A customer-centric approach to measuring financial needs

What have we learned and where to now?

Synthesis Note | April 2020

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About insight2impact

insight2impact is a resource centre that aims to catalyse the provision and use of data by private and public-sector actors to improve financial inclusion through evidence-based, data-driven policies and client-centric product design.

insight2impact is jointly hosted by Cenfri and FinMark Trust and is funded by the Bill & Melinda Gates Foundation in partnership with The MasterCard Foundation.

For more information:

Visit our website at **www.i2ifacility.org**.

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Introduction

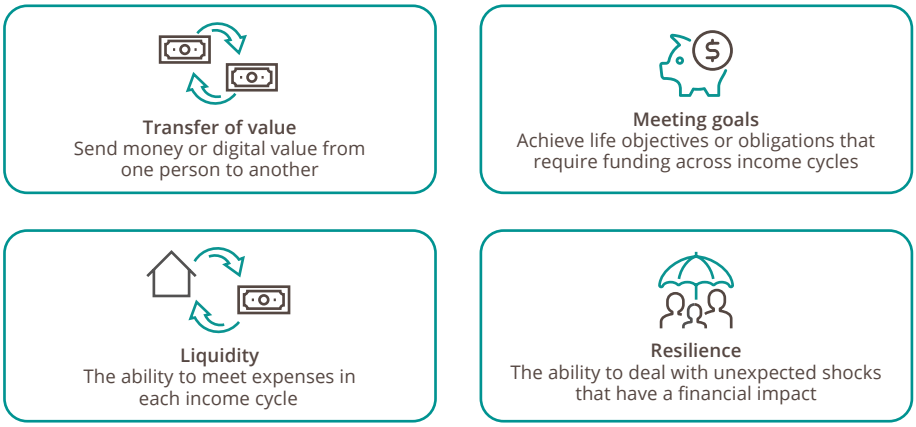
The insight2impact facility was set up to harness the power of data for positive consumer outcomes in financial inclusion. From the start, measurement has been core to our mission. To be able to target and achieve a policy or market goal, you must be able to measure progress towards that goal.

A needs lens. As we set out to understand what our financial inclusion measurement quest would be, it became apparent that it matters *what* you try to measure. Financial inclusion targets (percentage of adults with a bank account, say) remain valid, but they don't tell you much when tracked in isolation. Are people *actually using* their financial services and, more importantly, is it having an impact on their lives?

The hypothesis that we set out to test is that success in financial inclusion policy is when the formal financial sector meets people's underlying financial needs to help them achieve positive outcomes. That is, to live their financial lives in a way that allows them to make progress towards their goals and manage or prevent financial vulnerability. We coined the term financial needs or "FinNeeds" as a measurement lens to analyse financial inclusion across four universal financial needs: transfer of value, liquidity, resilience and meeting goals:

Are people *actually using* their financial services and, more importantly, is it having an impact on their lives?

Figure 1. The four financial needs



It's useful to take a use case view to contextualise financial needs and to be specific about what financial services are used for. For example: an illness that requires hospitalisation as a resilience use case, the need to smooth seasonal income as a use case for managing liquidity, or saving for a particular goal such as a quality education for a child. Everybody meets their financial needs in some way, be it through relying on cash, through support from family and friends, by adjusting their consumption or work patterns, or by relying on state support. We call these different strategies used to meet needs "financial devices". A financial device doesn't need to be a formal financial service. In fact, using cash kept at home or drawing on your social network may be even more relevant.

Our mission. Through a series of country-level pilot studies[1], we set out to understand how people's financial needs manifest, what they use to meet those needs and how they use it, as well as what drives them to choose the specific combination of financial services or strategies and, ultimately, whether their usage allows them to meet their needs. We also wanted to test the power of different data sources – notably face-to-face demand-side surveys and transactional data on formal accounts – to create a holistic picture of people's financial lives. Ultimately, the goal was to inform policy aimed at welfare impact. By "welfare impact" we mean socio-economic gains – a population able to pursue opportunities and weather financial shocks.

Taking stock. We learned that the policy questions to be answered through the needs lens are different to the ones we had anticipated at the outset. As we reach the end of the insight2impact programme, we're taking stock of what we've learned and what insights we've generated regarding the role of the financial sector in meeting needs, but more importantly, we're also looking ahead to ask "where to from here" for financial inclusion measurement?

1 The financial needs measurement framework was piloted in two ways: (1) a full pilot study, including a specific financial needs face-to-face survey and analysis of transaction data (Mexico, Nigeria, Zimbabwe) or (2) by incorporating a module on financial needs or adapting questions in an existing demand-side survey to take financial needs into account (Kenya, as well as more light-touch engagements in the Philippines, Malaysia and São Tomé and Principe). Some financial needs questions were also incorporated in selected FinScope national financial inclusion surveys. In addition, we explored specifically the transfer of value and liquidity needs using transaction data and telephonic survey data in Rwanda.

2. What have we learned?

Needs matter. Our findings show that needs do matter. The financial needs lens resonated across the board in our engagements, and the pilots confirmed the validity of the four universal financial needs categories.

Our key insights seem simple at first glance, but they have far-reaching implications:

Portfolio of devices

All the pilots confirm that people use a portfolio of different devices to meet their needs. This is an intuitive finding already established in the financial diaries[2] studies, but seeing it emerge from quantitative data adds power[3]. Our Mexican pilot, for example, showed that, of those who experienced liquidity distress, most turned to friends and family either for assistance (25%) or for a loan (19%). A fifth also used personal devices such as savings at home, taking on more work or cutting back on consumption. Finally, some turned to informal or formal credit or savings. Often, different devices would be combined towards the same use case.

> **People use a portfolio of different devices to meet their needs.**

Different market dynamics

The pilots also confirmed our hypothesis that customers don't think in terms of product markets such as savings, credit, payments or insurance; they think in terms of use cases and the financial devices that will help them meet that use case. Regarding people's needs as the whole "point" of using financial services means that you can measure each of the four financial needs *as a market with its own market dynamics*. Let's take liquidity as an example: To be able to meet their monthly expenses, most people would try to build up some savings buffer (be it cash kept at home or in a bank account, or an investment in livestock or at a financial institution); sometimes, they need to ask a family member to help tide them over; sometimes they may take out a payday loan or turn to the village loan association. Different types of savings and credit devices therefore interact as complements or substitutes to meet that need. Applying this measurement lens has rendered stark insights in our pilots, such as that most people across the various pilot studies turn to savings at home and credit from their social circle – rather than formal insurance – to help cope with financial shocks arising from insurable risk events.

Formal financial services are not meeting needs

Although we've always known that informal financial services are pervasive, it has been eye-opening to see just how stark the picture is. All our pilots confirm that informal financial services are widely used even among the "included", for most use cases. Let's again turn to our Mexican pilot: our state-wide demand-side survey showed that the overwhelming majority of individuals use *only* informal financial services to meet each of the four needs. More tellingly, this also holds

2 The research of Stuart Rutherford was influential in shaping the financial diaries methodology, whereby interviewers keep detailed track of all a household's financial transactions, across all devices, formal and informal, for a year. The book, *Portfolios of the Poor*, published in 2009, synthesised findings from the first financial diaries studies and showed the resourcefulness of the low-income individuals in using a portfolio of formal and informal financial devices to meet their financial needs. For more information, see: http://bfaglobal.com/financial-diaries/

3 Whereas diaries allow us to understand one individual's decisions in minute detail, the needs approach generalises the individual's decision to the entire sample population – it sits between an individual's choices and aggregate account statistics.

for bank customers: 80% of bank account holders still use cash for their day-to-day expenses. Moreover, when we blended demand-side survey data and bank account data for the same subset of consumers to compare their bank account usage to their broader financial lives, we saw that those bank customers meet virtually all their needs first and foremost outside of the formal financial services sector.

In fact, the data in all our pilots suggests that the traditional financial sector – banks and non-bank financial institutions – has not solved the transfer of value, nor the resilience, nor the liquidity challenge for the low-income population. In the Kenyan pilot, formal insurance and credit were both used by a mere 1% of the sample as a resilience device. It's only for reaching goals that formal financial services start to play a bigger role. For example, the Mexican national financial inclusion survey, ENIF 2018, shows pensions as an anchor device for the retirement use case. Taken up by about a third of adults, it is the single biggest formal device used towards a defined use case in Mexico.

New business models needed

So: If the policy goal is to meet people's needs, we see that the formal financial sector is for the most part not serving that goal, despite the gains in formal financial inclusion.

Financial institutions are not competing with one another in meeting needs and delivering value, but with informal, social and cash alternatives.

Vulnerability. The conundrum is that the informal and social devices people turn to instead are not necessarily generating positive welfare outcomes. All the pilots show a high incidence of liquidity distress (inability to balance income and expenses) and vulnerability to financial shocks. In Zimbabwe, for example, 42% of the respondents said that they do not have any strategies to deal with liquidity distress, while in Mexico almost two out of every three respondents who experienced a risk-related financial shock in the past year had not yet recovered by the time the survey was administered.

Traditional financial services not wired to meet needs. Thus, there is a real imperative for the formal financial sector to generate better outcomes. To serve needs better, the formal financial sector needs to be able to compete with or mimic the benefits of cash and provide the flexibility and accessibility of people's social networks. Financial institutions are not competing with one another in meeting needs and delivering value, but with informal, social and cash alternatives. This is easier said than done: The way the formal financial sector is traditionally configured, it seems hard-wired not to serve the needs of the low-income market. KYC requirements, monthly charges, minimum account balances, credit-scoring, risk-rating – to name but a few – all make it hard to emulate the flexibility and accessibility of social devices, or the cost-free[4], ubiquitous nature of cash. This begs the question: Is it a valid policy expectation that the formal financial sector (as it is traditionally constituted) should meet the low-income market's financial needs, or does the focus need to shift elsewhere, to new business models that would truly serve the needs and realities of the low-income population?

New business models driven by digital technology. Our Kenyan, Nigerian, Rwandan and Zimbabwean pilots show that, where formal financial services manage to reach large chunks of the lower-income population, it is on the back of instant payments and mobile payments as a cash alternative. Such innovation is happening outside of the legacy systems of the traditional banking sector.

4 From the customer's perspective

This suggests that, to meet needs in the formal sector, you need a different kind of financial service, as is emerging through the development of new business models driven by digital technologies.

A shifting discourse

The FinNeeds framework was conceptualised within a development view of the role of financial inclusion. We wanted to understand to what extent the formal financial sector was meeting the needs of its people. The hypothesis was that, if we could understand how people meet their financial needs currently, we could inform policymakers, regulators and market players on how the financial sector could better serve such individual or household retail financial services needs *to improve welfare outcomes*. However, the discourse is shifting.

Broader policy relevance. Over the lifespan of insight2impact, we've seen that the questions asked by policymakers have changed. Interest is growing in the linkages between financial usage and policy objectives other than just financial inclusion, such as livelihoods and economic sector development[5]. In our Rwandan pilot, we're working with regulators to harness mobile money data to help inform such broader policy questions – for example to understand how small merchants benefit from digital transactions and by identifying consumer protection issues from fraud and over indebtedness. Our work on transfer of value also highlights that digitisation and digitalisation[6] are fundamentally changing the way in which the economy works, and this has profound effects on livelihoods. In our Nigerian pilot, our engagements with the central bank focused on how the data could inform payment digitisation strategies.

Broader suite of data sources. We also see a shift in how we think about data collection. The new generation of policy questions requires faster responses than what face-to-face, full-length demand-side surveys can render. Furthermore, where we've blended demand-side survey and transactional data for the same consumers, we've picked up a mismatch that suggests that survey data may suffer from data quality issues: People claim to have a certain usage profile, but their transactional data suggests otherwise. We're also seeing that new data sources, such as GIS data matched with transaction data, enable novel analyses, such as identifying the primary P2P transfer use cases. And, big data sets of real-time transactions are opening up a host of potential applications. These developments mean that we're starting to reassess the suite of measurement instruments and data sources that we draw on.

What, then, is the next frontier for financial inclusion measurement?

What, then, is the next frontier for financial inclusion measurement?

5 Complex problems such as financial inclusion, poverty reduction, small business growth or how people generate their livelihoods are all related: The ways in which people select devices to meet use cases is inextricable from their other life choices. One needs to understand these linkages to impact livelihoods or outcomes in the real economy.

6 We use "digitisation" to refer to when an engagement or object is converted into digital format (for example scanning a photo or, in the case of financial inclusion, converting payments that were previously made in cash into digital payments). "Digitalisation" refers to business processes becoming digital, such as a financial service provider moving from a paper-based to a digital system.

3. The future of measurement

The shifting discourse means that, looking ahead, we see three trends shaping the course of financial inclusion measurement:

3.1. What we're measuring is changing

We predict a move towards tailored, context-relevant proxy indicators that focus on mapping the interplay of financial services and the digital economy.

Locally relevant insights. While universal financial inclusion indicators – such as the percentage of adults banked or formally included – will remain relevant for comparison across countries and across years, it will become more and more important to also identify specific context-relevant indicators and how to measure them. For example, in our Rwandan pilot, where the regulator is interested in understanding the effects of digitisation, the analysis of transactional data allowed us to design indicators that help the Rwandan Government to track the rate and pattern of digitisation, the incidence of fraud and the number of people who repay loans late.

> **The hunt is on for good proxy indicators suited to the local context.**

Simple proxies. The emphasis on tailored indicators does not negate the FinNeeds indicators[7] that we have identified through our pilots. However, it means that the application of the FinNeeds conceptual framework can also have value beyond universally applicable indicators in that it can be used to identify and answer specific policy-relevant questions that matter in the local context. The irony is that, as more data becomes available, policymakers actually search for a narrower set of indicators to monitor in the form of a dashboard. The hunt is on for good proxy indicators suited to the local context.

Focus on digital. Market players, development partners and governments are all increasingly focused on digitalisation and what that implies for business models, consumer outcomes and regulatory frameworks. This changes what we need to measure. For example:

- A shift from understanding levels of financial inclusion to understanding trends in digital financial services, the digitisation of transactions and the consumer protection implications of digital world phenomena such as online gambling and high-interest digital consumer credit.
- An emphasis on specific digital use cases and the use of digital devices within the broader portfolio of devices that people hold.
- As global platforms, such as WeChat, Alibaba, Netflix or Facebook, increasingly drive people's digital engagements and the related payments that they make, the boundaries of national jurisdictions are being challenged. This raises new policy considerations (such as the sustainability of the tax base if digital services such as online video streaming are directly purchased offshore) that must be explored through our measurement efforts.

7 http://access.i2ifacility.org/Measurement_framework/Indicators.php

Financial incidences of the digital economy. In fact, we predict that financial inclusion measurement will increasingly mutate into the measurement of the financial incidences of the digital economy. That is, all the dimensions of the digital economy[8] that can be measured from its financial flows and transactions.

3.2. The way we measure is changing

Financial sector policymaking will increasingly be data-driven – and that data will not primarily be survey data.

Beyond demand-side data. As the measurement questions we're trying to address evolve, so do our views on data sources. Financial service supervision will become more data-driven, and that data will not be survey data. Traditionally, financial inclusion is measured through global or national-level demand-side surveys. Our explicit mandate at insight2impact was to pilot test the use of supply-side data to measure financial inclusion and where possible, link it to demand-side survey data. Transactions via digital channels and with digital value are generating more and more data. We see the continued broadening of data sources as arguably the biggest trend in financial inclusion measurement going forward.

By answering different types of questions, transactional data plays a valuable complementary role in building a more complete understanding of how users interact with the financial system.

Transactional data as complement. As set out in our recent blog, drawing on transactional data has been a learning journey. Analysing transactional data reconfirmed that one does still need the customer perspective to understand people's broader financial lives and their device usage outside of the formal financial sector. But it showed that these demand-side insights can be powerfully amplified by transactional data, which can build a more accurate picture of actual usage behaviour than survey respondents can recall. Transactional data also enables statistical analysis of usage patterns and determinants and can allow for real-time tracking. By answering different types of questions, transactional data plays a valuable complementary role in building a more complete understanding of how users interact with the financial system.

New, speedier survey techniques. Within demand-side research, face-to-face surveys will always be relevant, but additional, quicker ways to gather complementary insights will become increasingly important. Examples include mobile-phone-administered SMS or CATI[9] surveys. The questions asked in demand-side research are also changing: shorter formats, more focused on drivers, context and specific aspects of people's financial lives. Furthermore, demand-side measurement no longer needs to cover what can be picked up through transactional and administrative data (such as transaction patterns or location).

Smarter analysis. Drawing on and linking a wider variety of data sources create a big analytical ask. It already requires increasingly sophisticated data warehousing, data engineering and data analysis processes, using a variety of data analysis techniques; and this trend is likely to increase. Our pilot experience suggests that few developing countries are yet set up to tap into the full data analysis potential. Several African governments are now investing in more sophisticated data warehousing and analytical capacity, which when matched with citizen ID numbers can provide opportunities for interesting analyses. However, there is still some way to go to harness the full power of data for public policy.

8 The digital economy refers to the world-wide buying and selling of goods and services facilitated by digital communications.

9 Computer-assisted telephonic interview

3.3. The questions we're trying to answer are changing

Financial transaction data will not only become more broadly used; it will also be used to answer broader policy questions.

Usage as input, not end. Transactional and administrative data are able to track the impact of policy decisions in real time. For example: when the utilities regulator in Rwanda, RURA, wants to know how to accelerate the digitisation of the economy in the wake of Covid-19; or if it cuts mobile money transaction fees and wants to know the impact – did it lead to increased usage, disaggregated by gender and region? We are still interested in measuring financial needs, but meeting those needs is not the end in and of itself. It becomes data that feeds into a larger set of policy questions that policymakers want to answer.

We foresee two trends in the policy questions that we'll be asked to answer:

A shift to financial health

Outcomes as measure of success. We're seeing a policy shift towards ensuring positive consumer outcomes. Whether the financial sector is actually meeting people's financial needs (which is how we define financial inclusion outcomes) in a way that does not detract from their financial health is the ultimate measure of financial inclusion policy success. This means that measuring outcomes will arguably become even more important from a policy perspective than tracking inclusion per se[10].

> **Now governments will focus even more on how to use the financial sector to buttress financial health.**

Contributing to financial health. Measuring the outcomes of usage, such as resilience to financial shocks, links to the broader agenda on financial health. The concept of financial health has been attracting more and more policy attention in recent times. And now that populations across the world are experiencing the biggest challenge to their financial health in generations due to the COVID-19 pandemic, governments will focus even more on how to use the financial sector to buttress financial health.

There is currently little consensus on how to define or measure financial health, but definitions by leading researchers all include aspects of four key elements: (1) the ability to smooth short-term finances, (2) being prepared to meet and recover from long-term shocks, (3) a longer-term perspective on maintaining and improving welfare, and (4) feelings of confidence and wellbeing[11]. It is thus in essence the ability to meet financial needs, combined with a sense of confidence and wellbeing in doing so. In fact, the proxies most often used to gauge financial health (such as access to a lump sum to ensure resilience) are closely linked to financial needs and outcomes.

Measuring financial health focuses on the desired state, rather than the means to get there. Many factors contribute to financial health, and financial service usage is only one. To inform policy action we need to understand how people attain financial health, not just whether they do or not. This means that financial health and its drivers will continue to be a key measurement topic in the foreseeable future.

10 This is not to say that tracking financial inclusion is no longer useful. It is just no longer sufficient as an indicator of its own.

11 For more on financial health, see our report titled "Measuring Financial Health: An Assessment for Policymakers" by Beth Rhyne.

A focus on the real economy

From financial inclusion to economic inclusion. Our basic premise when conceptualising insight2impact was that financial inclusion for the sake of financial inclusion is insufficient. This still holds true, now more than ever. The SDGs mean that policymakers and funders want to track tangible effects: economic inclusion and not just financial inclusion. By economic inclusion we mean the ability to participate in the economy and earn a livelihood. This requires a shift away from narrow financial inclusion indicators towards economic inclusion indicators.

Understanding how financial services "plug into" livelihoods. To measure economic inclusion and how that interacts with financial inclusion, we must understand trends in the economic value chains where people are earning their livelihoods. This includes small and medium-sized enterprises, informal traders, service providers or merchants, as well as farming. In an increasingly digitising world, an important line of enquiry is exploring the working of digital platforms, be it e-hailing or any other platform that connects suppliers and buyers of goods and services[12], and the ancillary role that financial services usage plays in such platforms[13]. The financial service is not the core transaction between the two parties trading on the platform; it's used to enable commerce (for example where insurance or an escrow account is used to guarantee the transaction of services rendered, or where payment functionality enables a sale). This means that we need to monitor it differently, as financial incidences of the digital economy.

> **The SDGs mean that policymakers and funders want to track tangible effects: economic inclusion and not just financial inclusion.**

Here, transactional data can help. For example: Merchant transaction data can be analysed to explore income-earning patterns; or one can explore whether adding credit or insurance onto a digital platform can enable platform participants to increase or smooth their revenue. Transactional data makes for a more robust analysis of trends and correlations than drawing on demand-side data alone.

Direct insights into real economy activity. Regulatory authorities receive huge volumes of data through their reporting systems and via real-time administrative data tracking. For example: Each time a transaction is made, the time, location, amount and merchant type are recorded. In terms of informing policy decisions, much of this data remains under-utilised or un-utilised. Our work with the utilities regulator in Rwanda seeks to use administrative data to develop a generalisable framework of policy questions that can be answered by data typically already collected or available to public agencies and regulators. This work will enhance our understanding of how transaction-level datasets can be used to measure trends relevant to the real economy.

We do not yet know what the key proxy indicators will be that can inform public policy questions on real economy participation. Finding out will be an important financial inclusion measurement imperative for the next few years.

12 For more on digital platforms in Africa, see: https://i2ifacility.org/system/documents/files/000/000/086/original/DIGITAL_ADP_Focus_Note.pdf?1553833148

13 For more information, see: https://i2ifacility.org/system/documents/files/000/000/105/original/Insurance_in_e-Hailing_report.pdf?1567676667

4. Conclusion

Our measurement agenda over the past few years has been a learning journey that has challenged our preconceptions and changed our perspective on what really matters in financial inclusion measurement.

Yes, financial needs and how they are met matter, but to explore the usage of financial services as a primary measurement lens is no longer enough. We need to understand people's *incidences of engagement* with the digital economy and the role of financial services in that. We need to understand *outcomes* in the context of financial health. We need to understand *how economic sectors function* and how financial services interplay with value chains to generate growth.

To do so, the traditional bank and non-bank financial sector can no longer be our point of departure. So much of the dynamics are happening outside of the traditional formal financial sector. Nor can we focus just on demand-side survey data to render consumer insights. We need adaptable instruments to measure trends with a quicker turnaround.

With the meteoric rise of devices that have connected billions to the internet, more information is being generated than any single organisation is currently able to utilise. This phenomenon is providing us with the opportunity – and duty – to tackle analyses that researchers even a decade ago could not have foreseen.

The quest continues, even as we wrap up our formal mandate under insight2impact. We and our partners will take up the challenge to advance the study of complex development problems based on new measurement paradigms that are appropriate to the age of data.

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FinMark Trust is an independant non-profit trust. Its purpose is "Making markets work for the poor, by promoting financial inclusion and regional financial integration". Its programmes aim to unlock financial inclusion and sector development through a symbiotic relationship between rigorous data collection and research activities. Its work can be found in South Africa, throughout the SADC region and the global arena. For more information, visit www.finmark.org.za.

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