, its policy implications for countries that remain financially underdeveloped today are not immediately obvious. Since the wheels of history cannot be turned back and geography cannot be changed, does it mean that there is no hope for financially underdeveloped economies today? We think not. If better institutions do indeed hold the key for financial development, it must surely be possible to adapt and strengthen them, even where the legacy of European settlers and geography has been unfavourable. Some questions that emanate from this frontier of the literature are the following. Is geography relevant today in shaping the future of institutions? Are financially under-developed economies plagued by extractive institutions even today? If so, to what extent would improvements in the disease environment today help to improve institutions that are critical for financial development?

#### 4 Effectiveness of financial development

In their recent empirical analysis of the effectiveness of financial development across different groups of countries, Demetriades and Law (2004) estimate the following growth equation using panel cointegration techniques (see Pesaran *et al.* 1999):

$$\ln RGDPC_{i,t} = \beta_{0,i} + \beta_{1,i} t + \beta_{2,i} \ln FD_{i,t} + \beta_{3,i} \ln INS_{i,t} + \beta_{4,i} \ln(FD \times INS)_{i,t} + \beta_{5,i} \ln K_{i,t} + \beta_{6,i} \ln(n + g + \delta)_{i,t} \quad (2)$$

where *RGDPC* is real GDP per capita; *FD* is a financial development indicator; *INS* is an indicator of institutional quality; *K* is the stock of capital investment or physical capital accumulation; *n* is the rate of labour growth; *g* is the rate of technology growth or technological progress, and  $\delta$  is the rate of depreciation.

Their data set consists of a panel of observations for 72 countries for the period 1978–2000. The sample countries are split into three groups: high, middle and low-income in accordance with the World Bank classification.<sup>8</sup> Annual data on real GDP per capita, real gross capital formation, total labour force and three alternative financial development indicators (liquid liabilities, private sector credit and domestic credit provided by the banking sector, all expressed as ratios to GDP) are from the *World Development Indicators*. All these data are converted to US dollars based on 1995 constant prices. The data set on institutional quality indicators they employ was assembled by the IRIS Center of the University of Maryland from the ICRG, discussed earlier. Following Knack and Keefer (1995), Demetriades and Law (2004) use the following five indicators to measure the overall institutional environment: (i) *corruption* which reflects the likelihood that officials will demand illegal payment or use their position or power to their own advantage; (ii) *rule of law* which reveals the degree to which citizens are willing to accept established institutions to make and implement laws and to adjudicate dispute; it can also be interpreted as a measure of ‘rule obedience’ (Clague 1993) or government credibility; (iii) *bureaucratic quality* which represents autonomy from political pressure, strength and expertise to govern without drastic changes in policy or interruptions in government services, as well as the existence of an established mechanism for recruitment and training of bureaucrats; (iv) *government repudiation of contracts* which describes the risk of a modification in a contract due to change in government priorities, and (v) *risk of expropriation* which reflects the risk that the rules of the game may be abruptly changed. The above first three variables are scaled from 0 to 6, whereas the last two variables are scaled from 0 to 10. Higher values imply better institutional quality and vice versa. The institutions indicator is obtained by summing the above five indicators.<sup>9</sup>

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<sup>8</sup> The World Bank classifies economies as low-income if the GDP per capita is less than US\$755; middle-income if the GDP per capita is between US\$755 and US\$9265 and high-income economies if the GDP per capita is more than US\$9265.

<sup>9</sup> The scale of corruption, bureaucratic quality and rule of law was first converted to 0–10 (multiplying them by 5/3) to make them comparable with the other indicators. For robustness checks, Demetriades and Law (2004) also used different weights for each indicator to construct the aggregate index, obtaining similar estimates.

Table 2 Panel data estimations  
Dependent variable: real GDP per capita (72 countries, 1978–2000)

<i>Liquid Liabilities/GDP (LIA)</i>	MG Estimators	PMG Estimators	Static Fixed-Effects Estimators
(n+g+δ)	-0.50 (-1.36)	-0.36 (-1.44)	-0.58 (1.53)
Capital	1.38 (1.55)	0.34 (2.29)**	0.40 (4.52)***
LIA	0.32 (1.25)	0.25 (2.36)**	0.27 (8.32)***
INS	0.68 (0.99)	0.20 (2.28)**	0.29 (2.49)**
LIA x INS	0.60 (1.71)	0.35 (3.62)***	0.31 (5.55)***
Time Trend	0.03 (2.14)**	0.02 (2.98)***	0.02 (2.36)**
Adjustment	0.32 (-6.98)***	-0.14 (-4.42)***	-1 (N/A)
Log-likelihood	3141.33	2631.92	1075.78
H Test for long-run Homogeneity	4.11 (0.53)		
<i>Private Sector Credit/GDP (PRI)</i>	MG Estimators	PMG Estimators	Static Fixed-Effects Estimators
(n+g+δ)	-0.47 (1.48)	-0.34 (-1.50)	-0.62 (1.54)
Capital	0.82 (1.29)	0.32 (2.32)**	0.37 (4.08)***
PRI	0.30 (1.52)	0.32 (2.14)**	0.27 (6.38)***
INS	0.71 (1.14)	0.22 (2.33)**	0.20 (2.12)**
PRI x INS	0.53 (1.80)*	0.36 (2.95)***	0.32 (4.90)***
Time Trend	0.02 (2.31)**	0.03 (3.02)***	0.02 (2.28)**
Adjustment	-0.36 (-7.25)***	-0.16 (-4.29)***	-1 (N/A)
Log-likelihood	3169.64	2631.39	1050.96
H Test for long-run Homogeneity	5.82 (0.32)		

<i>Domestic Credit/GDP (DOC)</i>	MG Estimators	PMG Estimators	Static Fixed-Effects Estimators
(n+g+δ)	-0.48 (-1.53)	-0.29 (-1.56)***	-0.54 (-1.53)
Capital	0.74 (1.33)	0.30 (2.45)**	0.35 (4.16)***
DOC	0.25 (0.14)	0.22 (2.21)**	0.12 (1.47)
INS	0.84 (1.56)	0.24 (3.46)***	0.21 (2.18)**
DOC x INS	0.33 (1.86)*	0.30 (4.14)***	0.39 (2.19)**
Time Trend	0.01 (2.46)**	0.02 (3.21)***	0.02 (2.36)**
Adjustment	-0.40 (-6.23)***	-0.18 (-4.39)***	-1 (N/A)
Log-likelihood	3166.85	2648.85	996.59
H Test for long-run Homogeneity	3.44 (0.63)		

Notes: All equations include a constant country-specific term. Figures in parentheses are t-statistics except for Hausman tests (H), which are p-values. \*\*\* and \*\* indicate significance at the 1% and 5% levels, respectively. N x T = 1656.

Source: Demetriades and Law (2004)

Tables 2 through 5 reproduce some of the results in Demetriades and Law (2004). Table 2 reports the estimates of Equation (2) on the entire set of countries, while Tables 3, 4 and 5 report estimates for high-income, middle-income and low-income countries, respectively.

The Hausman test (see Hausman 1978) in Table 2 indicates that the data do not reject the restriction of common long-run coefficients, therefore only the pooled mean group (PMG) estimator results reported in Tables 2 through 5 are discussed. The PMG estimates in Table 2 reveal that both financial development and institutional quality are statistically significant determinants of long-run growth. In addition, the interaction term enters with a large positive and statistically significant coefficient. This suggests that the marginal effects of both finance and institutions on growth may be higher than has been suggested by earlier literature. Financial development has both direct and indirect effects on growth, which broadly speaking reflects the effects of financial deepening (size effects) and the influence of institutions (quality effects). Similarly, institutional development has both direct and indirect effects on growth, with the latter depending on the size of the financial system. In other words, institutional development has a greater payoff in terms of growth when the financial system is more developed.

Table 3 Pooled mean group estimations of high-income countries  
 Dependent variable: real GDP per capita (24 countries, 1978–2000)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(n+g+δ)	-0.50 (-1.01)	-0.47 (-1.07)	-0.55 (-1.14)	-0.53 (-1.25)	-0.56 (-1.34)	-0.51 (-1.39)
K	0.42 (1.86)*	0.45 (1.77)*	0.44 (1.89)*	0.45 (1.87)*	0.48 (1.93)*	0.46 (1.84)*
INS	0.12 (1.69)*	0.15 (1.88)*	0.20 (1.92)*	0.10 (1.58)	0.12 (1.62)	0.15 (1.54)
LIA	0.24 (3.09)***	-	-	0.18 (3.10)***	-	-
PRI	-	0.20 (2.79)***	-	-	0.17 (2.38)**	-
DOC	-	-	0.14 (1.51)	-	-	0.11 (1.45)
LIA x INS	-	-	-	0.36 (3.15)***	-	-
PRI x INS	-	-	-	-	0.38 (2.47)**	-
DOC x INS	-	-	-	-	-	0.32 (1.89)*
Time Trend	0.02 (2.44)**	0.03 (2.59)***	0.02 (2.38)**	0.01 (2.23)**	0.02 (2.50)**	0.03 (2.34)**
Adjustment	-0.09 (-2.05)**	-0.11 (-2.47)**	-0.08 (-1.92)*	-0.06 (-2.52)***	-0.07 (-2.43)**	-0.09 (-2.61)***
H test for long-run homogeneity	1.68 (0.79)	3.27 (0.51)	1.65 (0.80)	8.09 (0.08)	3.90 (0.14)	4.39 (0.35)

Notes: All equations include a constant country-specific term. Figures in parentheses are t-statistics except for Hausman tests (H), which are p-values. Significance at 1%, 5% and 10% denoted by \*\*\*, \*\* and \* respectively.

Source: Demetriades and Law (2004)

The PMG results for high-income countries in Table 3 show that while both the financial development indicators and institutional quality retain their positive sign, they are no longer statistically significant in all models. Two of the financial development indicators, namely liquid liabilities and private sector credit, remain statistically significant, while domestic credit is no longer significant. Institutional quality is no longer statistically significant in any of the six models at the 5 per cent level – it is, however, significant at the 10 per cent level in the first three models. The interaction term, however, performs better. It is statistically significant at conventional levels in two out of three models and significant at the 10 per cent level in the third. The coefficients on the financial development indicators in Models 4, 5 and 6 are much lower than those in the corresponding models in Table 2. The interaction terms,

however, are slightly higher than in the corresponding models in Table 2. These findings seem to suggest that even within high income countries financial development, as measured by liquid liabilities or private credit, has positive albeit smaller direct effects on growth than in the entire sample. Its indirect effects, which depend on the quality of institutions, are, however, if anything, somewhat larger than in the entire sample. Given that institutional quality is higher in high-income countries, financial development may overall still have large positive effects on economic growth. The same cannot be said for institutional quality, the effects of which are now largely through the financial system. Thus, while institutional improvements appear to display diminishing returns, financial development remains an important engine of growth even for developed countries.

Table 4 Pooled mean group estimations of middle income countries  
Dependent variable: real GDP per capita (24 countries, 1978–2000)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(n+g+δ)	-0.30 (-2.77)***	-0.36 (-2.33)**	-0.33 (-2.44)**	-0.27 (-2.59)***	-0.30 (-2.40)**	-0.28 (-2.37)**
K	0.35 (4.67)***	0.41 (4.65)***	0.38 (4.24)***	0.30 (3.77)***	0.32 (2.85)***	0.33 (3.32)***
INS	0.20 (5.57)***	0.22 (5.36)***	0.24 (5.00)***	0.17 (2.41)**	0.18 (2.49)**	0.21 (2.52)**
LIA	0.35 (3.15)***	-	-	0.30 (2.43)**	-	-
PRI	-	0.40 (4.57)***	-	-	0.42 (3.59)***	-
DOC	-	-	0.27 (3.53)***	-	-	0.36 (1.88)*
LIA x INS	-	-	-	0.49 (4.26)***	-	-
PRI x INS	-	-	-	-	0.53 (4.48)***	-
DOC x INS	-	-	-	-	-	0.45 (5.30)***
Time Trend	0.01 (2.58)***	0.02 (2.45)**	0.01 (2.35)**	0.02 (2.40)**	0.02 (2.39)**	0.02 (2.53)**
Adjustment	-0.15 (-4.62)***	-0.18 (4.32)***	-0.20 (-4.89)***	-0.21 (-3.58)***	-0.25 (-3.59)***	-0.24 (-3.82)***
H test for long-run homogeneity	8.14 (0.09)	4.41 (0.35)	1.74 (0.78)	8.10 (0.08)	3.96 (0.33)	8.33 (0.08)

Notes: All equations include a constant country-specific term. Figures in parentheses are t-statistics except for Hausman tests (H), which are p-values. Significance at 1%, 5% and 10% denoted by \*\*\*, \*\* and \* respectively.

Source: Demetriades and Law (2004)

The PMG results for middle-income countries are reported in Table 4. The direct effects of financial development on economic growth are larger and more significant than in the high-income group in all of the corresponding six models. This finding is consistent with Rioja and Valev (2004), who also find a much stronger growth-enhancing effect of financial development in middle-income countries compared to high-income countries. Institutional quality also has a positive and highly significant effect on economic growth in all six models. Thus, the findings in Demetriades and Law (2004) provide support for the argument that good institutions are more important for growth in less developed countries (Rodrik 1997). In addition, the estimated coefficient of the interaction term in Models 4, 5 and 6 is both large and highly significant. These findings seem to suggest that both finance and institutional quality have large direct and indirect effects on growth. Improving both finance and institutional quality in middle-income countries is, therefore, likely to boost economic growth much more than in high-income countries.

Table 5 Pooled mean group estimations of low-income countries  
Dependent variable: real GDP per capita (24 countries, 1978–2000)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(n+g+δ)	-0.45 (-2.22)**	-0.43 (-2.35)**	-0.47 (-2.55)**	-0.48 (-4.36)***	-0.46 (-3.16)***	-0.50 (-2.15)**
K	0.28 (5.88)***	0.31 (6.30)***	0.33 (6.52)***	0.30 (2.87)***	0.33 (3.71)***	0.32 (2.75)***
INS	0.38 (2.16)**	0.40 (2.29)**	0.36 (2.89)***	0.34 (2.38)**	0.36 (2.27)**	0.32 (2.41)**
LIA	0.17 (1.32)	-	-	0.18 (1.56)	-	-
PRI	-	0.10 (2.33)**	-	-	0.20 (2.14)**	-
DOC	-	-	0.08 (0.98)	-	-	0.13 (1.38)
LIA x INS	-	-	-	0.26 (2.45)**	-	-
PRI x INS	-	-	-	-	0.28 (2.30)**	-
DOC x INS	-	-	-	-	-	0.23 (2.27)**
Time Trend	0.01 (2.14)**	0.02 (2.39)**	0.02 (2.22)**	0.02 (2.41)**	0.03 (2.36)**	0.03 (2.50)**
Adjustment	-0.13 (-3.25)***	-0.16 (-3.69)***	-0.10 (-3.55)***	-0.17 (-2.87)***	-0.19 (-2.36)**	-0.15 (-2.39)**
H test for long-run homogeneity	5.39 (0.25)	4.40 (0.35)	5.65 (0.23)	3.15 (0.68)	10.75 (0.06)	4.07 (0.54)

Notes: All equations include a constant country-specific term. Figures in parentheses are t-statistics except for Hausman tests (H), which are p-values. Significance at 1%, 5% and 10% denoted by \*\*\*, \*\* and \* respectively.

Table 5 reports the results for low-income countries. Financial development is found to have very small direct effects on growth. The estimated coefficients are not only small but they are also statistically insignificant for two of the three indicators. Only the private credit indicator is significant but its coefficient is only 0.10 compared to 0.40 for middle-income countries and 0.20 for high-income countries. Institutions, however, have a large positive and significant direct effect on growth in these countries. The estimated coefficients on institutional quality are roughly twice the size of those obtained for middle or high-income countries. The estimated coefficients of the interaction terms are positive and highly significant; however, they are almost half the size of the corresponding ones obtained for the middle-income group. These findings suggest that policy makers in low-income countries should primarily be focussing on improving institutional quality, which is likely to have both direct and indirect effects on growth. Financial development, especially if it boosts credit to the private sector, is also likely to have significant payoffs in terms of growth, but even these to a large extent depend on the presence of good institutions.

Demetriades and Law (2004) conclude that financial development has larger effects on growth when the financial system is embedded within a sound institutional framework. This is found to be particularly true for poor countries, where more finance may well fail to deliver more growth if institutional quality is low. For poor countries, improvements in institutions are likely to deliver much larger direct effects on growth than financial development itself. They are also likely to have positive indirect effects through the financial system, particularly when the latter is providing large amounts of credit to the private sector.

## **5 Summary and conclusions**

While we now know a lot more about the sources of financial development and its effectiveness in delivering more growth, there remain many unanswered questions offering fruitful ground for further research. Specifically, the case that financial liberalisation can deliver substantial benefits in terms of both financial development and growth remains largely unproven. Indeed, much of the evidence suggests that financial liberalisation can have major de-stabilising effects on financial markets, including major financial crises like the 1997-98 one in Asia, which undermine the confidence of market participants. The question that remains largely unanswered is how long it takes economies to recover from such events, if indeed they do recover. Therefore, despite its likely short-to-medium term destabilising consequences, is financial liberalisation, on balance, beneficial to the development of financial markets in the long run? The case for related policy measures like bank privatisation is even less convincing. While government ownership of banks may be correlated negatively with both financial development and growth, this negative correlation may well reflect institutional weaknesses, which may leave governments with little choice but to have controlling interest in banks. If ignored, such weaknesses can undermine the success of bank privatisation programmes, leading to financial disintermediation and, subsequently, to re-nationalisations of problem banks. Thus, the negative correlation between government ownership and financial development that is found in the data may well reflect unsuccessful attempts at bank privatisations. Further research on this topic would be fruitful, especially if it provides in-depth case studies of the history of government ownership of banks.

Institutions and political economy factors appear to hold the key to understanding why some countries have succeeded in developing their financial systems while others have not. Institutions appear also to influence the effectiveness of financial development itself, which suggests that poor countries may be stuck in a bad equilibrium, in which weak institutions inhibit growth both directly and indirectly, through under-developed, low-quality, finance. There are of course many unanswered questions on detail, relating to the precise role of important institutions such as law in finance, as well as the means by which countries can overcome unfavourable starting positions such as geographical disadvantages. More research on these issues could, therefore, prove very fruitful in highlighting mechanisms that can make finance more effective in delivering both growth and poverty reduction.

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