

## **Access to Finance**

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### *1. Motivation*

Financial exclusion is likely to act as a “brake” on development as it retards economic growth and increases poverty and inequality. Theoretical models have shown that existence of financial market frictions can be the critical mechanism for generating persistent income inequality or poverty traps. A wide-ranging empirical literature has also found a significant and robust relationship between financial depth and economic growth.<sup>1</sup> And recent research has shown that financial depth is not only associated with higher growth rates but also has an additional pro-poor effect, disproportionately boosting the income of the poorest.<sup>2</sup>

Despite the emphasis it has received in theory, empirical evidence that links broader access to financial services to development outcomes has been very limited, providing at best tentative guidance for public policy initiatives in this area. Financial inclusion – or broad access to financial services - implies an absence of price or non-price barriers in the use of financial services. It is difficult to define and measure because access has many dimensions: services need to be available when desired, and products need to be tailored to specific needs; the prices for these services need to be affordable, including all non-price costs such as having to travel a long distance to a bank branch; and most importantly, it should also make business sense, translate into profits for the providers of these services, and therefore be available on a continuous and sustainable basis.

This access dimension of financial development has often been overlooked, mostly because of serious data gaps on who has access to which financial services and the barriers to broader access. However, without inclusive financial systems, poor individuals and small enterprises need to rely on their personal wealth or internal resources to invest in their education, become entrepreneurs or take advantage of promising growth opportunities. Financial market imperfections - such as information and transactions costs – are likely to be especially binding on the talented poor and the micro and small enterprises who lack collateral, credit histories and connections. Hence, financial exclusion can lead to persistent inequality and slower growth.

More recently, especially with the impetus of the Year of MicroCredit (2005), more emphasis has been given to access to finance as part of the overall development agenda by international agencies, and the development community more generally. Better data is being recognized by the international community as a means to advance financial inclusion, but large challenges exist. There is little systematic information on who is financially served in developing countries, which financial institutions or services are the most effective at supporting broad-based access, what practical and policy barriers there

may be to the expansion of access or what is the welfare impact of relaxing these barriers and expanding access.

This conference brought together leading academics, practitioners and policy makers working in the area of access to financial services. The papers and discussions focused on three main themes<sup>3</sup>:

- (i) *Measuring access.* How should we measure access to finance? Just how limited is financial access? What are the chief obstacles and policy barriers to broader access?
- (ii) *Evaluating the impact of access.* What is the impact of access to financial services – credit, savings, insurance and payments - on firms, households and microenterprises? What role does microfinance play? What roles do formal and informal finance play?
- (iii) *Policies to broaden access.* What is the government's role in building inclusive financial systems? What roles do private and public partnerships, innovative approaches, importance of institutions and regulations play?

## 2. *Research Findings*

### 2.1. *Theory and Measurement*

Although theory advertises the crucial role of financial market imperfections in explaining intergenerational income dynamics, there is stunningly little research on how financial policy reforms and changes in financial system operations shape the evolution of poverty and the distribution of income. *Demirguc-Kunt and Levine (2007)* review research on the intergenerational persistence of relative incomes and identify this as a key gap in the literature. The paper discusses the value of additional research on evaluating the impact of broader access and on how reforms to financial policies influence the economic opportunities of the poor and hence the intergenerational persistence of relative incomes.

This gap in the literature is partly due to unavailability of systematic information on measures of access to finance. Existing evidence on financial development, growth and poverty is encouraging and consistent with theory. However, most of the evidence is either at the very aggregate level – using financial depth measures instead of access – or micro studies using financial wealth to proxy for credit constraints.

Hence future work in this area is likely to benefit from development of better indicators; indicators on who has access to which financial services, to establish how broad access is, who the underserved groups are, and the barriers to broaden this access. *Beck, Demirguc-Kunt and Martinez Peria, (2007)* and *Honohan (2007)* are efforts in this direction.

However, access is not easy to measure. It is important to distinguish between access – the possibility to use – and actual use of financial services. The difference might reflect

voluntary lack of demand or the lack of need. Understanding usage requires information on both demand and supply factors, which are difficult to disentangle at the aggregate level.

Why can't large proportions of the population in many developing countries use financial services? *Beck, Demirguc-Kunt and Martinez Peria (2007)* survey the largest banks in 62 countries and document large differences in price and non-price barriers associated with deposit, credit and payment services. For example, to open a checking account in a commercial bank Cameroon, the minimum deposit requirement is over 700 dollars, an amount higher than the average GDP per capita of that country, while no minimum amounts are required in South Africa or Swaziland. Annual fees to maintain a checking account exceed 25 percent of GDP per capita in Sierra Leone, while there are no such fees in the Philippines. In Bangladesh, Pakistan, Philippines, to get a small business loan processed requires more than a month, while the wait is only a day in Denmark. The fees for transferring 250 dollars internationally are 50 dollars in the Dominican Republic, but only 30 cents in Belgium.

The authors show that these types of barriers are negatively correlated with banking penetration and outreach and may exclude a large percentage of the population from using banking services in many countries. Factors associated with financial depth such as the effectiveness of credit information sharing, creditor rights and contract enforcement are highly correlated with barriers, but so are non-financial factors such as the development of the infrastructure and the extent of media freedom. More competitive banking systems and market-based supervisory policies are associated with lower barriers. Contrary to conventional wisdom, government banks are not associated with lower access barriers. Instead, bank customers face higher barriers to credit services in banking systems which are predominantly government-owned, while a larger share of foreign bank ownership is associated with lower barriers in deposit services.

*Honohan (2007)* combines data on banking, micro finance institutions and savings banks, as well as individual household surveys to construct estimates of the fraction of adult population using formal financial intermediaries, for more than 160 countries. Financial access (here approximated by use) and depth (Private credit to GDP) are highly correlated, but this correlation is not perfect, suggesting that there is not a one to one relationship between depth and access. Although access to finance increases with income approaching 100% at high levels, still at any given income level there is significant variation. A world map of access to financial services illustrates that in many low income countries (for example in Africa) less than 20 percent of households use financial services from formal financial intermediaries.

While cross-country aggregate indicators can help produce proxies for access by firms and households, and document barriers that prevent expansion of this access, only carefully conducted studies using micro data at the household and firm level can provide us with in-depth information on access to different financial services and allow us to evaluate the impact of this access.

Some of the papers summarized below are initial attempts in addressing these issues.

## 2.2. Access to Finance - The Impact on Firms, Microenterprises, Households

### 2.2.1. Firms and Access to Finance

Firm dynamics plays an important role for technological innovation and productivity growth, however what determines firm dynamics is not fully understood. *Aghion, Fally and Scarpetta (2007)* focus on credit constraints as a potential barrier to entry and post entry growth of firms. They develop a stylized model and use data on firm entry and exit rates (calculated from census data from business registries) for a sample of developed and developing countries to investigate the impact of financial development on firm dynamics. Using a difference-in-differences approach, they confirm earlier findings that higher financial development (measured by usual depth measures and also regulatory indicators) enhances new firm entry in sectors that depend more heavily on finance (external dependence obtained from the largest firms in the corresponding sector in US, since these firms face the lowest barriers in accessing finance). Their results also suggest that the smallest size firms benefit the most in terms of higher entry from higher financial development. Finally, they also show that financial development promotes the post-entry growth of firms in sectors that depend more on external finance. Importantly, regulations that affect banks or financial markets have a significant impact, even after controlling for other policy variables like labor market regulation or entry costs. They conclude that an important policy implication for most countries – even for those in Continental Europe – is that they should make further progress in improving their financial markets, so as to boost entry and particularly entry of small firms, to better select the best projects, and to promote post-entry growth of successful firms. Other reforms – such as labor market and entry regulations etc – also have an impact, but play a weaker role. Focusing on financial reforms also has the advantage that they may face less opposition, for example compared to reforms in labor regulations.

Another interesting question is the role of informal institutions in risk sharing and providing credit. A common view is that informal institutions act as a substitute to formal institutions in developing countries. For example, China is often mentioned as a counterexample to the findings in the finance and growth literature since, despite the weaknesses in its banking system, it is one of the fastest growing economies in the world. *Ayyagari, Demirguc-Kunt and Maksimovic (2007)* investigate the role of bank finance versus other informal financing mechanisms in financing firm growth using a database of Chinese firms. Indeed, they find that a relatively small percentage of firms in the sample utilize formal bank finance with a much greater reliance on informal sources. However, the results suggest that despite its weaknesses, financing from the formal financial system is associated with faster firm growth, whereas fund raising from alternative channels is not. Using a selection model, the authors find no evidence that these results arise because of the selection of firms that have access to the formal financial system. While firms report bank corruption, there is no evidence that this significantly affects the allocation of credit or the performance of firms that receive the credit. An important determinant of access to bank loans is the ability to post collateral, which is in turn a function of firm

size, level of fixed assets and firm location. Overall, the results suggest that, even in fast growing economies like China where the formal financial system serves a small portion of the private sector, the fastest growing firms depend on external finance from the formal financial system. These findings suggest that the role of reputation and relationship based informal financing and governance mechanisms in supporting the growth of private sector firms is likely to be limited and unlikely to substitute for formal mechanisms.

### *2.2.2. Microentrepreneurs and Access to Finance*

Dynamic microenterprises are a dominant feature in developing countries, where as much as a third of the labor force is self-employed. How much does the lack of capital affect the earnings from these enterprises? The answer is: a lot. Assessing the extent to which lack of capital affects business profits is generally complicated by the fact that business investment is likely to be correlated with a host of unmeasured characteristics like the ability of the enterprise owner or the prospects for the business. *Cull, McKenzie and Woodruff (2007)* overcome these difficulties by designing a field experiment in Mexico which administers treatments of cash or equipment to randomly selected microenterprises in their sample, hence generating shocks to capital stock which are uncorrelated with entrepreneurial ability or growth opportunities. Their results suggest returns to capital of around 20-33% per month, which is much higher than market interest rates. Furthermore, interacting the treatment effect with different measures of financial constraints and access to finance, they find that the return is much higher (70-79% per month) for firms which report themselves as financially constrained and much lower for firms that report that lack of finance is not a constraint. Indeed, they cannot reject the possibility of no return for the latter group of firms. Very high levels of return at very low levels of capital stock also implies there may be no minimum investment threshold below which returns to capital are so low as to discourage entry into self employment.

What determines the decision to enter self-employment? *Demirguc-Kunt, Klapper and Panos (2007)* use a panel household survey in Bosnia and Herzegovina (BiH) over the 2001-2004 period to study factors affecting the transition to self-employment and the viability of this decision, in terms of business survival for more than a year. BiH represents an interesting case because being a post-conflict country, it has a very low rate of self-employment, however the government has been making significant regulatory changes to promote entrepreneurship, hence there is room for significant improvement in this area. The richness of the data allows for a large set of physiological, sociological and behavioral controls, as well as financial variables. Results indicate that financial constraints play an important role in promoting entry into self-employment and its success. Prior wealth has a persistently positive effect in the survival equation, indicating that higher potential of self-financing is an essential component of self-employment activity and longevity. While the decision to become an entrepreneur is not related to financing from banks, the ability to survive is significantly increased by an existing relationship with a bank. Informal sector workers are more likely to transition to formal self-employment and are more likely to be successful as entrepreneurs. These results support the perception of informal sector as an incubator for self-employment in the

formal sector in the early years of transition, through which individuals acquire skills that can facilitate their future entrepreneurial activities.

### 2.2.3. *Microfinance, Microinsurance and Microsavings*

The rhetoric around microfinance -as highlighted by Muhammad Yunus of Bangladesh - builds on the premise that millions of poor households seek capital to build small businesses, and that innovative microbanks meet this demand, hence unleashing untapped productive power. *Johnston and Morduch (2007)* examine microcredit versus microsavings using household data from Indonesia, another important early site for microfinance. The picture that emerges from Indonesia is quite different: Loans for small business are important but not predominant as a fraction of all loans. Instead, low-income households in the survey use loans as often for household needs including paying for school fees, medical treatment, daily consumption needs, and social and holiday expenses. The finding holds for low-income households across a wide range: households below regional poverty lines, just above the lines, and well above the lines. Furthermore, many poor households, including many with savings accounts but not loans, are adverse to taking debt and do not seek credit even though they are creditworthy.

In contrast to the well-developed literature on micro-credit, research on “micro-insurance” is still very limited. In one of the few papers in this area, *Gine, Townsend and Vickery (2007)* study barriers to household participation in micro-insurance products by documenting the institutional detail and contractual features of an innovative weather insurance policy for small farmers in India. They find that insurance takeup increases in the correlation between insurance payouts and the risk to be insured, and in wealth, and decreases in credit constraints. They also find that inconsistent with theory, risk adverse households are less likely to buy the insurance product, potentially suggesting that many households may be uncertain about the insurance product itself. This work is continuing and a follow-up survey work including a randomized field experiment will provide more detailed results not only on determinants of participation, but also on the impact of insurance participation on other household decisions and welfare.

How can microfinance institutions design better microfinance products that meet the needs of their clients? *Ananth, Karlan and Mullainathan (2007)* seek to understand the constraints that govern the way microentrepreneurs manage their money to start answering this question. They focus attention on three anomalies in microfinance: (i) persistence of microentrepreneurs in a borrowing cycle without expansion in underlying economic activity (ii) lack of joint production activities despite cooperating on financial ventures and (iii) investment and labor allocation decisions which seem sub-optimal, and may be a result of failures in other related markets. The paper describes on-going field experiments to help reveal true drivers of such behavior. Focusing on these anomalies, preliminary results suggest clear, high-impact non-credit interventions for microfinance lenders. The authors outline the need for new tools and propose small changes in existing policies that may dramatically improve efficacy of loan products. Further, insights into how microentrepreneurs are spending and managing their money is likely to help us

understand whether microfinance products are scalable in their current form and in particular, the channels of impact.

### 2.3. *The Role of Government in Improving Access –Regulations and Institutions*

Focusing on access to finance implies looking beyond microfinance to the banking system. While cross-country evidence has already shown the pro-poor effect of financial sector development, *Beck, Levine and Levkov (2007)* provide evidence from a quasi-natural experiment in the U.S. Throughout the history of the United States, political leaders suspected that large banks only benefit the rich. Moreover this anxiety that large banks enrich the wealthy at the expense of others motivated states to restrict banks from opening bank branches across and within states. Using a U.S. panel dataset over the 1977-2003 period the authors investigate whether liberalizing restrictions on intra-state branching affected the distribution of income within states. Using a difference-in-differences approach across U.S. states and over time, they find that deregulation of branching restrictions reduced the Gini coefficient of income inequality. Hence, the findings are consistent with the view that branch deregulation had a disproportionately positive impact on the poor, by increasing both average income growth and reducing income inequality. Furthermore, deregulation reduced income inequality among female wage and salary earners and among the self-employed. These results also suggest that the largest effect of deregulation on income inequality comes through changes in the labor market rather than through improved access to finance.

*Guiso, Sapienza and Zingales (2007)* also study the impact of bank deregulation – but on access to and cost of finance - using the 1936 Italian banking law and its removal in the 1980s as a natural experiment. The 1936 Italian banking law curtailed competition in the banking industry with the objective of enhancing stability. While the regulation was imposed homogenously throughout the country, the restrictions had different impact in different areas because they granted a different flexibility to expand to different types of banks. Hence, an unintended consequence of the law was a different degree of competition across Italian provinces determined on the basis of the conditions pre-dating the 1936 law. The authors exploit this exogenous variation the restrictions on competition have on the structure of the banking industry. Since all these regulations were removed during the 1980s, the authors also exploit the difference in starting competition levels to assess how differentially repressed financial systems respond to liberalization. The authors find that in provinces where there was more competition, there was more access to credit for both households and firms, more firms, and higher growth, but also a higher percentage of bad loans. With deregulation, the results show that provinces that had a less competitive banking sector during the regulation period experienced a significant increase in the number of households with access to credit. They also experienced a reduction in the cost of borrowing, and an increase in the percentage of bad loans. The overall effect is that after deregulation, the provinces that were more penalized by restrictions in competition experienced a higher than normal aggregate growth rate. These results emphasize the importance of bank competition in broadening access to finance.

What about the impact of institutions more broadly, on financial market participation and use of financial services? *Osili and Paulson (2006)* examine the determinants of financial market participation among immigrants in the U.S., examining the role of both individual level of determinants like wealth and education as well as the effect of the country of origin institutional environment captured by variables such as legal origin, religion, culture, geographic endowments, banking freedoms, protection from expropriation and so on. The authors find that immigrants from countries with institutions that more effectively protect private property and provide incentives for investment are more likely to have a U.S. bank account and participate more extensively in U.S. financial markets. These effects are long lasting, with an impact for at least 28 years after immigration, and are even present in immigrants who arrive in the U.S. as young children. These results suggest that institutional reform is likely to be a very important tool in the effort to expand access.

A controversial topic is the role of state-owned institutions in providing broad access to financial services. The poor record of government development banks in delivering broad access weakens the case for using this tool on the credit side. However a handful of more sophisticated government-owned DFIs have moved away from credit and have evolved into providers of more complex financial services. Their know-how, willingness and capacity to take initiatives that are consistent with a social remit even at the cost of a lengthy initial period of loss-making has allowed them to take the initiative in introducing to developing countries products and markets which are proven elsewhere but entail heavy set-up costs, without certainty of high financial return. Involving little or no credit risks, these services are less subject to the political subversion of state-provided credit. On the other hand, they can help overcome coordination failures, first-mover disincentives and obstacles to risk sharing and distribution, with private-public partnerships. *De la Torre, Gozzi and Schmukler (2006)* illustrate this with three examples from Mexico: one is the electronic brokerage of reverse factoring developed by Nafin, a government development bank, which allows many small suppliers to use their receivables from large credit-worthy buyers to receive working capital financing. Another example is the electronic platform implemented by BANSEFI, another government-owned institution, to help semi-formal and informal financial intermediaries reduce their operating costs by centralizing back-office operations. Finally, a third government-owned DFI-turned investment bank, FIRA, has brokered quite complicated structured finance products to realign credit risks with the pattern of information between financial intermediaries and the different participants in the supply chains for shrimp and other agro-fish products. Ultimately each of these successful initiatives could have been done in the private sector, given patient capital. Indeed, the Mexican government explicitly envisages privatization of at least some of these initiatives. But they have had a useful catalytic function in “kick-starting” certain financial services in Mexico.

### 3. *Policy Conclusions*

What can we take away from all these papers? Some general messages emerge.

*Theory suggests financial exclusion is an important reason for persistent inequality, poverty traps and slower growth.* Financial sector reforms that promote financial inclusion, i.e. broad access to financial services, should be at the core of the development agenda.

*Empirical evidence linking access to development outcomes is very limited due to lack of data.* Existing evidence on financial development, growth and poverty is encouraging and consistent with theory. However, most of the evidence is either at the very aggregate level – using financial depth measures instead of access – or micro studies using financial wealth to proxy for credit constraints.

*The first step in improving access is measuring it.* Hence, the importance of developing indicators of access and barriers to access, as well as collecting in-depth household and enterprise information on financial services.

*Better data will help us assess which financial services – savings, credit, payment, insurance - are the most important for development outcomes.* Indicators of access are just that – indicators. While they are linked to policy, they are not policy variables. Analytical work using micro data is needed to understand the impact of these indicators and design better policy interventions.

*Among different business environment obstacles firms face -such as labor market regulations, entry restrictions etc.- credit constraints play a very important role as a potential barrier to entry and post-entry growth of firms.* These results obtained using census data are also consistent with earlier findings using firm survey data.

*Not all firms are affected the same way.* Smaller firms complain more from financing constraints and are affected more by them. However, small firms also benefit the most – in terms of seeing their constraints relaxed – as financial systems develop. Entry of smallest size firms also benefits the most from higher financial development.

*The role of reputation and relationship based informal financing and governance mechanisms in supporting the growth of private sector firms is likely to be limited and unlikely to substitute for formal mechanisms.* Even in fast growing economies like China where the formal financial system serves a small portion of the private sector, the fastest growing firms depend on external finance from the formal financial system.

*Lack of access to finance due to financial market imperfections can result in large inefficiencies also for microentrepreneurs leading to underinvestment and lower levels of self-employment.* Randomized experiments show returns to capital are much higher than prevailing market interest rates. Financial constraints also play an important role in promoting entry into self-employment and its success.

*For poor households, credit is not the only or in many cases the priority financial service they need: good savings and payments (including international remittances)*

*services and insurance may rank higher.* For example, one of the reasons why the poor may not save in financial assets may be the lack of appropriate products.

*Building inclusive financial systems requires a focus broader than microfinance.* While microfinance lessons are important to internalize, in most developing countries, it is not only the poor that lack access to formal financial services; often the middle class is excluded from the financial sector. For example, most small and medium enterprises—even those owned by the non-poor—have limited or no access to formal finance.

*Good institutions -greater transparency, and better developed physical, information and legal infrastructures- are associated with broader access and use.* Institutional development – good laws, strong enforcement, strong regulation and supervision, good quality information and disclosure requirements, protection of property rights – is essential and associated with greater participation in the financial sector.

*Evidence also suggests more open and competitive financial systems with limited state ownership are likely to be more inclusive.* Contestable financial systems – with foreign entry and private ownership - and absence of rules and regulations that distort the risk taking, pricing or monitoring incentives of market participants, are more likely to provide broader access and a more equal income distribution.

*Governments have an important role to play in building inclusive financial systems. However not all government action is equally effective, and some policies can be counterproductive.* The examples of branching restrictions in the U.S. and bank regulation in Italy illustrate how government policies restricting competition can back fire. Encouraging competition in the financial sector is important in ensuring that the private sector has the incentives to develop innovative services to serve the underserved segments. Direct intervention substituting a government-owned service provider for market intermediaries can be recommended in only a limited range of circumstances where innovative public-private partnerships can “kick-start” certain financial services.

*And of course...much more research is needed to evaluate the impact of access to financial services on development outcomes, and to design policy interventions.*

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<sup>1</sup> See World Bank (2001) and Levine (2005) for a review of this literature.

<sup>2</sup> See for example, Beck, T., A. Demirguc-Kunt and R. Levine, “Finance, Inequality and the Poor,” *Journal of Economic Growth*, forthcoming.

<sup>3</sup> All papers and presentations can be accessed at: <http://econ.worldbank.org/accessconference>