

Access to Finance and Development: Theory and Measurement

FINANCE IS AT THE CORE OF THE DEVELOPMENT PROCESS. BACKED by solid empirical evidence, development practitioners are becoming increasingly convinced that efficient, well-functioning financial systems are crucial in channeling funds to the most productive uses and in allocating risks to those who can best bear them, thus boosting economic growth, improving opportunities and income distribution, and reducing poverty.¹ Conversely, to the extent that access to finance and the available range of services are limited, the benefit of financial development is likely to elude many individuals and enterprises, leaving much of the population in absolute poverty. This access dimension of financial development is the focus of this report.

Improving access and building inclusive financial systems is a goal that is relevant to economies at all levels of development. The challenge of better access means making financial services available to all, thereby spreading equality of opportunity and tapping the full potential in an economy. The challenge is greater than ensuring that as many people as possible have access to basic financial services. It is just as much about enhancing the quality and reach of credit, savings, payments, insurance, and other risk management products in order to facilitate sustained growth and productivity, especially for small and medium-scale enterprises. Although the formal financial sector in a few countries has achieved essentially universal coverage of the population, at least for basic services, some financial exclusion persists even in many high-income countries (and, because they find it difficult to participate fully in those sophisticated economies, financial exclusion can be an even more serious handicap for those affected).

Well-functioning financial systems can boost growth and reduce poverty

Financial market frictions can generate poverty traps

Theoreticians have long reasoned that financial market frictions can be the critical mechanism for generating persistent income inequality or poverty traps. 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 asymmetries and transactions costs, are likely to be especially binding on the talented poor and the micro- and small enterprises that lack collateral, credit histories, and connections, thus limiting their opportunities and leading to persistent inequality and slower growth. However, this access dimension of financial development has often been overlooked, mostly because of serious gaps in the data about who has access to which financial services and about the barriers to broader access.

Measuring access can be difficult

Despite the emphasis financial access has received in theory, empirical evidence that links broader access 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 and nonprice 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 and where desired, and products need to be tailored to specific needs. Services need to be affordable, taking into account the indirect costs incurred by the user, such as having to travel a long distance to a bank branch. Efforts to improve inclusion should also make business sense, translate into profits for the providers of these services, and therefore have a lasting effect.

This chapter reviews the theoretical models—

The purpose of this chapter is twofold. First, it briefly reviews the theoretical models that incorporate capital market imperfections to illustrate how improved access to finance is likely to reduce inequality as well as promote growth and, through both channels, lead to a reduction in poverty. Many types of policy measures aimed at reducing poverty and inequality through redistributive measures such as land reform can have adverse side-effects on incentives. If the underlying causes of inequality are not removed, the effect of such redistributive measures may be only temporary and require repetition. A complementary development strategy would directly address the underlying causes, including capital market imperfections (in addition to redistributive policies). Financial sector reforms to achieve this goal can represent a first-best policy to promote growth and poverty reduction and would also make redistribution more effective and sustainable.

Second, the chapter presents indicators of access to and use of financial services that households and small firms are likely to need. Developing better indicators of access to finance is essential to strengthen the link between theory and empirical evidence and to investigate the channels through which a more developed financial system promotes development, both in terms of growth and poverty reduction. Indeed, the extent of direct access to financial services by households and small enterprises varies sharply around the world, with very limited access in many countries.

—and presents access indicators for households and small firms

Theory: The Crucial Role of Access to Finance

Modern development theory studies the evolution of growth, relative income inequalities, and their persistence in unified models. In many of these models, financial market imperfections play a central role, influencing key decisions regarding human and physical capital accumulation and occupational choices. For example, in theories stressing capital accumulation, financial market imperfections determine the extent to which the poor can borrow to invest in schooling or physical capital. In theories stressing entrepreneurship, financial market imperfections determine the extent to which talented but poor individuals can raise external funds to initiate projects. Thus, the evolution of financial development, growth, and intergenerational income dynamics are closely intertwined. Finance influences not only the efficiency of resource allocation throughout the economy but also the comparative economic opportunities of individuals from relatively rich or poor households.

This crucial focus on the financial sector in economic modeling has been strengthened with the historical development of views on the links between economic growth and income inequality. It was long believed that the early stages of economic development would inevitably be accompanied by inequality and concentrations of wealth. Pointing to the fact that rich people's marginal propensity to save is higher than that of the poor, theoreticians argued that the need to finance large, indivisible investment projects in the process of development implied that rapid growth would need wealth concentration, leading to a fundamental trade-off between growth and social justice. More generally, Kuznets (1955, 1963) reasoned that this trade-off meant that inequality would increase in the early stages of development until the benefits of growth spread throughout the economy. Some of the earlier empirical evidence

Empirical evidence suggests that the link between growth and inequality is ambiguous

from the United States and other developed countries supported the Kuznets hypothesis. But evidence from developing countries was not so supportive.²

The importance of providing incentives to reward the productive efficiency of enterprise and investment might seem to imply that growth and inequality must be positively linked, but empirical studies suggest that this is not always so. In particular, while very low inequality is indeed empirically associated with rapid subsequent growth, the highest rates of growth are associated with moderate inequality. Furthermore, high levels of inequality seem to reduce subsequent growth.³

Modern development theory highlights the role of finance

Helping to explain these findings, more subtle theories have explored precise mechanisms whereby inequality might adversely affect growth. Financial market imperfections are often at the core of this line of thought because inequalities persist because of these imperfections.⁴ For example, in the model of Galor and Zeira (1993), it is because of financial market frictions that poor people cannot invest in their education despite their high marginal productivity of investment. In Banerjee and Newman's model (1993), individuals' occupational choices are limited by their initial endowments. The structure of occupational choices—whether people can become entrepreneurs or have to remain wage earners—in turn determines how much they can save and what risks they can bear, with long-run implications for growth and income distribution.⁵ Hence, these models show that lack of access to finance can be the critical mechanism for generating persistent income inequality or poverty traps, as well as lower growth.

Wealth redistribution and financial development

One implication of these modern development theories is that redistribution of wealth can foster growth. Indeed, this has been the main policy conclusion drawn by many readers of these theories. This thinking rationalizes a focus on redistributive public policies such as land or education reform. However, if it is the capital market imperfections that lead to these relationships and necessitate redistribution, why neglect policies that might remove capital market imperfections? Nevertheless, some theories take credit constraints or other frictions as exogenous. In others, static information and transaction costs endogenously yield adverse selection and moral hazard frictions that impede the operation of financial markets. In either case, researchers take capital market imperfections as given and suggest different redistributive policies to promote growth, focusing on schooling, saving, or fertility changes. This is true even though the literature also notes that if financial market

imperfections continue to exist, absence of a virtuous circle a la Kuznets may also necessitate *permanent* redistribution policies.⁶

A more effective and sustainable development approach would directly address financial market imperfections, without causing adverse incentive effects. Most redistributive policies create disincentives to work and save, although the economic magnitudes of these disincentive effects are a subject of intense debate (Aghion and Bolton 1997). As Demirgüç-Kunt and Levine (2007) argue, these tensions vanish when focusing on financial sector reforms. Reducing financial market imperfections to expand individual opportunities creates positive, not negative, incentive effects. Hence these arguments are very consistent with modern development theories *yet* emphasize putting financial sector reforms that promote financial inclusion at the core of the development agenda. Addressing financial sector imperfections can also appeal to a wider range of philosophical perspectives than can redistributive policies inasmuch as the latter are directly linked with equalizing *outcomes*, whereas better functioning financial systems serve to equalize *opportunities*.

Extensive empirical evidence suggests a significant and robust relationship between financial depth and growth. More recent micro evidence using firm-level data sets suggests that better-developed financial systems ease financial constraints facing firms. This finding illuminates one mechanism through which financial development influences economic growth. Furthermore, researchers recently have shown that financial depth reduces income inequality and poverty and is thus particularly beneficial for the poor.⁷ This evidence is reviewed in detail in the coming chapters. Although these results are encouraging, the link between theoretical models and empirical evidence has not been very close because of a lack of data on access to financial services. While theory focuses on the importance of broader access and greater opportunities (that is, financial inclusion), relatively little empirical evidence links access to finance to development outcomes, and there is little guidance for policies on how best to promote access.

Financial depth, or development more generally, can have direct and indirect effects on small firms and poor households. Greater depth is likely to be associated with greater access for both firms and households, which will make them better able to take advantage of investment opportunities, smooth their consumption, and insure themselves. However, even if financial development does not improve direct access for small firms or poor households, its indirect effects may also be significant.

Financial sector reforms can improve incentive structures

Empirical evidence on financial access is limited

Before access can be improved, it has to be measured

For example, the poor may benefit from having jobs and higher wages, as better-developed financial systems improve the efficiency of product and labor markets and promote growth. Similarly, small firms may see their business opportunities expand with financial development, even if the financial sector still mostly serves the large firms.

Only now are many questions about access beginning to be answered. Just how limited is financial access around the world? What are the chief obstacles and policy barriers to broader access? How important is access to finance as a constraint to growth or poverty alleviation? Which matters more: access by households, or access by firms? Is it more important to improve the quality and range of services available to those firms and households who might already have access (intensive margin), or to provide basic services to those who are completely excluded (extensive margin)? How important is direct access to finance for the poor and small firms compared with economywide spillover effects of greater financial development through more efficient product and labor markets? The development of indicators of access to financial services is the first step in answering all these questions. Before we can improve access, or decide whether and how to do it, we need to measure it.

Measurement: Indicators of Access to Finance

The financial sector is often thought of as being particularly well documented by statistical data. In advanced securities markets, data on transactions and prices are often available on a minute-by-minute basis. Across countries, indicators of the depth of banking systems, capital markets, and insurance sectors are widely available. Indicators such as the total value of bank claims on an economy's private sector expressed relative to gross domestic product, the turnover of shares (relative to total stock market capitalization), and the spread between lending and deposit interest rates have become standard measures of financial sector development. These indicators are also the basis for a large literature assessing the impact of financial depth and efficiency on outcomes in the real sector, such as per capita GDP growth, and exploring the determinants of financial sector development.

Much less is known about how inclusive financial systems are and who has access to which financial services. How many borrowers are behind the total value of outstanding loans of a country's banking system? How

many depositors are represented by the statistic on total deposits? Or taking the perspective from the demand side, what share of the population uses deposit accounts? What share of the population has taken out a loan? Unlike data on financial depth, these statistics are not readily available. Until recently, there has been little systematic information on who is served by the financial sector in developing countries, which financial institutions or services are the most effective at supporting access for poor households and small enterprises, or what practical and policy barriers there may be to the expansion of access. Better data are needed to advance research on financial inclusion, and significant efforts have recently been made in this direction.

Unlike measures of financial depth—where data from individual institutions (or trades in the case of the capital market) can be aggregated relatively simply to obtain consolidated figures⁸—data on financial use cannot easily be constructed in this way. For instance, the total number of all bank accounts far exceeds the number of customers served, as households and enterprises may have business with several banks (or multiple accounts with a single bank). Further, regulatory entities traditionally do not collect data on individual accounts or account holders (unless they are large ones), because this information has not been considered useful for macroeconomic stability analysis. Researchers have therefore used a variety of different data sources and methodologies to infer the actual share of households or enterprises that use financial services. Many of these data collection efforts are recent, and researchers have just started to relate them to real sector outcomes. As more data become available and more systematic data collection efforts get under way, one can expect more and better analysis.

Financial inclusion, or broad access to financial services, is defined here as an absence of price or nonprice barriers in the use of financial services. Of course this does not mean that all households and firms should be able to borrow unlimited amounts at prime lending rates or transmit funds across the world instantaneously for a fraction of 1 percent of the amount. Even if service providers are keenly competitive and employ the best financial technology, prices and interest rates charged and the size of loans and insurance coverage on offer in a market economy will necessarily depend on the creditworthiness of the customer. As discussed in later chapters of this report, subsidies and regulation can influence this outcome to some extent. But the application of modern techniques in information and communications technology is more important in improving the prices,

Aggregate data can be misleading

What does access mean?

Distinguishing between voluntary and involuntary exclusion

terms, and conditions on which financial services are available—regardless of whether services are provided at home or abroad.

Improving access, then, means improving the degree to which financial services are available to all at a fair price. It is easier to measure the use of financial services since use can be observed, but use is not always the same as access. Access essentially refers to the supply of services, whereas use is determined by demand as well as supply.

To illustrate the differences between access and use, remember that even wealthy customers in advanced financial systems will choose not to use some financial services. Some moderately prosperous customers, especially older individuals or households, may not have any wish to borrow money, even if offered a loan at a favorable interest rate. Still, almost all households need to use some financial services, such as payments services, to participate in a modern market economy, and in a few of the most advanced economies, use of at least some basic services from the formal financial sector is essentially universal.

Moreover, some specific financial products are not attractive to some customers on ethical or religious grounds; nonusage in this case cannot be attributed to lack of access—although access might be an issue here if acceptable alternatives are not being offered. The case of *Sharia*-compliant financial products can be relevant here, a topic that is discussed in chapter 4.

For specific classes of financial services, the distinction between access and use can be significant (box 1.1). The challenge is to distinguish between voluntary and involuntary exclusion and, among those that are excluded involuntarily, between those that are rejected due to high risk or poor project quality and those that are rejected because of discrimination or high prices, which makes financial services or products unaffordable. While rejection due to high risk and poor project quality is not necessarily worrisome, rejection due to discrimination and high prices is, particularly if equilibrium prices are too high, excluding large portions of the population. In addition, even if the underlying cost structures are the same in different countries, a given price would lead to greater exclusion in poorer countries.

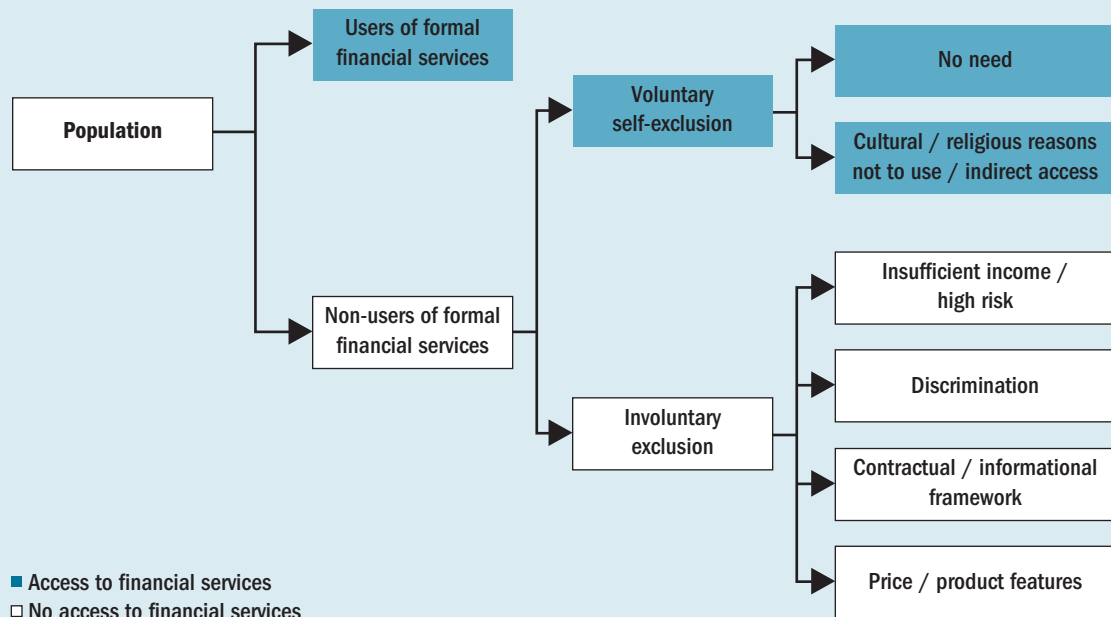
Poor people could be involuntarily excluded due to lack of appropriate products or services; they may need simple transaction accounts rather than checking accounts that entail the risk of incurring severe overdraft charges when the timing of payments and receipts goes wrong. Microentrepreneurs might be reluctant to take out loans that require

Box 1.1 Access to finance vs. use: voluntary and involuntary exclusion

WHAT DISTINGUISHES USE OF FINANCIAL SERVICES from access to financial services? To what extent is lack of use a problem? The figure below illustrates the difference between access to and use of financial services.^a Users of financial services can be distinguished from nonusers, and there are important distinctions among nonusers. On the one hand are those who do not use financial services for cultural or religious reasons or because they do not see any need. These nonusers include households who prefer to deal in cash and enterprises without any promising investment projects. These nonusers have access, but they choose not to use financial services. From a policy maker's viewpoint, nonusers do not really constitute a problem because their lack of demand drives their nonuse of financial services. On the other hand are the involuntarily excluded who, despite demanding financial services, do not have access to them. There

are several different groups among the involuntarily excluded. First, there is a group of households and enterprises that are considered unbankable by commercial financial institutions and markets because they do not have enough income or present too high a lending risk. Second, there might be discrimination against certain population groups based on social, religious, or ethnic grounds (*red-lining*). Third, the contractual and informational framework might prevent financial institutions from reaching out to certain population groups because the outreach is too costly to be commercially viable. Finally, the price of financial services may be too high or the product features might not be appropriate for certain population groups. While the first group of involuntarily excluded cannot be a target of financial sector policy, the other three groups demand different responses from policy makers—a topic that is discussed in chapter 4.

Distinguishing between access to finance and use



a. For alternative classifications of the reasons for exclusion, see Claessens (2006) and Kempson and others (2000).

them to pledge their personal assets as collateral, a common practice in most developing countries. In contrast, voluntary exclusion could result from lack of awareness of products if financial institutions do not target their marketing toward certain groups. Also, individuals can access services indirectly, for example, by using an account that belongs to somebody else in the household. And finally voluntary exclusion could also result from lack of financial literacy. Defining the “access problem” is challenging (box 1.2). It also requires a wealth of different data sources that researchers are just starting to collect. In the remainder of this chapter, we discuss some of these initial efforts and point to ongoing and future work.

Measuring access to, and use of, financial services

Recent data compilation efforts have made progress toward better measurement of both access to and use of financial services. Consider first the measurement of the use of financial services. Ideally, one would like to have census data on the number and characteristics of households that have a bank account or an account with a bank-like financial institution. In the absence of census data, one would at least like to have survey-based measures that are representative of the whole population and of important subgroups, again collecting information about the types of financial services they are consuming, in what quantities, and at what price, as well as complementary data on other characteristics of the household that might affect or be affected by their financial service use.

Research is hampered by limited survey data—

To date, however, survey-based data are quite limited both in terms of the number of countries that are covered and the amount of information collected about the respondents. The data are often not comparable across countries because the surveys use different definitions. Only a handful of the large and long-established Living Standard Measurement Surveys (LSMS) surveys sponsored by the World Bank cover financial services, and even these provide limited financial information. However, a number of specialized household surveys designed to assess financial access have been conducted in developing countries. Among these are surveys prepared by or for the World Bank in India, Brazil, Colombia, and Mexico (box 1.3), though even these are not always representative of the whole country and are not consistent across different countries. An ambitious multicountry effort to measure access of individuals to a wide range of financial services was launched by Finmark Trust in South Africa and four neighboring countries in 2002 and has since been rolled out to several other African countries. Some data come as incidental by-products of surveys designed for other purposes; this is the case for the

Box 1.2 Access to finance: supply vs. demand constraints

WHY DOES ONE OFTEN HEAR ABOUT AN ACCESS problem in credit markets but not about an access problem, say, for toothpaste? One of the basic rules of economics is that prices adjust so that at market equilibrium, supply equals demand. Hence, if demand for toothpaste exceeds the supply for it, the price of toothpaste will rise until demand and supply are equated at the new equilibrium price. If this price is too high for some, they will not use toothpaste. But all who are willing to pay the price will be able to use it. So if prices do their job, there should be no access problem.

In a famous paper, Stiglitz and Weiss (1981) provide a compelling explanation for why credit markets are different.^a They show that information problems can lead to credit rationing even in equilibrium. That is because banks making loans are concerned not only about the interest rate they charge on the loan but also about the riskiness of the loan. And the interest rate a bank charges may itself affect the riskiness of the pool of loans, either by attracting high-risk borrowers (adverse selection effect) or by adversely affecting the actions and incentives of borrowers (moral hazard effect). Both effects exist because even after evaluating loan applications, the banks do not have complete information on their borrowers. When the interest rate (price) affects the nature of transaction, market equilibrium may not occur where demand equals supply.

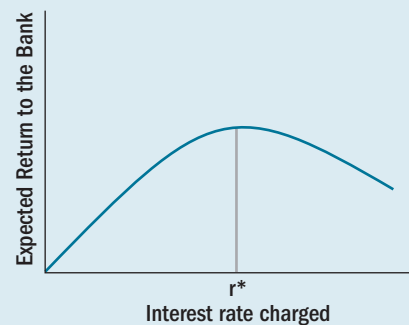
The adverse selection aspect of interest rates is a consequence of different borrowers having different probabilities of repaying their loan. The expected return to the bank obviously depends on the probability of repayment, so the bank would like to be able to identify borrowers who are more likely to repay. It is difficult to identify good borrowers, which is why a bank uses a variety of screening devices, including the interest rate. Those who are willing to pay high interest rates may, on average, be worse risks; they are willing to take higher risks to gain higher returns if

successful, but such high returns are generally associated with a higher probability of failure, making it less likely that the loans will be repaid. As the interest rate rises, the average “riskiness” of those who borrow increases, possibly reducing the bank’s profits.

Similarly, as the interest rate and other terms of the contract, such as collateral requirements, change, the behavior of the borrower is likely to change. Stiglitz and Weiss show that higher interest rates lead to moral hazard, that is, they induce firms to undertake riskier projects with lower probability of success but higher payoffs when successful.

In a world with imperfect and costly information that leads to adverse selection and moral hazard problems, the expected rate of return to the bank will increase less rapidly than the interest rate and, beyond a point, may actually decrease, as shown in figure A. The interest rate at which the expected return to the bank is maximized, r^* , is the “bank-optimal” rate. The bank will not want to raise the interest rate above this rate, even though demand may still exceed the funds available for lending. This also suggests that the supply of loans will be backward-bending, at interest rates above r^* .

Figure A



Note: D = demand, S = supply; r = interest rate.

(continued)

Box 1.2 (continued)

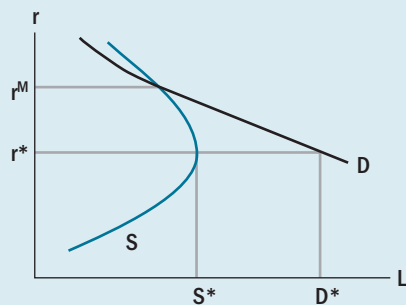
Clearly, it is conceivable that at r^* , the demand for funds (D^*) exceeds the supply of funds (S^*) as shown in figure B. In the absence of rationing, with excess demand for loans, unsatisfied borrowers would offer to pay a higher interest rate to the bank, bidding up the interest rate until demand equals supply at r^M . Although supply does not equal demand at rate r^* , it is the equilibrium interest rate. Since it is not profitable to raise the interest rate when the bank faces excess demand for credit, the bank will deny loans to borrowers who are observationally indistinguishable from those who receive loans. The rejected applicants would not receive a loan even if they offered to pay a higher rate. Hence they are denied access. Determining empirically whether an individual or firm has access to finance but chose not to use it or was rationed out is complex, and the effects of adverse selection and moral hazard are difficult to separate (see chapter 3).

What about other financial services, such as deposit or payment services, which do not suffer from information problems? Why do these areas of finance suffer from access problems? For those types of financial services, nonprice barriers become important. For example, some individuals will have no access to financial services because there are no

financial institutions in their area, as is the case in many remote rural areas. Or the small transactions the poor demand may involve high fixed transaction costs, which makes them too costly to be offered: it costs as much for the bank to accept a \$1 deposit as it does to accept a \$1,000 deposit. Poorly designed regulatory requirements may also exclude those who do not meet the documentation requirements of opening an account, such as not having a formal address or formal sector employment. Some would-be customers may be discriminated against for some reason. For all those individuals the supply curve is vertical at the origin, and the supply and demand for services do not intersect, again leading to an access problem (as shown by S^0 in figure C). Of course, credit markets can also suffer from these nonprice barriers in addition to the type of rationing discussed above.

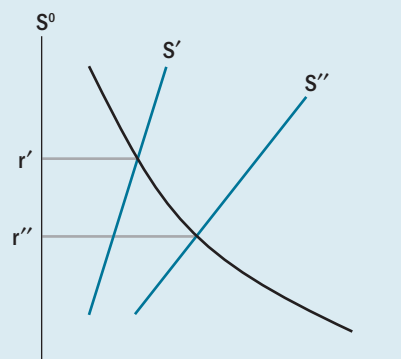
Price can also be a barrier. Even when nonprice barriers are overcome and the supply (S') and demand do intersect, the equilibrium price for these services (including the fees, minimum requirements, and so forth) may be very high, making them unaffordable for a large proportion of the population. This is an access problem of a different nature

Figure B



Note: D = demand, S = supply; r = interest rate.

Figure C



Note: D = demand, S = supply; r = interest rate.

Box 1.2 (continued)

since there is no rationing, but it still represents a policy problem because the high price often reflects lack of competition or underdeveloped physical or institutional infrastructures, leading to financial exclusion. These are matters that may call for public policy interventions to increase competition

among providers and build relevant institutional and physical infrastructures, hence shifting the supply curve to the right (S''), reducing prices, and making financial services affordable for a larger part of the population. These government policies are discussed in chapter 4.

a. For other explanations, see, for example, Keeton (1979) and Williamson (1987).

European Commission's Eurobarometer, which covers all member states of the European Union (European Commission 2005).⁹ Different surveys have different primary objectives: the questions in the South African survey reflect the original motivation for doing the survey, which was to assess the political and commercial climate for expanding access to finance, rather than to underpin research designed to build a comprehensive picture of economic and financial decision making. Findings based on surveys of individuals cannot easily be compared directly with those from surveys of households.¹⁰ Different survey methodologies and their impact on the quality of information gathered are the subjects of an ongoing research effort at the World Bank.

Thus, despite some interesting insights from individual household surveys that focus on financial services, lack of cross-country comparability between survey instruments still prevents documentation of cross-country differences and thus analyses of supply and demand constraints. Altogether, household or individual survey data providing substantial financial services information currently exist for fewer than 40 developing countries and are inconsistent across countries in representativeness, measurement, and definition of financial services and products.¹¹

Lack of consistent cross-country, micro data on use of financial services has led researchers to consider the information contained in more easily collected indicators such as the number of loan or deposit accounts in a country. Of course the total number of accounts is not the total number of users: people might have several accounts with one institution or accounts with several institutions. Further, a number of accounts might be dormant, a particularly common occurrence in many postal savings banks with

—and a lack of cross-country consistency

Box 1.3 Measuring access through household surveys

EXISTING HOUSEHOLD SURVEYS FOCUSING ON financial services in India, Brazil, Colombia, and Mexico give some insights into the information that can be obtained from such survey instruments beyond simple measures of use of financial services. Indeed, household surveys are necessary to obtain detailed information on who uses which financial services from which types of institutions, including informal ones. These surveys include questions on why people do not use financial services, which help researchers distinguish between

use and access issues and between demand and supply factors.

For example, in the United States, 87 percent of the adult population has a bank account, compared with 48 percent in rural Upper Pradesh and Andhra Pradesh, India; 43 percent in 11 urban areas in Brazil; 41 percent in Bogota, Colombia; and 25 percent in Mexico City (48 percent when compulsory savings for borrowers are included). A comparison of U.S. and Mexican households reveals interesting differences about why some do not have bank accounts:

Main reasons for not having a bank account

Reason	United States (%)	Mexico (%)
Do not need account/no savings	53	7
Want to keep records private	22	2
Not comfortable with banks/don't trust	18	16
Fees and minimum balance too high	45	70
Inconvenience-location and hours	10	2
Lack of documentation	10	3

Although these figures are not strictly comparable because multiple reasons were allowed in the U.S. survey but not in the Mexican one, voluntary exclusion reasons—such as no need or an unwillingness to use banks—appear to be much higher in the United States compared with Mexico City. Survey

responses also suggest that involuntary exclusion because of affordability is a more important deterrent in Mexico, with 70 percent of those without accounts citing high fees and minimum balances. These figures also indicate that supply factors in Mexico play a more important role in limiting access.

Sources: Caskey, Ruiz Duran, and Solo (2006); Kumar (2005); World Bank (2004).

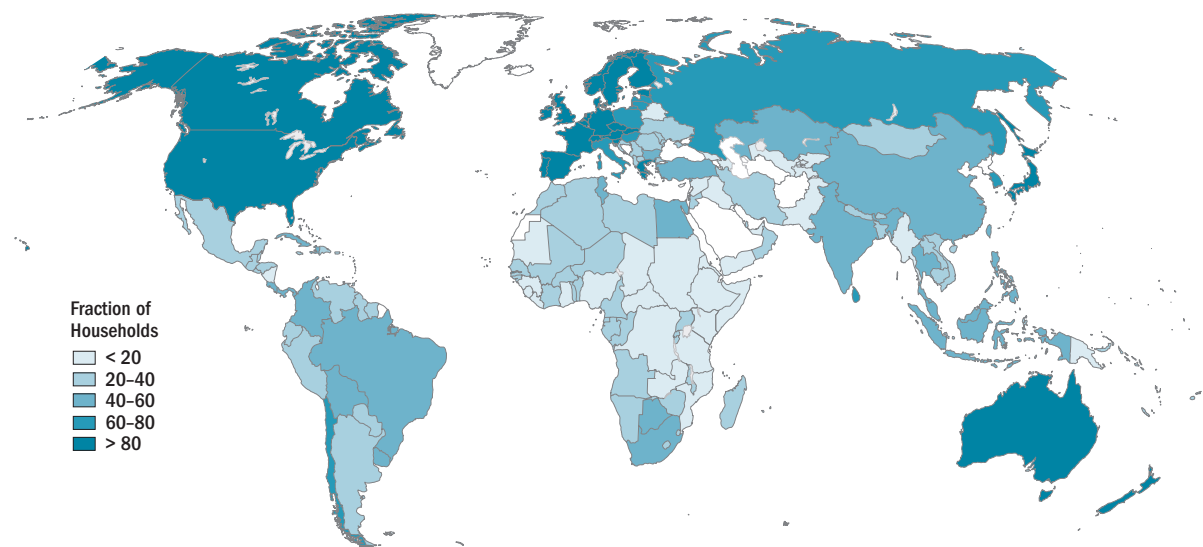
free pass-book savings accounts and inefficient documentation systems. Nevertheless, Beck, Demirgüç-Kunt, and Martinez Peria (2007b) and Honohan (2006) show that nonlinear combinations of such aggregate indicators of loan and deposit accounts are sufficiently highly correlated with the actual proportion of households using financial services in countries for which this information is available from household surveys.

Indeed, in the absence of micro data that are more accurate but costly to collect, combining these indicators allows estimates to be made of the share of the population with accounts at formal or semiformal financial intermediaries for most countries (box 1.4). Figure 1.1 maps the main cross-country variations in this synthetic “headline” indicator. More than 80 percent of households in most of Western Europe and North America have an account with a financial institution, while the share is below 20 percent in many countries in Sub-Saharan Africa. The Russian Federation and many other countries of the former Soviet Union show usage ratios between 60 and 80 percent, a legacy of the state-run savings bank from communist time. Latin America exhibits a high variation in usage, ranging from less than 20 percent in Nicaragua to more than 60 percent in Chile. Usage across Asian countries varies much less and is mostly in the 40 to 60 percent range.

These headline indicators show that access to finance or, more precisely, use of financial services is positively, but not very closely, correlated with economic development and financial depth. Take first the correlation with economic development. The proportion of households with an account in a financial institution is higher in more developed

Creating synthetic headline indicators from surveys and aggregate data

Figure 1.1 Fraction of households with an account in a financial institution



Sources: Beck, Demirgüç-Kunt, and Martinez Peria (2007b); Christen, Jayadeva, and Rosenberg (2004); Peachey and Roe (2006); and Honohan (2006). See also box 1.4.

Box 1.4 Households' use of financial services: estimating the headline indicator

AN EXACT STATISTIC ON THE NUMBER OF households that use formal financial services can be inferred only from household surveys. However, only around 34 countries have household surveys containing this information, and researchers have therefore turned to proxy indicators to estimate the share of the population using financial services (For estimates by country, see appendix table A.1).

Beck, Demirgüç-Kunt, and Martinez Peria (2007b) compile loan and deposit account data through surveys of bank regulators for a cross-section of countries and document the large variation in these indicators across countries (see appendix table A.2). In Austria there are three deposit accounts for every inhabitant; in Madagascar, there are only 14 for every 1,000 inhabitants. In Greece there is almost one loan account for every inhabitant; in Albania, there are just four for every 1,000 inhabitants. The ratio of deposit and loan accounts per capita increases with income, although the average deposit or loan account balance relative to income per capita decreases with income, indicating that poor people

and smaller enterprises are better able to make use of these services in more developed countries (figures A and B). Still there is great variation among developing countries. For example in Bolivia, the average loan amount is 28 times GDP per capita, while it is only a third of GDP per capita in Poland. In Madagascar, the average deposit account balance is nine times GDP per capita, while it is only 4 percent of GDP per capita in Iran.

These aggregate indicators are not only interesting measures in their own right, but when no household surveys are available, they also can be used to predict the proportion of households using bank accounts. Regressing the share of households with deposit accounts obtained from household surveys on their aggregate indicators of deposit accounts and branch penetration, Beck, Demirgüç-Kunt, and Martinez Peria (2007b) show that the predicted share of households with deposit accounts resulting from this regression provides a reasonably accurate estimate of the actual share of households with deposit accounts obtained from household surveys

Figure A. Number of loans and deposits per capita, by income quintile of countries

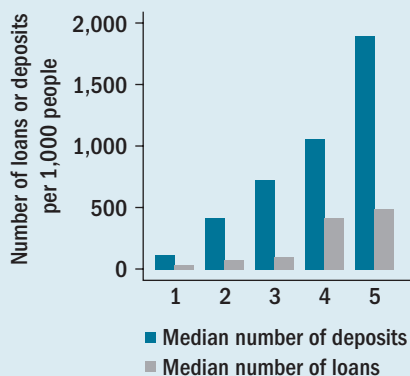
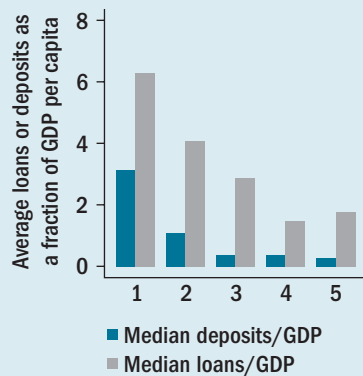


Figure B. Loan and deposit size/GDP per capita, by income quintile of countries



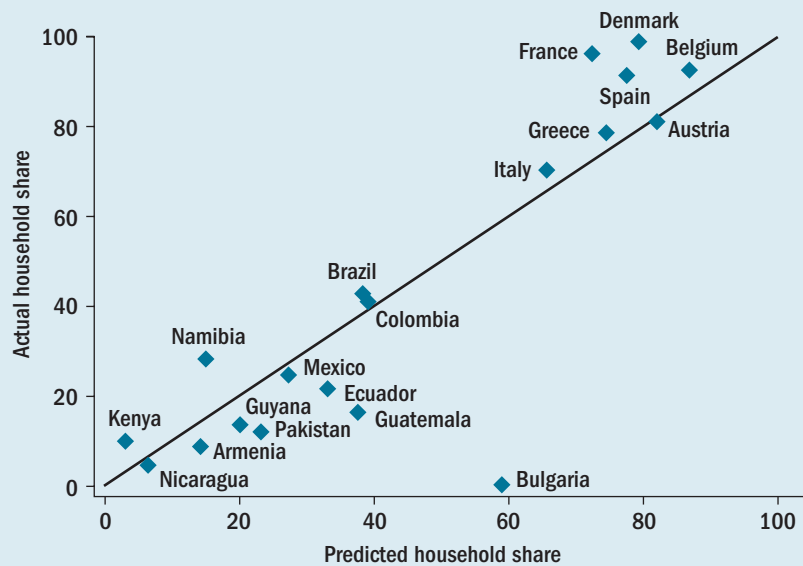
Box 1.4 (continued)

(figure C). Hence it is also possible to obtain from aggregate indicators out-of-sample estimates of the proportion of households using a bank account, although the fit is likely to be poorer.

In parallel efforts, Christen, Jayadeva, and Rosenberg (2004) collected information on individual institutions that are considered socially oriented or alternative financial institutions, that is, institutions that target low-income clients and are not profit maximizers, such as microfinance institutions, postal savings banks, credit unions, and state-owned agricultural and development banks, while Peachey and Roe (2006) collected information on the member institutions of the World Savings Bank Association. These different efforts give a first indication of financial services provided by different providers. Honohan (2006) combines data from all three sources

to estimate a headline indicator of access. Using data on number of accounts in financial institutions as a proportion of population and an average account size as a proportion of GDP per capita (or estimated values where they do not exist) as regressors, he estimates a nonlinear regression relationship between these variables and the actual share of households with a financial account obtained from survey data. Where there is no survey data, a “predicted” share of households is obtained using the regressors and regression coefficients. Hence, the headline indicator pieces together the values of households using financial accounts from surveys when available, and this predicted value when survey data are not available. This indicator can then be used to map the share of the adult population with use of financial accounts for most of the world, as illustrated by the map in figure 1.1.

Figure C. Actual vs. fitted values of share of households with deposit accounts

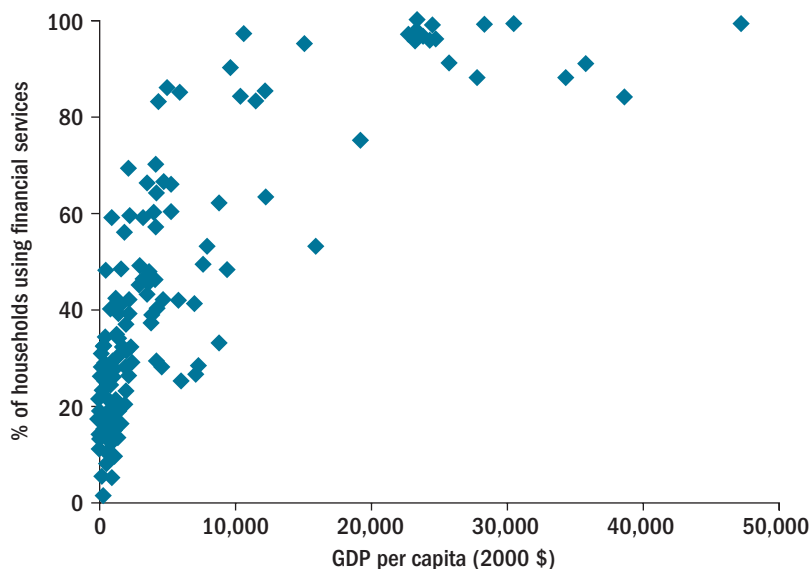


countries, approaching 100 percent for some of the richest (figure 1.2). Use of financial services increases steeply as per capita GDP approaches \$10,000, and converges to near universal use at income levels above \$20,000. However, countries show significant differences at similar levels of economic development. On the one hand, countries in Western Europe have typically higher rates of usage than does the United Kingdom or the United States, despite similar levels of GDP per capita. On the other hand, a higher proportion of households holds accounts in financial institutions in low-income countries in South Asia than in low-income countries in Sub-Saharan Africa.

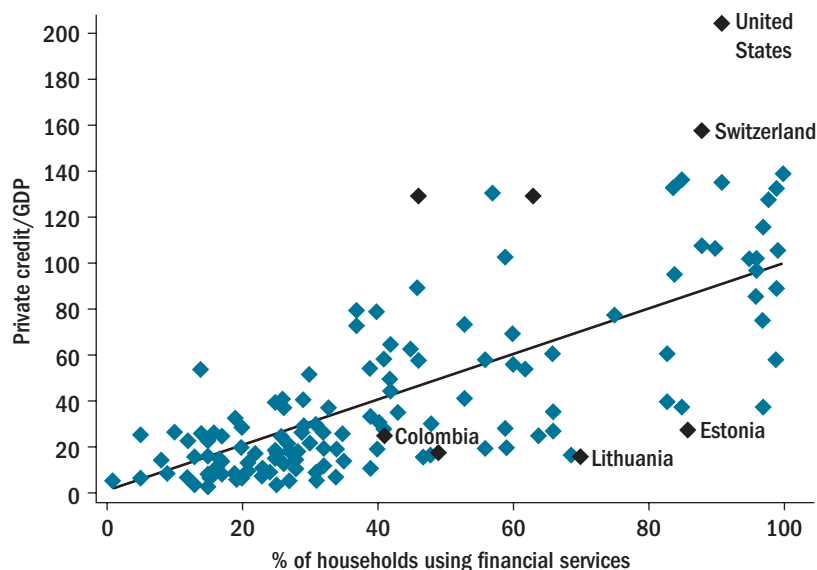
The correlation between financial access and economic development is weak, albeit positive

Similarly, indicators of financial use show a positive but imperfect correlation with indicators of financial depth, such as credit to the private sector divided by GDP (figure 1.3). This correlation shows that access really is a distinct dimension: financial systems can become deep without delivering access to all. Take Colombia and Lithuania as examples. Both countries have similar levels of private credit to GDP at around 20 percent, but 70 percent of households in Lithuania have accounts, compared with 40 percent in Colombia. Similarly, over 85 percent of

Figure 1.2 Economic development and use of financial services



Sources: Beck, Demirgüç-Kunt, and Martínez Peria (2007b); Christen, Jayadeva, and Rosenberg (2004); Peachey and Roe (2006); Honohan (2006); World Bank (2002, *World Development Indicators*).

Figure 1.3 Financial depth vs. use

Sources: Beck, Demirgüç-Kunt, and Martínez Peria (2007b); Christen, Jayadeva, and Rosenberg (2004); Peachey and Roe (2006); Honohan (2006); and updated version of Beck, Demirgüç-Kunt, and Levine (2000).

households have accounts in Estonia and Switzerland, but while Estonia's financial depth is around 20 percent, Switzerland's is over 160 percent. The positive but imperfect correlations of financial services usage with economic development and financial depth raise questions regarding the drivers of cross-country differences in financial use and access. The correlations also suggest that there might be room for policy reforms to increase the level of financial inclusion—an issue that is addressed throughout this report.

It is important to understand not only the actual use of financial services, but also access across its different dimensions. Collecting indicators of and barriers to access and comparing them to usage and other country characteristics will enable researchers and policy makers to better understand the reasons for low access and to design policies to close the gaps (box 1.5). It is also important to assess the quality of access as well as quantity. For example, services may be available but may not be customized to different needs, or points of delivery may be too few, or delivery may take a very long time. The following discusses several dimensions of access and the indicators that have been collected to proxy for them.

Identifying barriers to access

Box 1.5 Creating indicators of access barriers to deposit, payments, and loan services

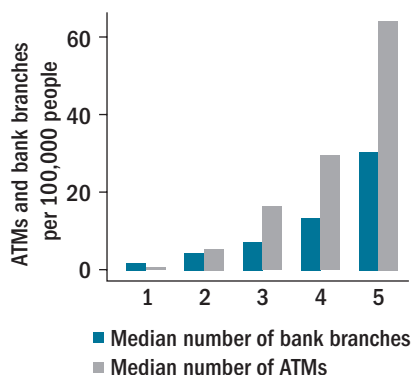
FINANCIAL SERVICES ARE PROVIDED IN THE informal and the formal sector by banks, postal savings banks, credit unions, finance companies, microfinance institutions, and a whole range of other formal and quasi-formal nonbank institutions. Given the dearth of data on access, however, the initial data collection effort has focused on commercial banks, which are the dominant institutions in the formal financial sector. (Furthermore, policy implications regarding improving access are also more relevant for the formal financial sector given that the ability of informal finance to scale up and meet the financing needs of a growing economy is not clear; see box 3.5 in chapter 3). Conducting a survey of up to five large banks in each of more than 80 countries, Beck, Demirgüç-Kunt, and Martinez Peria (2007a) developed indicators of access for three types of banking services—deposits, loans, and payments—across three dimensions—physical access, affordability, and eligibility (for breakdowns by country, see appendix tables A.4–A.7).

Barriers such as availability of locations, minimum account and loan balances, account fees, fees associated with payments, documentation requirements, and processing times are found to vary significantly both across banks and across countries. Indicators of access barriers are also found to be negatively correlated with actual use of financial services, confirming that these barriers can exclude individuals from using bank services. The correlations of these indicators with country characteristics also have important policy implications for broadening access.

This is a first effort in documenting access barriers around the world. Next steps include broadening the study's coverage of both countries and banks and documenting the barriers imposed by nonbank financial intermediaries. Finally, urban-rural differences, as well as the role of customer characteristics, such as differences in gender and age, are important areas where further work will focus. The World Bank Group plans to expand and update these indicators within the context of its *Getting Finance* indicators.

Physical access barriers can be overcome by technology

Consider first geographic access. Branches have been the traditional bank outlet. Hence geographic distance to the nearest branch, or the density of branches relative to the population, can provide a first crude indication of geographic access or lack of physical barriers to access (Beck, Demirgüç-Kunt, and Martinez Peria 2007b). As in the case of usage, geographic access varies greatly across countries. Low-income Ethiopia has fewer than one branch per 100,000 people, while Spain has nearly one for every 1,000 people. Similarly, Spain has 79 branches for every 1,000 square kilometers, while sparsely populated Botswana has one branch for every 10,000 square kilometers. ATM penetration, rather than branch penetration, shows an even wider dispersion in geographic access (figure 1.4). These indicators are only crude proxies for geographic access, however, since branches and ATMs are never distributed equally across a country but are clustered in cities and some large towns. A better measure would be the average distance from the

Figure 1.4 Branch and ATM penetration by income quintile of countries

Source: Beck, Demirgüç-Kunt, and Martínez Peria (2007b).

household to the branch or ATM, but these data are available for very few countries. Nevertheless, the branch and ATM density figures are highly correlated with aggregate loan and deposit accounts per population and the synthetic headline indicator introduced above, suggesting that they do contain access-relevant information (for branch and ATM penetration by country, see appendix table A.3).

A focus on branches and ATMs ignores other delivery channels that have gained importance over the past decades. Among these are non-branch outlets, such as correspondent banking agreements, where bank services are sold by nonfinancial corporations on behalf of the banks, and mobile branches, where trucks drive through remote areas providing financial services at a scheduled frequency. Phone finance allows clients to do financial transactions such as payments or even loan applications over the phone. Electronic finance (e-finance) allows clients to access services through the Internet. While correspondent bank agreements and mobile branches have helped extend geographic outreach of financial institutions in many countries, phone and e-finance have been introduced primarily to reduce transaction costs for already existing customers and to make service delivery more effective for financial institutions. Any of these delivery channels, however, can reduce the costs of access and thus potentially increase the use of financial services.

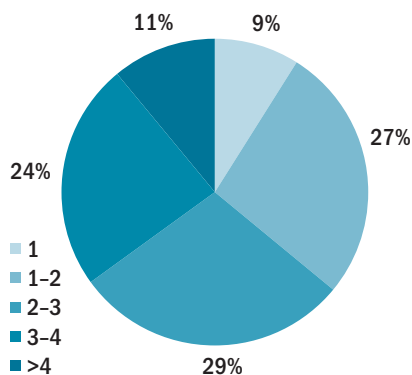
While no cross-country data are available on the importance of these different alternative delivery channels, a recent bank-level survey, discussed in box 1.5, sheds some light on their use. Asking banks whether they accept loan applications in nonbranch bank outlets, over the phone,

or over the Internet, Beck, Demirgüç-Kunt, and Martinez Peria (2007a) find a large variation across countries. According to this survey, bank customers in Australia, Chile, Denmark, Greece, South Africa, and Spain can submit their loan applications in nonbranch outlets, over the phone, or over the Internet. At the other extreme, loan applicants in Armenia, Ethiopia, Nepal, Sierra Leone, Thailand, Uganda, and Zambia have to travel to bank headquarters or a branch to submit their loan application. While this measure is of course not the only or even the most important determinant of access, it is notable that Chile, for example, has 418 loan accounts per 1,000 people, while Thailand has only 248.

Lack of documentation can create eligibility barriers

Limited geographic or physical access to a bank is only one type of barrier that potential customers face. By limiting eligibility, documentation requirements can be another important barrier to access. For example, banks in Albania, the Czech Republic, Mozambique, Spain, and Sweden demand on average only one document to open a bank account, whereas banks in Bangladesh, Cameroon, Chile, Nepal, Sierra Leone, Trinidad and Tobago, Uganda, and Zambia require at least four documents, including an identity card or passport, recommendation letter, wage slip, and proof of domicile (figure 1.5). Given the high degree of informality in many developing countries, only a small proportion of the population can produce these documents. Sixty percent of the population in Cameroon works in the informal sector and is thus unable to produce a wage slip. People in rural areas in Sub-Saharan Africa—61 percent of the overall population—are often unable to provide a formal proof of domicile. Limiting banking services to customers within the formal

Figure 1.5 Number of documents required to open a checking account



Source: Beck, Demirgüç-Kunt, and Martinez Peria (2007a).

economy or formal society thus automatically excludes a large share, if not the majority, of people in many low-income countries. Improvements on this dimension would not require great sophistication or cost.

Perhaps even more important than barriers of physical access and documentation are barriers of affordability. Standard bank account charges seem absurdly high when related to average national per capita GDP. To open a checking (transactions) account in Cameroon, a person needs more than \$700, an amount higher than the per capita GDP of the country. On average, in 10 percent of the countries sampled, an amount equal to at least 50 percent of per capita GDP is necessary to open a checking account.

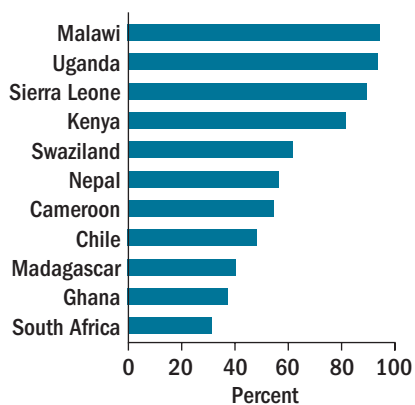
Likewise, the cost to the customer of maintaining these accounts varies widely as a percentage of average per capita GDP. In Uganda the figure is 30 percent, whereas customers in Bangladesh pay no annual fees. Perhaps not surprisingly, there are 229 deposit accounts for every 1,000 people in Bangladesh, but only 47 for every 1,000 people in Uganda. Obviously, much of the cross-country variation here reflects the fact that bank charges do not vary as much across countries as income does, imposing a much greater burden on individuals in poor countries and making access more difficult. High minimum balances to open and maintain bank accounts and high annual fees can constitute high barriers for large parts of the population in the developing world. Checking accounts also often come as expensive packages with costly overdraft facilities that can easily be incurred accidentally by those with low and volatile incomes, resulting in great risks.

Assuming, somewhat arbitrarily, that poor people cannot afford to spend more than 2 percent of their annual income on financial services, just the fees on checking accounts can exclude more than 50 percent of the population in some African countries such as Kenya, Malawi, and Uganda from having a bank account (figure 1.6).¹²

Payments services—for paying bills and sending domestic or international money transfers—are an important service for many low-income households, but again these services are too costly in many countries. For example, the cost of transferring \$250 internationally—a typical amount of remittance—is 5–10 percent of this amount for half of the sampled countries and varies from 30 cents in Belgium to \$50 in the Dominican Republic (figure 1.7). The fees associated with ATM transactions (for a relatively small transaction of \$100) are also above 40 cents in Pakistan and Nigeria, and average 10 cents across countries, while the use of ATMs is free in 50 percent of the sample countries.

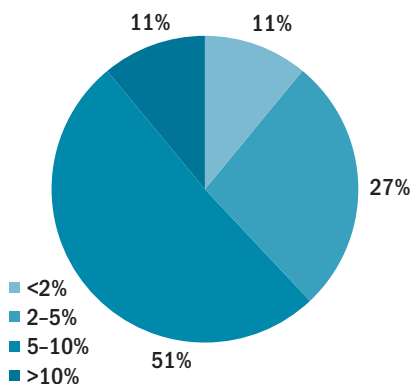
Affordability barriers: fees and minimum balances

Figure 1.6 Share of the population unable to afford checking account fees



Source: Beck, Demirgüç-Kunt, and Martinez Peria (2007a).

Figure 1.7 Cost of transferring funds abroad as a percentage of \$250



Source: Beck, Demirgüç-Kunt, and Martinez Peria (2007a).

A lack of appropriate products and services

Lack of appropriate products and services for low-income households and microenterprises is another important barrier to access financial services. Availability and affordability of consumer and mortgage loans vary quite a bit around the world. Banks in Nepal reported that the minimum amount a consumer can borrow is 12 times per capita GDP, whereas in richer countries it is possible to borrow amounts smaller than 10 percent of per capita GDP. Mortgage loans, where they exist, can also be subject to high fees and high minimums. Furthermore, it can take more than 10 days to process a credit card application in the Philippines, more than 20

days to process a consumer loan application in Pakistan, and more than two months to process a mortgage loan application in Chile.

Surveys of firms over the past 10 years have greatly expanded the information available about financing patterns of and access constraints on small firms and even microenterprises across countries. These sources include the Regional Program on Enterprise Development (RPED) studies for Sub-Saharan Africa in the 1990s; Business Environment and Enterprise Performance Surveys (BEEPS) for the transition economies; the World Business Environment Survey (WBES), conducted across 80 countries in 1999–2000; and the Investment Climate Surveys (ICS), conducted since 2002 and available for almost 100 countries. These surveys include micro-, small, and medium enterprises that are not captured in data sets based on published financial statements. In addition to specific firm information, these surveys contain an array of questions on the business environment in which the firm operates, information that allows in-depth analysis of the relationships between firm investment, productivity, growth, and financial and institutional obstacles. Doubts have been raised about how well these surveys actually represent the population of firms for a specific country, a concern that could be fully allayed only by using census data, which are unavailable for most developing countries. Even census data that are available mostly cover only formal sector firms, representing, in many developing countries, a small fraction of the total number of firms, formal and informal.¹³

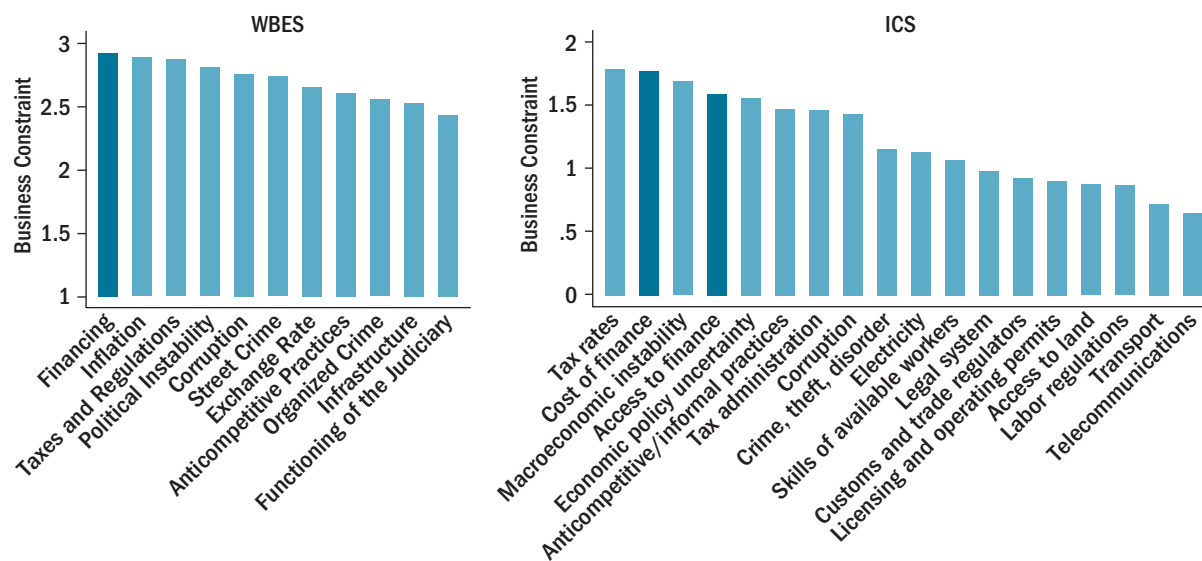
These surveys ask firm managers to what extent access to and cost of external finance constitute obstacles to their operation and growth, with higher numbers indicating higher obstacles. In general, small firms in both the WBES and ICS report financing constraints to be among the most important business constraints they face (figure 1.8). The geographic variation is large. Firms in East Asian and European countries rate financing as a minor constraint on average, while in the Middle East and Sub-Saharan Africa, financing constraints are much more severe. Variation is also wide within regions, particularly in Latin America, the Middle East, and South Asia. For example, the average Chilean firm reports that neither access to finance nor its cost are important constraints to growth, whereas the average Brazilian firm reports both as important growth constraints.

These surveys show that more than 40 percent of large firms, but just over 20 percent of small firms, use external finance for new investment (figure 1.9). While large firms finance about 30 percent of their new investment by external finance, small firms only finance 15 percent externally.

Looking at firms' use of and access to finance—

—managers' perceptions of financial exclusion vary widely

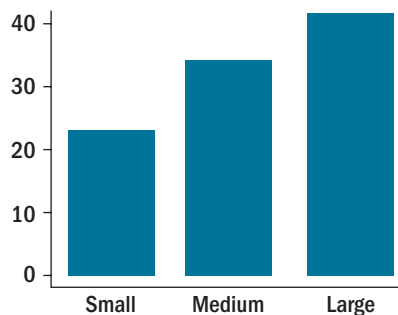
Figure 1.8 Financing and other constraints faced by small firms



Source: WBES and ICS.

Note: WBES covers small firms in 80 countries; ICS covers those in 71 countries. The figures show the mean response of firms rating obstacles on a scale from 1–4 in WBES (1 = no obstacle; 4 = major obstacle) and 0–4 in ICS. In WBES, a firm is defined to be small if it has 5–50 employees; in ICS, small firms are those with 1–20 employees.

Figure 1.9 Percentage of firms using external finance, by firm size



Source: ICS.

Note: ICS covers 71 developing countries. Small firms are those with 20 or fewer employees; medium firms are those with 20–99 employees; and large firms are those with 100 or more employees.

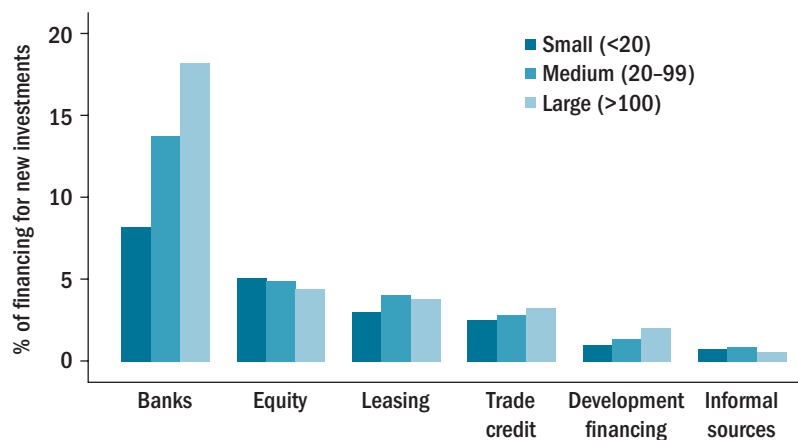
Looking across regions, use of external finance by firms varies considerably. For example, some firms in East Asia finance almost 60 percent of their new investments with external finance. Within regions, there are big differences here too—while the average firm in the Philippines finances less than 8 percent of its new investment externally, this figure is 77 percent for the average Thai firm. Out of all financing sources, bank finance is the most common, for firms of all sizes (figure 1.10).

Banks are the most common source of finance

Firm-level surveys suggest that the share of small firms with bank credit varies from less than 1 percent in Pakistan to almost 50 percent in Thailand. Analyzing WBES data on financing patterns, Beck, Demirgüç-Kunt, and Maksimovic (2008) find that small firms and firms in countries with poor institutions use less external finance, especially bank finance. Small firms do not use disproportionately more leasing or trade finance compared with larger firms, so these financing sources do not compensate for lower access to bank financing by small firms. Consistent with these findings, financial sector assessments conducted by the World Bank also often point to the limited availability of leasing and factoring, two important financing products for small and medium enterprises.

If firms do not use bank finance, why don't they? Of the ones that have applied and have been rejected, what are the reasons? Box 1.6 provides some highlights from three of the largest countries for which

Figure 1.10 Sources of external finance for new investments



Source: ICS, covering 71 countries.

Note: Values in parentheses represent number of employees.

Box 1.6 Small firms' access to finance vs. use: firm-level surveys

ALTHOUGH BANK FINANCE IS THE MOST COMMON type of external finance, a large proportion of small firms do not have a bank loan. For example, enterprise surveys of small firms suggest that only 20 percent in China, 30 percent in Russia, and 55 percent in India have a bank loan.

Of those who do not have a loan, 85 percent in China, 95 percent in Russia, and 96 percent in India have not applied for one. So the rejection rates are 15, 5, and 4 percent, respectively.

Do these numbers reflect barriers to access or lack of need? Some of the firm surveys include questions that help shed light on this issue.

The survey results suggest that a large proportion of small firms that do not use bank loans actually do not need external finance or have been refused a loan for basic business reasons. However, in poor contractual and informational environments, the need to rely on collateral, rather than an assessment of the quality or feasibility of the project and credit history of the firm, is an important barrier for many firms. High interest rates may reflect lack of competition and infrastructure problems, in addition to other macroeconomic issues. Bank corruption is also a potential barrier deterring firms from applying for bank loans.

Why did the firm not apply for a loan?^a

	China (%)	India (%)	Russia (%)
Does not need a loan	69	80	60
Does not think it would be approved	22	N/A	2
Application procedures are too burdensome	27	16	23
Collateral requirements are too strict	26	18	25
Interest rates are too high	17	17	35
It is necessary to make informal payments	11	N/A	6
Other	N/A	7	3

What was main reason the loan application was rejected?*

	China (%)	India (%)	Russia (%)
Perceived lack of profitability	18	32	11
Lack of acceptable collateral	69	N/A	56
Inadequate credit history of the firm	24	N/A	11
Incomplete application	N/A	16	11
Other	N/A	37	N/A

Source: ICS.

a. Multiple answers are allowed, and hence the percentages do not sum to 100.

surveys have offered answers to these questions. Surveys of small firms suggest that while some firms are excluded from bank finance because of high interest rates, collateral requirements, corruption in banking, cumbersome paperwork, and the like, a large proportion simply have no demand for or good projects to finance.

Smaller firms tend to face greater access barriers than do larger firms. For example, the responses to the surveys discussed in box 1.5 suggest that in Georgia, Nepal, and Uganda, the minimum SME loan amount is 20 times GDP per capita, casting doubt on whether banks in those countries can meet the borrowing needs of smaller firms. Similarly, fees on SME loans and the time it takes to process an SME loan application may represent barriers. For example, while it takes more than a month to process an application in Bangladesh, Pakistan, the Philippines, and Uruguay, the wait is less than two days in Denmark (figure 1.11). These issues are explored in much greater detail in chapter 2.

Two aggregate indicators can be created by summarizing different barriers that impede firms' and households' access to financial services. These indicators, one for access barriers for deposit services and the other for loan services, suggest an overall impression of the country characteristics that are associated with high barriers.¹⁴

Based on simple correlations, access barriers decline as per capita GDP rises (figure 1.12). The quality of physical infrastructure is also negatively associated with access barriers. Such relationships are not necessarily causal ones; both barriers and the country characteristics shown have common underlying structural causes. Nevertheless it is striking that indicators of competition, openness, and market orientation in the overall financial sector and economic policy are also strongly negatively correlated with access barriers at the bank level. Examples include the Heritage Foundation index of banking freedoms¹⁵ and an index of media freedom developed by Djankov and others (2003). (Each of these has also been found to be correlated with financial depth and economic growth.)

As far as contractual and informational infrastructures are concerned, better credit registries are associated with lower access barriers, but there is no evident correlation with creditor rights, suggesting that a deficient information infrastructure may be a greater barrier to access than a deficient contractual framework. Countries that encourage market discipline by empowering market participants (through enforcement of accurate and timely information disclosure and by not distorting risk-taking incentives) also tend to have lower barriers to accessing loan services. Government ownership of banks is associated with *lower* barriers on the deposit side (as is foreign ownership of banks) but with *higher* barriers on the loan side.

Not too much should be read into these simple partial correlations. They do, however, foreshadow the characteristics that emerge again and

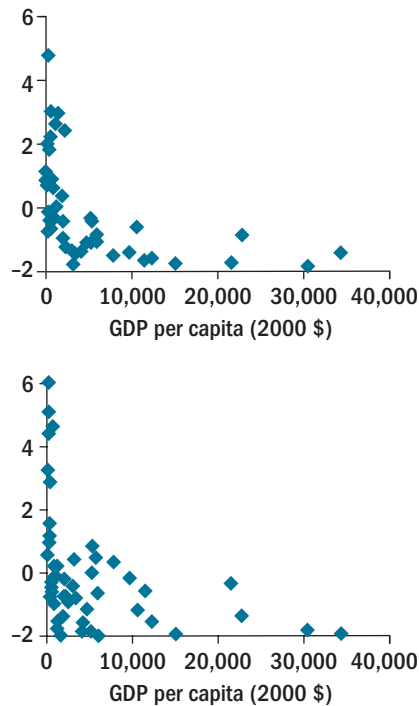
Smaller firms tend to face greater financial exclusion

What determines access barriers for households and enterprises?

Figure 1.11 Time to process an SME loan application



Source: Beck, Demirgüç-Kunt, and Martínez Peria (2007a).

Figure 1.12 Economic development and barriers to access

Source: Beck, Demirgüç-Kunt, and Martínez Peria (2007a).

Note: The two panels show the first principal component of the indicators of barriers to (a) loan and (b) deposit services, respectively, as discussed in box 1.5.

again in the discussions in later chapters that take a more in-depth look at access and policies to broaden it.

Conclusions

Data from financial institutions and their regulators can contribute greatly to a better understanding of the many barriers to access and usage. Ultimately, however, researchers are interested not only in measuring access to financial services and the barriers that prevent access but also in understanding the welfare impact of removing these barriers and broadening access. For this, household and firm-level surveys are necessary to distinguish between supply constraints and demand-side constraints and to determine how the removal of these different barriers would affect household welfare.

Access, and its welfare implications, can best be measured through surveys—

—and randomized field experiments have potential in evaluating impact of access

In evaluating the impact of broadening access, randomized field experiments hold promise. These experiments, which use surveys of microenterprises and households, introduce a random component to the assignment of financial products, such as subsidized fees for opening accounts or random variation in the terms of loan contracts. Continuing research in this area will shed more light on how reduced barriers and improved access affect growth and household welfare. These findings, in turn, will inform the design of policy interventions to build more inclusive financial systems, and the efforts to narrow the access indicators to track over time. We discuss these issues in more detail in the remainder of the report.

Notes

1. Conceptually, when discussing the impact of finance on growth, it is important to distinguish between two different effects (Mankiw, Romer, and Weil 1992) the impact of finance on raising income levels of developing countries and on helping countries converge in income toward advanced economies; and the impact on steady state growth rate. The second effect could result from the role of financial development in promoting innovation and accelerating the outward movement of the frontier. Empirically, there is very little evidence to distinguish between these two effects. However, see Aghion, Howitt, and Mayer-Foulkes (2005), discussed below.

2. A return to rising inequality in several advanced economies in the past couple of decades shows further shortcomings of the Kuznet's model.

3. Key contributors to this literature are Alesina and Rodrik (1994); Perotti (1992, 1993, 1996); Persson and Tabellini (1994); for a contrary view, see Forbes (2000). World Bank (2006a) and Birdsall (2007) also discuss the implications of this literature and provide further references. An interesting case study is that of the Republic of Korea and the Philippines, which looked quite similar with regard to their development in the early 1960s, except in the degree of income inequality. Over the following 30-year period, income per capita in the Philippines (the more unequal country) barely doubled, whereas fast growth in Korea resulted in a fivefold increase.

4. There are other possible channels through which higher inequality could slow growth: for example, if inequality results in less-accountable governments or if it undermines civic and social life (compare Birdsall 2007).

5. Also see the discussion in Demirgüç-Kunt and Levine (2007) and many references therein.

6. See for example, Aghion and Bolton (1997); Aghion, Caroli, and Garcia-Penalosa (1999).

7. See Beck, Demirgüç-Kunt, and Levine (2007); Honohan (2004).
8. Of course, some netting of interinstitutional accounts is still needed.
9. For a general review of issues around data collection in this area, see Honohan (2005b).
10. The focus on individuals rather than households raises issues of comparability with other surveys: use of financial services can differ considerably between different household members, and it would be a mistake to assume that one household member's use is representative of the access of the other members. Surveys that randomly question individuals in a household are a less-promising basis for welfare analysis, which requires good-quality data at the household level.
11. In the context of the Year of Microcredit 2005, a coordinated effort was also started by World Bank, UN Capital Development Fund (UNCDF) and the U.K. Department for International Development to implement a consistent, stand-alone household survey instrument across developing countries to measure access to and use of financial services. Currently, the Research Department of the World Bank and UNCDF are planning to move forward with this effort, which should allow consistent cross-country comparison of finance-related questions and derivation of the share of households that use different financial services from different providers.
12. Genesis (2005a) examines the costs of using bank accounts in seven countries: Brazil, India, Kenya, Malaysia, Mexico, Nigeria, and South Africa. According to Genesis (2005b), the 2 percent limit is based on unpublished research by the South African Universal Services Agency in the context of a mandated rolling-out of telecommunications service to lower-income families. As both financial transaction accounts and telecom service can be considered network products, similar assumptions on affordability for both services seem reasonable.
13. Surveys are now being designed to reach informal firms also; see <http://www.enterprisesurveys.org>.
14. The aggregate indicators are the principal component indicator of the underlying indicators for deposit and loan services, respectively. Beck, Demirgüç-Kunt, and Martinez Peria (2007a) use a data set of 209 banks in 62 countries and regress these aggregate indicators of barriers on bank-level controls and one country-level variable at a time, such as the quality of physical and information infrastructures, protection of creditor rights, bank and media freedoms, and government ownership of banks.
15. This index takes into account government involvement and ownership, existence of directed lending and controls, quality of regulation and supervision, and the ability of foreign institutions to operate freely.

