Statistical challenges related to financial inclusion

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Financial inclusion has become a key element of the international initiatives to promote sustainable development. It can be instrumental to support economic welfare and reduce poverty. In turn, economic and financial stability can support financial inclusion through the provision of adequate financial services to the population. But good policy relies on good data. Statistics can play an essential role to assess, implement, monitor and adjust public initiatives promoting financial inclusion. This is particularly important because of the need to strike the right balance between financial innovation and financial stability. The promotion of best practices can also strengthen financial inclusion measurement frameworks and data.

Keywords: financial services, financial stability, data measurement, public policy.

1. Introduction - Importance of financial inclusion for sustainable development

Financial inclusion can be broadly defined as access by economic agents to formal financial services, eg the ability to make/receive payments, save/borrow and get insured. It is estimated that half of the world's adult population has no account at a formal financial institution, and three quarters of poor people are unbanked. The situation can vary across income groups, regions and countries (cf Chart 1).

But financial inclusion is a multiform concept. The CGAP[2] states that "*Financial inclusion efforts seek to ensure that all households and businesses, regardless of income level, have access to and can effectively use the appropriate financial services they need to improve their lives*". One will also focus on the quality of these services, which should be affordable, convenient, and provided with respect and dignity; others, including central banks, emphasise that financial services should be delivered in a competitive yet stable and properly regulated environment.[3]

As analysed in a recent IFC Workshop,[4] financial inclusion has become a key policy area to promote sustained economic development. It can be instrumental in reducing poverty and inequality and enhancing well-being, human capital and long-term growth – for instance it makes it easier for households to finance education and face unexpected events (eg health problems). It can also support economic, monetary and financial stability, by making saving and investment decisions more efficient, improving the effectiveness of modern policy instruments, enlarging the base of financial market participants, and facilitating the functioning of the economy (Mehrotra and Yetman (2015)). In turn, economic stability helps to develop and strengthen a smoothly functioning financial system that can support financial inclusion. Yet financial inclusion should be complemented by financial literacy and consumer protection, the needed "trinity" to ensure that agents fully understand the risks they take (Chakrabarty (2012)). More generally, a good balance must be found between encouraging innovation and the growth of financial services and the preservation of financial stability – noting in particular that financial excesses can be severely detrimental to long-term price stability and economic growth.

There is a need for adequate statistics to address these multi-faceted aspects, and public authorities are well aware of that. On the occasion of the AFI Global Policy Forum held in Kuala Lumpur in September 2013, they adopted the "Sasana Accord" which aims to ensure, among other things, that

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[2] Consultative Group to Assist the Poor (a global partnership housed at the World Bank); see *What is Financial Inclusion and Why is it Important?* on http://www.cgap.org/about/faq.

[3] See for instance on http://www.centerforfinancialinclusion.org/about the glossary provided by the Center for Financial Inclusion think tank.

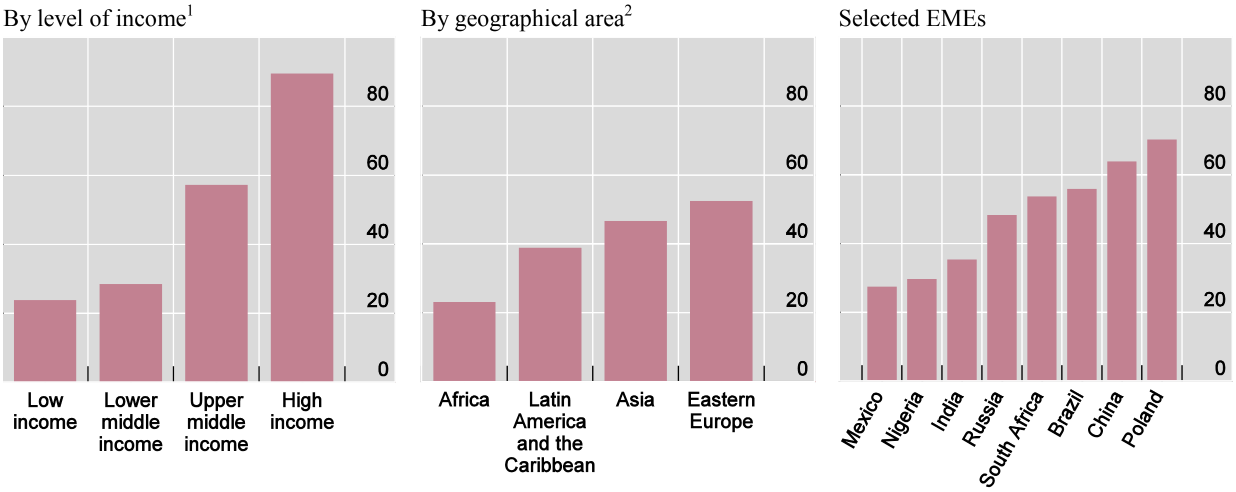
[4] This paper is based on the proceedings of the workshop on Financial Inclusion Indicators held by the Irving Fisher Committee on Central Bank Statistics – cf IFC (2015), esp. Gadanecz and Tissot (2015).

financial inclusion policy making and strategies can be assessed using data-based analysis.[5] To this end, the members agreed to set targets as well as measure progress based on common indicators.

Financial inclusion indicators, 2011

Share of adults who had an account at a formal financial institution, in per cent

Chart1



[1] World Bank definitions. [2] Average of all countries in region weighted by population in 2011; based on population estimates and definitions of geographical areas from the United Nations.

Sources: United Nations; World Bank, *Global Financial Inclusion Database*; BIS calculations; see Mehrotra A and J Yetman (2015).

2. Existing financial inclusion data collection frameworks

Financial inclusion can be measured along several main dimensions (Gadanecz and Tissot (2015)). One refers to accessibility and corresponds to the range of financial services that are available to, or that can be mobilised by, customers. A second dimension measures usage, ie the extent to and ways in which customers actually make use of the services they can access. A third dimension refers to the quality of the services, ie how well they fit with the needs of customers. Yet another, fourth dimension is how the degree of financial inclusion can actually influence the decisions of economic agents.

Whatever the dimension of interest, data on financial inclusion are often classified into supply- and demand-side data. Supply-side indicators serve to gauge the provision of financial services that people can use. These statistics usually follow a “top-down” approach and come from the providers of financial services. For instance, banks will indicate the number of personal accounts opened in one particular area. Demand-side data, on the other hand, tend to be derived from a “bottom-up” approach, aimed at assessing the needs of individuals. These data are mostly collected through surveys and can be instrumental for measuring the qualitative aspects of financial inclusion, such as financial literacy.

A further complication is that any financial data framework has both a micro and a macro perspective. The micro perspective arises from the need to take into consideration information that is granular enough (eg by type of transaction, customer or product). The macro perspective reflects, in particular, the fact that financial inclusion has multiple economic and policy implications. The definition of the concept of financial inclusion is thus quite broad and requires various indicators.

Nevertheless, a lot of data on financial inclusion already exist, reflecting the various international initiatives in this area (see IFC (2015) for a recent review). A centrepiece relates to the work of the Global Partnership for Financial Inclusion (GPFI) supported by the G20. Other international data sets comprise the Global Financial Inclusion (Global Findex) Database, funded by the Bill & Melinda Gates Foundation in partnership with Gallup (Demirgüç-Kunt and Klapper, 2012); the IMF Financial Access Survey, a global supply-side data set on financial inclusion that encompasses internationally

[5] Sasana Accord: http://www.bnm.gov.my/documents/2013/Sasana_Accord_AFI2013.pdf.

comparable indicators of financial access and usage by households and non-financial corporations; Enterprise Surveys, which provide global and comprehensive data collected by the World Bank on the use of financial services by enterprises; various monitoring efforts by international financial institutions, such as the World Bank and the IMF, and to some extent the OECD and the BIS through its Committees. A large number of countries also conduct national surveys that can serve as a gauge for measuring financial inclusion, esp. in the area of credit to households, SMEs and agriculture. The compilation of micro-databases can be instrumental for monitoring the financing needs of the economy at a sufficiently granular level, and thereby to assess financial inclusion effectively.

These datasets suggest that the main barriers to financial inclusion are affordability (high costs), physical distance and limited eligibility (eg little providers' interest to serve low-income groups).

3. Enhancing the collection, compilation, presentation and publication of financial inclusion data

There are a number of methodological challenges with respect to the collection of data in the area of financial inclusion. As regards supply-side data, they may be susceptible to double-counting, notably because providers of financial services tend to identify accounts rather than individuals, and because there is a lack of financial identity in many countries. Furthermore, it is difficult to segment these data to establish which parts of the population are well served, because they provide information on the demand for financial services that is actually observed and not on the potential demand that could be fulfilled. Lastly, financial suppliers and the products and services they offer are diverse: that makes it difficult to aggregate the data to form a comprehensive view.

Turning to demand-side "survey-type" data, there are also significant challenges. First, the sampling frame must be appropriate and, for instance, consistent with the structure of the population. The nature of the sample has to be sufficiently granular to allow for the compilation of different levels of aggregation that is key to a meaningful understanding, analysis and promotion of financial inclusion at a country level. The survey sample should ideally focus on both households and small businesses.

An important methodological issue pertains to cross-country comparisons. Financial inclusion data collected over the world rely on heterogeneous concepts (eg how is an under-banked individual defined; what is a bank account?), variables (eg access to a bank account versus its effective use), collection practices (eg bottom-up versus top-down approaches), methodologies (eg use of composite indicators), degree of accuracy, and time frames (eg survey frequency). In fact national data cannot be easily harmonised because financial inclusion issues are often country-specific.

The development of financial inclusion indices (FIIs) could be seen as a way to overcome these problems. They allow the multiple dimensions of financial inclusion to be reduced to a single one, making it simpler for analysts and policymakers alike (Abd Rahman (2015)). In general, such indices have no units and are constructed by making all the measured dimensions comparable. Such an index can be a valuable instrument when seeking to diagnose the situation for a specific geographic location, as well as to facilitate comparisons across regions and countries. In turn, the indexes based on a set of identified key performance indicators can be established as benchmarks and used to identify best practices. Moreover, composite indices may be easier for policymakers to target.

Yet FIIs cannot be considered as a universal or exclusive policy tool. While a key criterion for computing FIIs is simplicity, financial inclusion has different aspects specific to each country: hence it is far from straightforward to build FIIs that are comparable internationally and consistent over time. In fact, developing composite indices is not a goal in itself, and the quality of underlying data is essential. Compared to the FII approach, a less simplistic dashboard of meaningful ratios could indeed provide more insights on financial inclusion, since this issue is so multidimensional. Moreover, too much harmonisation of methods could make financial inclusion data less relevant for national policies. One way to deal with this issue may be to resist the setting of ex ante global standards for data collection, and instead to try to achieve international consistency of those indicators that are first deemed relevant at country level.

4. Filling data gaps to measure financial inclusion…

There has been significant progress in recent years in developing data on financial inclusion in various countries. However, much work remains to be done to enhance the coverage of the population and also the quality of the data collected. In addition, two important data gaps exist and would need to be addressed as a matter of priority: the situation of small and medium-sized enterprises (SMEs); and the quality of use of the financial services that can be supplied to the poor.

Many country studies suggest that there is a need for more information on the access to finance for SMEs. These can make a decisive contribution towards reducing unemployment and poverty – in both developing countries, where financial exclusion is high on the policy agenda, and also in advanced economies. A potentially interesting approach is assessing through formal surveys the funding needs/opportunities of SMEs. But a significant challenge is the lack of clear separation between firms and households. The reason is that households can engage in production, often on a relatively small scale and for informal and subsistence activities. In the poorest countries in particular, those households' production units are not legal entities.

The second main area where data are usually reported to be incomplete is the usage of financial services, especially qualitatively. Measuring this usage is crucial, if one is to correctly design financial products and enhance financial literacy and consumer protection. On the demand side, surveys can be effective in measuring consumer vulnerabilities and supporting the development of effective financial literacy programmes. Moreover, data on access usually emphasise convenience and flexibility, such as the number of bank branches or automated teller machines (ATMs) that can be accessed by agents in their proximity. But, often, these data do not encompass quality issues, such as the suitability of the services supplied compared to users' needs, and the way these services will potentially be used.

There are, in fact, several reasons why available financial services may not be used and/or may be used without translating into good outcomes. On the demand side, such reasons can include distance, awareness, affordability and cost, trust, lack of documentation, religious or cultural barriers, consumer experiences, financial illiteracy, and lack of customised products. All these factors can prevent an individual from using a financial service that is theoretically available.

On the supply side, providers may be unable or unwilling to actually provide to specific areas or groups the services that are part of their general offering. For instance, banks are often unwilling to lend to poor households because of their low income, the nature and scale of the business conducted with them (eg irregular and/or small value transactions), and a perception that they are too risky. These factors have indeed led to the development of microfinance as an alternative source of financial services for entrepreneurs and small businesses, with the aim of mitigating those supply restrictions by relying more on relationship-based services and/or the pooling of the demand for financial services across selected groups of entrepreneurs or households.

In turn, these demand- and supply-side dimensions interact in a way that is difficult to measure with simple data. For instance, the mis-selling of products, and related high fees charged by suppliers (as well as other non-price discriminatory measures), may in turn make poor households unwilling to demand banking services. One solution is to survey consumers and providers of financial services in a granular way so as to try to capture such qualitative aspects.

5. … and monitor related regulatory policy issues

A key area where there is a clear need of information relates to the way financial services are supervised by public authorities. First, there is an interest to avoid that vulnerable agents take excessive risk when accessing financial services for the first time. Public measures are thus being taken in many jurisdictions to improve financial literacy as more households join the formal financial system. The focus will in particular be on the barriers for accessing finance products, the prevention of over-indebtedness, transparency (documentation and pricing), and conflict resolution; adequate indicators have to be developed to ensure public monitoring of these points (IFC, 2015).

Second, financial inclusion can spur financial deepening, which can go too fast in view of the absorption capacity of the system. An excessive expansion of credit will typically be associated with financial booms, and can trigger serious strains afterwards (see Avdjiev *et al*, 2012). It is therefore essential to assess the credit expansion associated with financial inclusion policies, and in particular the degree of leverage in the economy. This puts a premium on the monitoring of loans and credit aggregates. At the same time, one should not forget that the development of formal credit may be desirable if it can replace the wide range of informal practices that are below the radar screen of public authorities and that also pose risks. Moreover, past experience suggests that excessive credit cycles is often related to buoyant mortgage financing in a context of rising property prices: this may be less an issue for developing economies, not least because of limited formal property rights (which are a key ingredient to support the development of mortgage finance). Lastly, progress in financial inclusion can be obtained without excessive credit creation, for instance by ensuring that low-income populations can access reliable savings and payment instruments.[6]

Third, the active promotion of services targeted to specific groups of economic agents (eg SMEs, low-income households) can lead to the emergence of new providers that may not be adequately supervised. This is in contrast to "formal" services providers, which are typically recognised by the authorities and subject to specific rules, even for those institutions serving the poorest customers (eg rural/collective banks, community-based credit associations unions, microfinance agencies).

One issue in this area is the development of "branchless banking", ie the delivery of "traditional" financial services outside physical conventional bank branches (eg correspondent agents located in another sector, use of ATMs). Usually these services will be offered in close coordination/relationship with a formal, duly supervised, entity. Nevertheless, authorities may want to check that customers have access to similar documentation and services compared to "traditional" customers. This even more so as some of these services can be offered with specific exemptions (eg lighter documentation requirements). This is because authorities are tempted to relax the rules to facilitate innovation and support the emergence of new institutions, products and channels that can service poor and low-income customers (esp. when services to the underbanked are perceived as an unattractive business).

An important associated issue relates to the fact that the providers can belong to different sectors – eg the banking sector, the non-bank financial sector, the non-financial sector – with different regulatory / supervisory frameworks. Attention has focussed on mobile banking, which is increasingly used to support payment transactions esp. in Africa (Dittus and Klein, 2011). These new service providers are indeed raising important challenges, not least because they are located in a sector where public regulation can be lighter compared to the financial industry or even absent. Financial supervisors will nevertheless need to monitor these new services closely so as to take appropriate actions as they become more significant in the financial landscape and/or pose new types of risks.

A fourth and important avenue relates to payment systems. A precondition for greater financial inclusion is to have secure and trustworthy payment services (CPSS (2012)), so that unbanked customers accept to use them. It is also important to ensure that other actors can safely use these services, such as governments when they distribute money to households, or foreign agents when they transfer international remittances. These payments have also to be efficient: costly services cannot be appealing to low-income customers. This puts a premium on adequate competition and innovation[7] as well some kind of monitoring of abusive practices (eg fees). Lastly, these new payments services, because of their easy access, have become a source of concerns in the context of more stringent international requirements regarding anti-money laundering / terrorism financing.

All these regulatory aspects entail new information needs. For instance, to measure risks that are specific to micro lending, to assess the importance of the services targeted to poor customers in the general financial system, etc. Moreover it is necessary to monitor the regulatory framework at certain intervals to assess whether it is still appropriate or should be refined. Furthermore it is essential to ensure that financial inclusion issues are put to the attention of the relevant global financial standard-setting bodies (Caruana, 2014). A key concept from this perspective is proportionality, ie the adequate calibrating of the regulatory environment to the degree of development of these financial inclusion services.[8] But calibrating requires data…

6. Conclusion – Towards a clear analytical framework to assess financial inclusion

[6] On the appropriate approaches to promote financial inclusion from this perspective, see Hawkins (2011).

[7] On the use of non-bank services by unbanked individuals as an alternative to payment instruments offered by banks, see CPMI (2014).

[8] See BCBS (2010) as regards the need for flexibility when taking into consideration the characteristics of microfinance activities compared to more conventional retail banking; and BCBS (2015) for finance inclusion more generally.

Dealing with financial inclusion requires adequate data. This is obvious for financial service providers: they can modify their offering of financial services and products only if they have a good picture of where the potential customers are and what they need. This is a key condition for ensuring that customised financial products can be designed for specific regions and categories of consumers.

Similarly, authorities seeking to reduce financial exclusion have to rely on data, not only to calibrate the various policy initiatives ex ante, but also to ensure that the outcomes can be usefully assessed ex post. To this end, the following steps should be followed: (i) diagnose the situation in terms of financial inclusion, based on objective data; (ii) design appropriate policies; (iii) monitor changes over time; (iv) evaluate policy impact; and (v) review and refine existing policies – not just those promoting financial inclusion, but also those in the fiscal, monetary, and regulatory areas taken to ensure the stable functioning of the financial system. The data implications can therefore be quite large.

There is a specific need to focus on the last step, ie policy assessment. This will depend on the location, age, income, education and occupation of each population segment. For instance, the way to address financial exclusion can differ between the less populated rural zones and crowded cities. In addition, the impact of financial exclusion on the poor, and the need for a policy response, may vary depending on the socioeconomic characteristics of the population. This means that the monitoring of financial inclusion policies should be conducted at a sufficiently micro level – ie at the level of individual customers or even of specific financial transactions and/or products – even if this information has to be properly aggregated to offer a "macro" perspective to national policymakers.

In summary, a number of important national and international initiatives are under way to improve the measurement of financial inclusion. In pursuing these endeavours further, it is essential not to duplicate existing data collection and policy efforts, but, instead, to leverage on them. Moreover, it can be useful to promote the stocktaking of various "best practices", both across countries and at the international level, to enhance financial inclusion measurement and data. Most importantly, a clear analytical framework is a key element for ensuring the success of financial inclusion policies: it can help to identify specific situations of financial exclusion, analyse the role played by various providers of financial services, and design and assess the policy responses. This framework should allow for the correct capturing of two key dimensions, one cross-sectional (ie at a given point in time but across the population) and one over time.

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