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Policy Division Working Paper

**The Importance of Financial Sector
Development for Growth and Poverty
Reduction**

Financial Sector Team

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The views expressed in this working paper do not necessarily reflect official policies

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Introduction

DFID's mission is to contribute to the achievement of the Millennium Development Goals and the elimination of world poverty. Achieving the Millennium Development Goals will require rapid and sustained growth in developing countries. It is now widely accepted that the private sector must be the engine of growth, and that governments must work to create the right enabling environment for private sector development.

By facilitating transactions and making credit and other financial products available, the financial sector is a crucial building block for private sector development. It can also play an important role in reducing risk and vulnerability, and increasing the ability of individuals and households to access basic services like health and education, thus having a more direct impact on poverty reduction.

But the importance of promoting financial sector development (FSD) has not always been widely understood. As this paper shows, there is a great deal of evidence to suggest that FSD is important for growth and poverty reduction, and that without it development may be held back, even if other conditions are met.

This paper reviews some of the literature, both theoretical and empirical, on the relationship between financial sector development, growth and poverty reduction in order to elucidate these linkages and to assess the importance of FSD to development. The paper does not discuss policy implications or related issues, such as how to eliminate barriers to financial sector development. These issues will be covered in a follow-up paper by DFID's Financial Sector Team, which will provide guidance on ways to promote pro-poor FSD.

The policy context

DFID's "Pro-Poor Growth Briefing Note 2: A Policy Framework" sets out the "4 Pillars" approach to stimulating pro-poor growth. This approach focuses on the need to:

1. Create strong incentives for investment in order to increase productivity.
2. Foster trade and business linkages in order to facilitate technology transfer and improved resource use.
3. Provide broad access to assets and markets in order to build up the asset base of the poor as well as increase the returns to such assets.
4. Reduce risk and vulnerability and enable the poorest to participate in, and benefit from, growth processes.

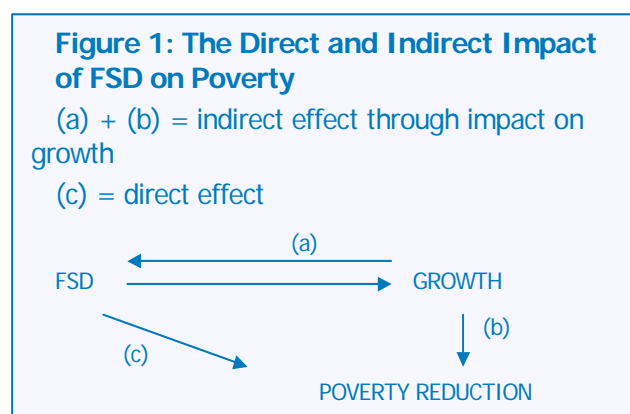
The financial sector has an important role to play in achieving each of these pillars. For example:

1. By mobilising savings for productive investment, and by facilitating capital inflows and remittances from abroad, the financial sector has a crucial role to play in

stimulating investment in both physical and human capital, and hence increasing productivity.

2. By reducing transactions costs, facilitating inward investment, and making capital available for investment in better technologies, the financial sector can promote technological progress, thus increasing productivity, and improving resource use.
3. By enabling the poor to draw down accumulated savings and / or borrow to invest in income-enhancing assets (including human assets e.g. through health and education) and start micro-enterprises, wider access to financial services generates employment, increases incomes and reduces poverty.
4. By enabling the poor to save in a secure place, the provision of bank accounts (or other savings facilities) and insurance allows the poor to establish a buffer against shocks, thus reducing vulnerability and minimising the need for other coping strategies such as asset sales that may damage long-term income prospects.

Theory and evidence show that FSD can impact on poverty both indirectly, through its positive impact on growth (as we know that growth is usually good for the poor¹), and more directly, to the extent that FSD widens access to financial services for the poor (see Figure 1²).



However, the poor in developing countries often do not have access to ongoing, formal financial services, and are forced to rely instead on a narrow range of sometimes risky and expensive informal services. This constrains their ability to participate fully in markets, to increase their incomes and to contribute to economic growth.

There are many reasons for this gap in formal sector provision, ranging from government imposed restrictions on banks, to a lack of the necessary financial sector infrastructure (e.g. legal enforcement mechanisms, credit bureaux etc.), to low or negative profit margins associated with low income clients.

In many countries, semi-formal channels such as microfinance institutions (MFIs) also play a role in providing financial services to the poor. While some of these MFIs have had a significant impact on poverty, others have been less successful, making it difficult to draw conclusions about the overall impact of microfinance on poverty reduction. MFIs generally cannot mobilize funds on a large scale and pool risks over very large areas in the way that more traditional, formal financial institutions can. And most MFIs have only limited coverage. Honohan (2004b) shows that MFIs reach less than 2% of the population in most countries³. Other types of institutions such as postal banks, development banks and credit

¹ See DFID Briefing Note "What Is Pro-Poor Growth And Why Do We Need To Know?" for evidence that growth usually benefits the poor.

² Source: Finmark, South Africa

³ with some notable exceptions e.g. Bangladesh with MFI penetration rates of over 13%.

unions, are more significant in terms of client numbers. Even so, all these institutions together are reaching only a minority of the bankable population.

So these types of institutions cannot adequately fill the gap in financial services provision by themselves. A widening of financial services provision by formal private sector institutions (such as commercial banks and insurance companies) is necessary to tackle this problem on an adequate scale, and the barriers to achieving this must therefore be identified and addressed where possible.

What do we mean by Financial Sector Development?

The financial sector is all the wholesale, retail, formal and informal institutions in an economy offering financial services to consumers, businesses and other financial institutions. In its broadest definition, it includes everything from banks, stock exchanges, and insurers, to credit unions, microfinance institutions and money lenders.

There are many different ways in which the financial sector can be said to 'develop'. For example:

- the efficiency and competitiveness of the sector may improve;
- the range of financial services that are available may increase;
- the diversity of institutions which operate in the financial sector may increase;
- the amount of money that is intermediated through the financial sector may increase;
- the extent to which capital is allocated by private sector financial institutions, to private sector enterprises, responding to market signals (rather than government directed lending by state owned banks), may increase;
- the regulation and stability of the financial sector may improve;
- particularly important from a poverty reduction perspective, more of the population may gain access to financial services.

Hence there is no single definition of FSD, and the theoretical and empirical articles reviewed in this paper focus on different aspects and measures of FSD.

There are very few empirical studies which focus at a macro level on the issue of access to financial services, which has meant that this important issue is often overlooked. This is mainly because of the lack of data. Most financial sector data comes from financial institutions themselves, but representative data at a *household* level is what is really required to get an accurate picture of patterns of access and usage across the population, and few household surveys address these issues.

DFID's Financial Sector Team is working with others to develop new indicators measuring access to formal sector financial services. It is hoped that over time the collection of such data will allow governments, donors and regulators to better promote and measure progress towards widening access, and will facilitate further research on the linkages between access to financial services, growth and poverty.

But in many countries, access is predominantly through either the informal sector – on which there is even less data - or the semi-formal sector, through microfinance institutions for example (though increasing linkages between MFIs and the formal sector are making this distinction less clear). There are many impact assessments of specific MFIs, some of which are reviewed briefly in this paper.

Section 1 of the paper discusses the theoretical linkages that have been identified between FSD and growth. Section 2 considers how these linkages may also serve to reduce poverty. Section 3 then considers the empirical evidence on the relationship between FSD and growth, and Section 4 looks at the evidence on FSD and poverty reduction.

1. Financial Sector Development and Growth: The Theory

Modern growth theory identifies two specific channels through which the financial sector might affect long-run growth:

1. through its impact on capital accumulation (including human as well as physical capital) and
2. through its impact on the rate of technological progress.

These effects arise from the intermediation role provided by financial institutions which enable the financial sector to:

- mobilise savings for investment;
- facilitate and encourage inflows of foreign capital (including FDI, portfolio investment and bonds, and remittances); and
- optimise the allocation of capital between competing uses, ensuring that capital goes to its most productive use.

Levine (1997) identifies five basic functions of financial intermediaries which give rise to these effects:

1. Savings mobilisation
2. Risk management
3. Acquiring information about investment opportunities
4. Monitoring borrowers and exerting corporate control
5. Facilitating the exchange of goods and services

While this section focuses on how these functions operate in the formal sector - as this is where the biggest growth impact stems from - the same functions of the financial sector also serve to reduce poverty (e.g. mobilising savings for on-lending, risk management, facilitating transactions etc.) as discussed in the following section.

Savings mobilisation

The mobilisation of savings is perhaps the most obvious and important function of the financial sector. The provision of savings facilities or transaction bank accounts enables households to store their money in a secure place, and allows this money to be put to productive use i.e. lent to individuals or enterprises to finance investment, thus encouraging capital accumulation and promoting private sector development.

Lack of access to secure savings facilities leads people to save in physical assets such as jewellery, or store their savings at home. Bringing these savings instead into the financial sector where they can be utilised productively, would by itself make a significant contribution to growth. In addition, the returns on investment can create positive expected returns for the savers, which may in turn increase savings.

It can also facilitate the development and adoption of better technologies. McKinnon (1973) explained this with an illustration of a farmer who cannot afford a particular investment out of his own savings – he needs to borrow in order to buy some piece of equipment (i.e. to invest in “new technology”) which would increase his productivity, and enable him to earn a higher income thereafter. Thus by mobilising savings, and hence increasing the availability of credit, financial intermediation facilitates investment in new technologies across the economy, increasing overall productivity.

Credit may also be made available to finance investment in education or health, and can thus promote the accumulation of human capital (De Gregorio, 1996). Thus savings mobilisation can have a significant impact on growth by increasing investment, productivity and human capital.

Savings facilities can also play an important role in reducing risk and vulnerability for the poor, which is discussed further in Section 2 below.

The next three functions of the financial sector identified by Levine – risk management, acquiring information, and monitoring borrowers – also contribute to savings mobilisation, because they increase the potential reward, and reduce the risks associated with saving.

Risk management

Liquidity risks: Many projects or enterprises require a medium to long-term commitment of capital, whereas most savers prefer to have the option to draw on their savings, or move them into another investment opportunity, should the need arise i.e. they like their savings to be ‘liquid’. Because banks and other financial intermediaries combine many households’ savings, and because savers usually won’t all want to withdraw their money at the same time, this allows financial intermediaries to simultaneously provide medium to long-term capital for investment, and liquidity for savers (e.g. Levine, 1991).

By doing so, they help to ensure that capital is allocated to the best projects, even if they require a long-term financial commitment (e.g. Bencivenga & Smith 1991). They can also affect the rate of technological change if long-term commitments of resources to research and development promote technological innovation. As these factors serve to increase the return on savings, they may also increase savings and capital inflows.

Risk diversification: Investing in an individual project is riskier than investing in a wide range of projects whose expected returns are unrelated. As savers generally dislike risk, financial intermediaries that facilitate risk diversification – such as banks and stock exchanges – allow investments to be made in riskier projects with higher expected returns in aggregate (e.g. Saint-Paul, 1992, and Obstfeld, 1994). This again increases overall investment returns, and improves capital allocation, with a subsequent impact on growth.

Risk diversification can also increase technological change. Innovation is risky – many innovations will fail. However, the ability to diversify risk by investing in many different innovation-based enterprises, may make investments in otherwise prohibitively risky enterprises possible. So by making more capital available to innovators, financial intermediaries that facilitate diversification may also increase technological change and thus economic growth (King & Levine, 1993).

Acquiring information

Individual savers are unlikely to have the time or capacity to collect, process and compare information on many different enterprises, managers and market conditions before choosing where to invest. Thus high information costs may prevent capital from flowing to its highest value use. In addition, they will be less keen to invest in activities about which they have little information.

So the creation of financial intermediaries such as banks and fund managers, who will collect this information on behalf of many investors, and share the costs of doing so between them, will improve resource allocation and increase investment (though in developing countries, financial institutions may have only limited information on investment opportunities, as much of the economy is informal). These intermediaries can facilitate selection between projects on the basis of informed judgements about expected returns, thus weeding out the weakest projects and ensuring that capital is allocated optimally (Greenwood & Jovanovic, 1990). They may also increase the rate of technological progress by identifying and thus allocating capital towards those innovations with the best chances of succeeding (King & Levine, 1993).

Monitoring borrowers, and exerting corporate control

Similarly, the ability of financial intermediaries to monitor the performance of enterprises on behalf of many investors – who would not otherwise have the resources to do so individually – and to exercise corporate control (e.g. lenders holding meetings with borrowers to discuss business strategy), helps to ensure that investors receive returns that

properly reflect the enterprise's performance (i.e. ensures they are not being defrauded by the firm's managers as a result of their lack of information), and creates the right incentives for the managers of the borrowing enterprises to perform well. Thus financial arrangements that improve corporate control tend to promote faster capital accumulation and growth by improving the allocation of capital (Bencivenga and B. Smith 1991).

Facilitating exchange

Last but not least, the financial sector facilitates transactions in the economy, both physically by providing the mechanisms to make and receive payments, and by reducing information costs in the ways outlined above. So by providing financial intermediation in this way, the financial sector reduces transactions costs, and facilitates the trading of goods and services between businesses and households.

In doing this, the financial sector allows greater specialisation which in turn facilitates productivity gains and allows more technological innovation and growth. So anything that reduces transactions costs and better facilitates exchange of goods and services – whether it be faster payments systems, more bank branches, or improved remittance services – will help to promote growth.

This set of ideas dates back to Adam Smith (1776) who argued that workers were much more likely to identify more efficient working methods and processes if they were focused on one particular endeavour, and that the division and specialisation of labour was therefore the principal factor underlying productivity improvements. Smith phrased this in terms of the way that money reduces transactions costs compared to barter, but it is equally valid in relation to other mechanisms that reduce transactions costs.

2. Financial Sector Development and Poverty Reduction: The Theory

The direct impact of FSD on poverty reduction, by widening access to the poor

In the same way that financial services increase income growth generally, expanding the supply of financial services which can be accessed by the poor will increase income growth for the poor, thus having a direct impact on poverty reduction (Jalilian & Kirkpatrick, 2001).

The provision of savings facilities can enable the poor to accumulate funds in a secure place over time in order to finance a relatively large, anticipated future expenditure or investment, and can sometimes provide a return on their savings. (A degree of *illiquidity* is sometimes preferred by savers, in order to provide extra discipline, and ensure the money can't be used for anything other than the purpose originally envisaged.)

More flexible savings facilities can also enable the build up of reserves that can be used to smooth consumption when there are unanticipated fluctuations in income and expenditure

– a feature that can be particularly important for those with low and variable incomes. Similarly, insurance can provide protection against some types of shocks.

These facilities can reduce the vulnerability of the poor, and minimise the negative impacts that shocks can sometimes have on long-run income prospects (e.g. if income-generating assets are sold at low prices out of necessity during a household crisis). Thus the value of financial services in helping the poorest to cope with risks can be as or more important than the expected financial return.

The mobilisation of savings also creates an opportunity for re-lending the collected funds into the community. The availability of credit can strengthen the productive assets of the poor by enabling them to invest in productivity-enhancing new ‘technologies’ such as new and better tools, equipment, or fertilizers etc., or to invest in education and health, all of which may be difficult to finance out of regular household income, but which could provide for a higher income in future. The availability of credit can also be an important factor in the creation or expansion of small businesses, thus generating self- and wage-employment and increasing incomes.

Access to credit can reduce the vulnerability of the poor to shocks in the absence of savings or insurance. This can have knock-on benefits. Eswaran and Kotwal (1990) argue that just the knowledge that credit will be available to cushion consumption against income shocks if a potentially profitable but risky investment should turn out badly, can make the household more willing to adopt more risky technologies. Such behaviour will increase the use of modern technologies with productivity-increasing, and hence income enhancing, benefits.

For the same reason, access to credit and other financial services is likely to decrease the proportion of low-risk, low-return assets held by poor households for precautionary purposes (such as jewellery), and enable them to invest in potentially higher risk but higher return assets, (such as education, or a rickshaw), with overall long-term income enhancing impacts (Deaton 1991).

Finally, remittances from abroad and domestic transfers are an important source of income for the poor, and provide an additional means for them to diversify their sources of income, thus reducing vulnerability. Where FSD leads to lower costs, more secure and rapid transfers, and easier access to transferred funds, this would be of significant benefit to poor recipients.

So though the scale may be different (e.g. investing in a new tool rather than a new factory), the same channels through which the financial sector can increase overall growth (e.g. savings mobilisation, risk management, facilitation of transactions) also serve to reduce poverty, though for the poor there may be more emphasis on reducing vulnerability and risk.

However, the poor in developing countries often do not have access to ongoing, formal, financial services, and are forced to rely instead on a narrow range of often expensive and more risky informal services. This constrains their ability to participate fully in markets, to increase their incomes and to contribute to economic growth.

There are many reasons for this gap in formal sector provision, many of which stem from government e.g. restrictions imposed on banks, excessive fiscal deficits etc. but there are also many market failures which contribute to the problem. For example, Stiglitz (e.g. Stiglitz & Weiss, 1981) emphasises the problems caused by imperfect information i.e. lenders don't know if borrowers will pay loans back. In developed countries, this problem is attenuated through the use of collateral, and through credit scoring mechanisms, but in developing countries many potential borrowers are unable to offer collateral, and are unlikely to have built up a credit record.

The informal sector can overcome some of these problems by utilising alternative incentive and information mechanisms, such as 'social' collateral and enforcement mechanisms, but these solutions tend to rely on small-scale community ties (World Bank 2001).

In many countries, semi-formal channels such as MFIs, play a role in providing financial services to the poor. While some of these MFIs have had a significant impact on poverty (see section 4 below), others have been less successful, making it difficult to draw conclusions about the overall impact of microfinance on poverty reduction. MFIs generally cannot mobilize funds on a large scale and pool risks over very large areas in the way that more traditional, formal financial institutions can. And most MFIs have only limited coverage; other types of non-commercial institutions such as postal banks, development banks and credit unions, are often more significant in terms of client numbers. Even so, all these institutions are reaching only a minority of the bankable population.

So while the informal, semi-formal and non-commercial sectors have an important role to play, they cannot adequately fill the gap in financial services provision by themselves. The barriers to widening financial services provision by private sector institutions in the formal financial sector - particularly commercial banks - must therefore be addressed in order to tackle this problem on an adequate scale.

But even the development of the financial sector in ways unrelated to widening access can serve to reduce poverty indirectly, through the impact on economic growth.

The indirect impact of FSD on poverty reduction through growth

We have seen that there are many reasons why FSD can have a positive impact on growth. And there is now widespread acceptance that growth is a necessary (though not always sufficient) condition for sustained poverty reduction. Cross-country analysis has shown that, while there are significant differences in the relationship between growth and poverty reduction across countries, the incomes of the poor tend to rise (and fall) proportionately with average incomes (e.g. Dollar & Kraay, 2001, or Eastwood & Lipton, 2001). (The DFID Briefing Note "What Is Pro-Poor Growth And Why Do We Need To Know?" discusses these issues in greater depth.) This implies that growth usually reduces absolute poverty, and that FSD should therefore serve to reduce poverty through its positive impact on growth.

3. Financial Sector Development and Growth: The Evidence

A large body of evidence now exists to support the theory relating to the strong linkages between financial sector development and growth. While there are a few studies which challenge this consensus (e.g. Favara (2003) finds that the relationship between FSD and growth is weak), the vast majority do provide support for this relationship. This section describes just some of the empirical evidence that has been produced.

A seminal study was undertaken by Goldsmith (1969). Using data on 35 countries from 1860 – 1963, he found evidence of a relationship between economic and financial development over long periods, and that periods of rapid economic growth have often been accompanied by an above-average rate of financial development.

Many other – often technically superior - empirical analyses of these issues have been undertaken since then, most of which provide further evidence of the positive relationship between FSD and growth⁴. For example, King and Levine (1993a, 1993b, 1993c) study 80 countries over the period 1960 – 1989, controlling for other factors affecting long-run growth, examining the capital accumulation and productivity growth channels separately, and using various different measures of the level of financial development⁵.

They find evidence of a strong, positive relationship between the various financial development indicators and growth. The sizes of the coefficients imply it is a large impact. According to King & Levine (1993b) their results suggest that a country that increased the amount of financial intermediation in the economy from the mean of the slowest growing 25% of countries to the mean of the fastest growing 25% of countries would have increased its per capita growth rate by almost one per cent a year. As the difference in average growth between these two sets of countries was about 5 per cent per annum over the 30 year period the analysis covered, this implies that FSD factors alone might explain around 20% of the growth difference between these two sets of countries.

Evidence on the direction of causation

By themselves, however, these results do not necessarily imply that FSD leads to higher growth. It may be that growth leads to FSD as it generates an increasing demand for financial services that induces an expansion in the financial sector (a view espoused by, for example, Gurley & Shaw (1967) and Jung (1986)). If this is the case, the large estimates calculated by studies such as King & Levine (1993) are overstating the impact of FSD on growth.

⁴ E.g. Gelb, 1989, Gertler & Rose, 1994, Roubini & Sala-i-Martin, 1992, Easterly, 1993 etc.

⁵ They use 4 different FSD variables: (1) liquid liabilities / GDP, which measures the amount of financial intermediation in the economy (2) commercial bank domestic credit / (commercial bank domestic credit + central bank domestic credit), which captures who is allocating the credit (3) claims on the non-financial private sector / domestic credit and (4) Gross claims on private sector / GDP which both capture who the credit is being allocated to.

Patrick (1966) proposes the 'stage of development' hypothesis, that FSD leads to growth in the early stages of development, but that this impact diminishes gradually as an economy develops, and that the impact of growth on FSD begins to predominate after a certain level of development has been reached. It is also possible that both impacts take place simultaneously, and / or that there are other factors that drive both.

Many researchers have examined this issue explicitly. In the King & Levine study cited above, this is attempted in a fairly simple way, by looking at whether the value of financial depth in 1960 predicts the rate of economic growth, capital accumulation and productivity improvements over the next 30 years. They find that it does, even after controlling for other factors that may affect these variables.

Furthermore, they find that the relationship between the initial level of financial development and growth is large. For example, the estimated coefficients suggest that if in 1960 Bolivia had increased its financial depth⁶ from 10% of GDP to the mean value for developing countries in 1960 (23% of GDP) then Bolivia would have grown about 0.4% faster per annum, so that by 1990 real per capita GDP would have been about 13% larger than it was.

Other researchers have examined this question using more sophisticated techniques, such as Levine, Loayza & Beck (2000), whose results confirmed that FSD exerted a large positive impact on economic growth. Calderon & Liu (2003) also adopt an innovative econometric technique to analyse this issue, using data on 109 countries over the 1960-1994 period. Their results show that:

- There is bi-directional causality i.e. FSD has a causal impact on growth, and growth also has a causal impact on FSD.
- However, the impact of FSD on growth is more important, relative to the impact of growth on FSD, particularly in developing countries where it explains 84% of the overall relationship over a 10 year period (though also in industrial countries over longer periods, where it explains 57% of the relationship over a 10 year period). This suggests that financial sector under-development is more likely to hold growth back in developing countries.
- The longer the period examined, the bigger the impact of FSD on growth, suggesting that the full impact takes time to come through.
- Over long periods, the impact of growth on FSD becomes insignificant, even in developed countries.

These results suggest that, while empirical estimates produced by studies such as King & Levine (1993) can overstate the impact of FSD on growth - as at least some of that relationship results from the impact of growth on FSD - in developing countries at least this overestimation is likely to be small, as only a small proportion of the overall impact is caused by growth.

⁶ Measured by liquid liabilities / GDP, which represents the amount of financial intermediation in the economy.

There are many other such studies which provide support for the theory that FSD positively affects growth. However, no econometric technique can completely overcome the technical difficulties associated with accurately establishing the direction and magnitude of impact. For example, econometric analysis can only ever demonstrate *precedence*. But the fact that something precedes something else doesn't mean it is necessarily causing it – something else could be causing both factors to change.

In addition, as noted by Zingales (2003), there are a set of institutional characteristics (including the legal system, respect for property rights, degree of corruption etc., as well as the level of FSD), which individually are found to have a positive effect on economic growth, but which tend to be highly correlated with each other. This makes it difficult to accurately identify the magnitude of their independent effects.

Another problem that arises in relation to the types of cross-country studies cited above, is that they generate estimates of the *average* effects of financial development, while the relationship may vary considerably between countries. This has led a number of authors to examine the relationship using time-series data on individual countries, and some (e.g. Demetriades & Hussein 1996, Odedokun 1996) have found that the nature of the relationship can indeed vary between countries.

For example, Demetriades & Hussein find evidence that FSD causes growth in Honduras, Spain and Sri Lanka, that growth causes FSD in El Salvador, Greece, Pakistan, Portugal, South Africa and Turkey, and that there is bi-directional causality in Guatemala, India, Korea, Mauritius, Thailand and Venezuela.

While these kinds of results suggest caution should be used in making generalisations about the likely extent of benefits arising from FSD in any particular country, the weight of the evidence shows that FSD does make an important contribution to growth in most countries, especially in the developing world.

Evidence of a poverty trap

Berthelemy & Varoudakis (1996) suggest that insufficient financial development may leave a country in a 'poverty trap'. They argue that, because of increasing returns to scale in the financial sector, a vicious circle can be created, where low levels of financial intermediation result in only a few market players. The lack of competition results in high costs, leading to low real deposit rates and hence low savings, which in turn limits the amount of financial intermediation.

They argue that financial sector underdevelopment can therefore be a serious obstacle to growth, even when a country has established other conditions necessary for sustained economic development. They find evidence of this in relation to educational attainment. They find that countries with a high level of educational attainment, but a low level of FSD, are trapped at a relatively low standard of living compared to those countries with a similar level of educational attainment, but a more developed financial sector. Moreover, they find that educational attainment has no significant impact on growth in countries where FSD is

weak. This result implies that the lack of a sufficiently developed financial system may compromise the positive contribution of education to growth.

The authors suggest this may be because, beyond a certain level of educational attainment, the productivity gains stemming from human capital accumulation become conditional upon changes in the sectoral allocation of investment, which is difficult to achieve without a sufficiently developed financial system.

Evidence on financial sector regulation and growth

A number of recent studies have focused on the effects of law and financial regulation on output growth, showing evidence of strong causal links. For example, Levine, Loayza & Beck (2000) show that legal and regulatory changes that strengthen creditor rights, contract enforcement and accounting practices, boost financial intermediary development with positive repercussions on economic growth.

Regulation can also affect growth and poverty through its impact on the stability of the financial system. Regulation to ensure financial intermediaries manage risks properly is needed to protect both consumers (and their savings) and the financial system as a whole – as a problem in one bank can result in contagion, threatening the entire financial system.

Evidence suggests that financial crises severely affect the poorest and most vulnerable groups, and usually result in a major reduction in growth and an increase in poverty levels (World Bank, 2001[2]). This implies that measures to promote FSD should be accompanied by the development of an adequate regulatory framework, in addition to sound fiscal policy and macroeconomic stability. However, developing country regulators often fail to strike an appropriate balance between regulating the sector effectively and providing a good enabling environment for financial sector development.

Regulation can also have important implications for access for poorer clients, through its impact on the incentives financial institutions have to innovate, compete, and increase their low income customer base. For example, interest rate caps may reduce the profitability of serving clients with relatively high transactions costs, and the requirement for proof of address (such as a utility bill) before an individual can open a bank account, may serve to reduce access.

4. Financial Sector Development and Poverty Reduction: The Evidence

As already noted, because of a lack of data very few studies focus on the issue of *access* to financial services, through which the direct impact on poverty will arise. Instead they use more traditional measures of FSD, which may not be very related to increases in access, and hence are more likely to capture the *indirect* impact of FSD on poverty, through its impact on growth.

Jalilian & Kirkpatrick (2001) examine the link between financial development and poverty reduction using data for a sample of 26 countries including 18 developing countries. They use Bank Deposit Money Assets, and Net Foreign Assets as their measures of FSD. Their results suggest that a 1 per cent change in financial development raises growth in the incomes of the poor in developing countries by almost 0.4 per cent – a significant impact.

A recent paper by Honohan (2004a) finds that FSD (measured by private credit to GDP) is negatively associated with headcount poverty, with a coefficient suggesting that a 10 percentage point change in the ratio of private credit to GDP should (even at the same mean income level) reduce poverty ratios by 2.5 to 3 percentage points.

Other studies look at the relationship between FSD and the distribution of income, about which there are competing theories. For example, Greenwood & Jovanovic (1990) argue that there is an inverted U-shaped relationship between income inequality and FSD i.e. that FSD leads to greater inequality to begin with, which falls back again as FSD continues. This theory is based on the idea that financial intermediaries provide savers with higher returns and lower risks, but that poor individuals cannot initially afford to make use of these financial intermediaries, which results in growing inequality. It assumes, however, that more and more poor people will be able to afford to use these intermediaries over time, offsetting the initial increase in inequality.

Others, e.g. Banerjee & Newman (1993) and Galor and Zeira (1993) argue that imperfections in financial markets create hurdles to borrowing funds for income-enhancing investments. As only the rich are able to overcome these hurdles, they serve to perpetuate the initial distribution of wealth. FSD which overcomes these imperfections therefore reduces income inequality (i.e. there is a negative relationship between the two).

Finally there is a theory based on the ideas of Kuznets (1955) which suggests that to the extent that FSD facilitates more migration from the low-income but more egalitarian agricultural sector, to the higher-income but more unequal modern (industrial and services) sector, it may be expected to increase inequality.

Clarke, Xu & Fou (2002) empirically test these alternative theories about the relationship between FSD and income inequality using data from 91 countries between 1960 and 1995. They use credit to the private sector by financial intermediaries, and claims on the non-financial domestic sector by banks as their measures of FSD.

Their findings support the theory that there is a negative relationship between FSD and income inequality rather than an inverted U-shaped relationship i.e. they find that FSD reduces inequality, even where there are initially low levels of FSD. However, they also find that the beneficial impact of FSD on income inequality is smaller in countries with larger modern (i.e. non-agricultural) sectors, thus providing some support for the Kuznets-based theory, though it still reduces income inequality as long as the modern sector accounts for less than 99.6 per cent of GDP (which was true of almost all countries in the sample). For an average country in the sample, they estimate that a 1 per cent increase in private credit reduces inequality by 0.3% - a substantial impact.

Some more recent studies find further evidence that FSD disproportionately benefits the poorer sections of the community. Beck, Demirguc-Kunt & Levine (2004) use data on 52 developing and developed countries over the period 1960 to 1999 to assess whether there is a direct relationship between FSD (measured by credit to the private sector) and changes in income distribution. They find that the income of the poorest 20% of the population grows faster than average GDP per capita in countries with higher FSD, and that income inequality falls. They also find that FSD contributes to reductions in infant mortality.

However, this result is not always supported by other studies. Some find that FSD may increase inequality to some degree⁷. Thus neither the theory nor the evidence are conclusive on the impact of FSD on inequality.

As noted, these studies use traditional measures of FSD, which may not be very related to increases in access to financial services, and hence may capture only the indirect impact of FSD on poverty through growth. However, Burgess & Pande (2003) use rural bank branch data from India, which may better capture the *direct* impact of access to financial services on poverty.

Between 1977 and 1990, the Indian central bank mandated that a commercial bank could only open a new bank branch in a location with one or more existing bank branches, if it opened four new bank branches in locations with no existing branches. This rule caused banks to open relatively more rural branches in Indian states with lower initial financial development during this period. Burgess & Pande examine the impact of this policy on poverty, and find that a one percent increase in the number of rural banked locations reduced rural poverty by 0.34 percent, and increased total output by 0.55 percent by facilitating diversification out of agriculture.

The policy was abandoned in 1990 because of the heavy costs to the commercial banking sector. But while the overall impact on growth and efficiency associated with such government intervention may well be high, this example serves to demonstrate the potential impact on the poor associated with greater access to financial services.

Finally, a number of studies have found evidence of linkages between FSD and child labour and education patterns (e.g. Dehejia & Gatti 2002, Beegle, Dehejia & Gatti 2003, and Jacoby 1994). Poor households with high levels of income volatility may diversify their sources of income by allowing their children to work rather than go to school. Because financial services can help families to adjust to unexpected changes in income in other ways, FSD serves to reduce the incidence of child labour and increase school attendance.

Evidence on the impact of microfinance institutions

While studies such as those cited above tend to use measures of FSD based on macro data from traditional financial sector institutions, which may not be very closely related to increases in access, there is another large strand of literature focusing on the impact of

⁷ E.g. Dollar & Kraay, 2001 and Behrman, Birdsall and Szekely, 2001.

microfinance institutions (MFIs). This attempts to measure more directly the affect of access to financial services (through specific initiatives) on poverty.

Littlefield, Morduch, & Hashemi (2003) summarise the literature, citing, for example, a study by MKNelly & Dunford (1999) which found that two thirds of the clients of the CRECER Credit with Education Program in Bolivia had enjoyed higher incomes after joining the program. Another study they cite, by Remenyi & Quinones Jr. (2000) showed that in Indonesia, borrowers increased their incomes by 12.9 per cent compared to increases of 3 per cent of non-clients.

An important study was undertaken by Khandker (1998) on the impact of BRAC, Grameen Bank and RD-12, three microfinance institutions in Bangladesh. He found that as many as 5 percent of participants would be able to lift their families out of poverty every year by borrowing from one of these microcredit programs.

There is also evidence that MFIs can generate indirect benefits, (including for non-participants)⁸. For example, in the study cited above, Khandker found evidence of spillover effects in the village economy, as increases in self-employment by program participants and subsequent withdrawals from informal labour pools led to a 21% increase in wages, so that average rural household incomes in program villages increased even for non-program households.

Hulme and Mosley (1996) found evidence that MFIs can induce competing providers such as moneylenders to reduce their interest rates and widen their product mix. Access to services through MFIs can also contribute to the development of information (such as a credit history) that is usually necessary before an individual can gain access to services provided by formal sector institutions.

However, other studies question the rigour and validity of the findings of standard impact assessments, highlighting data and methodological problems (e.g. Morduch, 1998 and Coleman, 1999). In any case, it is difficult to derive from these studies aggregate results on the impact of MFIs comparable to those produced by studies using more traditional FSD indicators, as the diversity of such arrangements and providers prevents easy generalisations. Many MFIs rely on donors for sustaining their operations, and success rates across MFIs are highly variable, making it difficult to draw conclusions about the size and sustainability of the overall impact of microfinance on poverty reduction.

Holden & Prokopenko (2001) argue that the quality of the loan portfolio of MFIs may sometimes be poor because of inadequate management and deficiencies in control of their activities. In addition, a lack of competition means that lending rates of interest are often high. These factors make it more likely that poor lending decisions will be made, and will increase the proportion of households who end up with unmanageable debt⁹.

⁸ E.g. Mushtaque, Chowdhury & Mosley (eds.), 2004

⁹ This risk clearly exists in relation to any lending, though it can be minimised through appropriate management and monitoring. It is worth noting that in many developing countries the formal banking sector also suffers from a high proportion of non-performing loans.

However, Hulme and Mosley (1996), in a study which looked at enterprise credit programs in a number of different locations, concluded that MFIs relieve a great deal more poverty than they create, and that the provision of credit to poor families – as long as it is well administered and profitable projects exist – can be a prime weapon against poverty.

Conclusions

A large body of evidence now exists which shows that financial sector development can make an important contribution to economic growth and poverty reduction. This is especially likely to be true in developing countries, whose financial sectors are likely to be particularly underdeveloped, and without it economic development may be constrained, even if other necessary conditions are met.

By increasing the savings rate and the availability of savings for investment, facilitating and encouraging inflows of foreign capital, and optimising the allocation of capital between competing uses, financial sector development can boost long-run growth through its impact on capital accumulation and on the rate of technological progress.

Though the scale may be different, access to financial services can reduce poverty through the same channels that affect overall growth: by increasing investment and productivity resulting in greater income generation, and by facilitating risk management thus reducing vulnerability to shocks.

However, the poor in developing countries often do not have access to ongoing, formal financial services, and are forced to rely instead on a narrow range of often risky and expensive, informal services. This constrains their ability to participate fully in markets, to increase their incomes and to contribute to economic growth.

In some countries, semi-formal channels such as microfinance institutions play a role in providing financial services to the poor, as do institutions such as postal banks, development banks and credit unions. But all these institutions are reaching only a minority of the bankable population. So a widening of financial services provision by private sector institutions (particularly commercial banks) in the formal financial sector is necessary to tackle this problem on an adequate scale.

This requires a new focus on ways to encourage, and remove barriers to wider formal sector provision. It also means that when designing regulatory reform (for example to promote stability or security) greater attention needs to be paid to the incentives and regulatory space that private sector financial institutions have to widen access.

Better data on access to financial services is also required, in order to understand the needs of the poor, identify the barriers to wider formal sector provision, and incentivise governments to take action to support wider access. DFID's Financial Sector Team is working with others to develop new indicators and data sources measuring access to financial services.

A follow up note focusing on ways policy makers and donors can promote pro-poor FSD and associated policy reforms is being prepared by DFID's Financial Sector Team.

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