

The financial needs of Mexicans



How do Mexicans solve their financial needs?

September 2019



**GOBIERNO DE
MÉXICO**

HACIENDA
SECRETARÍA DE HACIENDA Y CRÉDITO PÚBLICO



COMISIÓN NACIONAL
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Acknowledgements

The authors of this report would like to thank staff at the commercial bank who provided the transactional data and valuable comments. Our sincere thanks also to Gabriela Zapata for her valuable input and review throughout the project.

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Publication date: **September 2019.**

CONTENTS

3	Contents
4	Executive summary
5	Introduction
7	Why measure financial needs?
9	Methodology
12	Findings
12	How do people meet their financial needs?
23	Use of the financial devices
33	Why do these findings matter?

ABBREVIATIONS

GPF
Global Policy Forum for Financial Inclusion

AFI
Alliance for Financial Inclusion

ENIF
Encuesta Nacional de Inclusion Financiera
(National Financial Inclusion Survey)

CNBV
Comision Nacional Bancaria y de Valores

POS
Point-of-sale

EXECUTIVE SUMMARY

This report outlines the findings from a study carried out by insight2impact in collaboration with Comision Nacional Bancaria y de Valores (CNBV) of Mexico to gauge how Mexicans meet their financial needs, especially when it comes to send and receive money, manage liquidity, build resilience for financial shocks, and to meet goals.

The study was conducted to provide a complementary lens into the financial inclusion landscape in Mexico, alongside the existing National Financial Inclusion Survey (ENIF 2018, for its acronym in Spanish), as well as the Mexico Financial Diaries findings. It combined insights from a survey on financial needs implemented in the State of Puebla, with transactional data obtained from a commercial bank to make a complete picture of people's formal and informal financial devices choices.

The findings suggest that the formal financial sector is barely used to satisfy the needs of Mexicans. This is seen clearly through people's continued preference for cash to transfer value. The bias towards informal financial services, particularly assistance from friends and family, is also clear when people face a liquidity constraint or a financial shock. Given that, after three months, two-thirds of respondents had yet to recover from such financial shocks, and the preference for informal services is not sufficient to build resilience. Formal services are used more frequently for meeting financial goals, than the other needs, but this could be further strengthened with more use-case-specific products, such as for housing or education.

The transactional data shows that despite growing usage of point-of-sale transactions, much card usage remains

in ATM withdrawals to transact in cash. This confirms the survey's findings that, whether banked or unbanked, people continue to meet their financial needs mostly in cash. In turn digital payments are growing for some consumer segments - income level and education were identified as drivers of this.

Receiving an income digitally is a potential driver for digital payments. It would be necessary to analyse the relevance of policies and incentives so merchants can offer digital payments and expand the opportunities for non-cash usage. There is an expectation that the implementation of new instant payment methods by the financial institutions generates competition with cash usage.

The combination of the survey's data and transactional data provides insights for policymakers and financial service providers. Taking a more customer-centric perspective, by understanding people's choices through the lens of financial needs, can be used to design more targeted financial products. Given the size of the needs that remain unmet by formal financial services, there is a large market opportunity as well as welfare imperative to offer better value to consumers, in a way that can compete with a broad presence of informal alternatives.

The findings suggest that people cannot rely only on informal financial services to effectively solve liquidity constraints, build resilience and meet their goals. In short, they cannot become financially healthy in the long-term without the support of formal financial services. However, without better formal financial service offerings, the population will continue to use informal services.

INTRODUCTION



Mexico is at the forefront of advancing financial inclusion. In 2011, the Mexican Government hosted the Global Policy Forum for Financial Inclusion (GPF) of the Alliance for Financial Inclusion, which gave rise to the Maya Declaration and the National Strategy on Financial Inclusion. This demonstrates the concerted efforts of the Government to extend the reach of financial inclusion.

The National Financial Inclusion Survey 2018 (ENIF 2018, for its acronym in Spanish), shows that 68% of working-age adults have access to at least one formal financial product. Yet, cash continues to dominate the economy, with most Mexicans borrowing from friends and family when their expenses exceed their income. This highlights the challenges that still need to be addressed to ensure that financial services deliver advantages to consumers.

There have been global successes in meeting financial inclusion targets, but questions raised about the impact on welfare. The 2017 World Bank Global Findex Survey revealed that accounts holding has not led to regular usage of them. Mexico was not the exception, with dormancy rates of 22% in 2017.

How can financial inclusion be increased to enhance welfare effects? Can the formal financial sector meet the financial needs of Mexicans?

This report outlines the findings and insights from a study on financial needs implemented by *insight2impact* in collaboration with Comision Nacional Bancaria y de Valores (CNBV). The purpose of the study was to assess the role of the financial sector in meeting

people's underlying financial needs. This research complements the existing financial inclusion data from ENIF 2018 and Mexico's Financial Diaries¹.

The study found that people largely meet their financial needs in cash and outside of formal financial services. They choose to borrow money through their, social networks instead. Those decisions did not show any link to a lack of access nor low financial knowledge (ENIF 2018). They were rational choices based on preferences for informal services that provided greater convenience, flexibility, and sense of belonging. However, this reliance on informal financial services has not reduced the financial vulnerability.

This creates an imperative need to design financial inclusion policies.

The untapped market presents an opportunity for formal financial services providers to develop more targeted and relevant products that enable people to meet their financial needs. For policy-makers, these insights into people's financial lives and behaviours can contribute to strategies, programs, actions, as well as indicators that measure financial needs satisfaction.

This report is structured as follows:

- Section 2 deals with the relevance of measuring financial needs.
- Section 3 describes the study methodology.
- Section 4 states the main findings.
- Section 5 sets the implications of the findings for the market and financial inclusion policies.

1/ <http://bfaiglobal.com/projects/mexico-financial-diaries/>



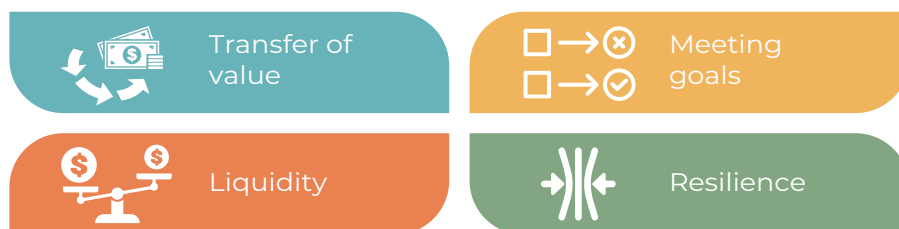
WHY MEASURE FINANCIAL NEEDS?

People use financial services because these services can help them meet their needs. Most uses of money or financial services typically fall into one of the four financial needs² that are the following:

1. to pay or receive payments for something (transfer of value);
2. to be able to meet expenses within an income cycle (liquidity);
3. to meet large expenses that have resulted from an unexpected financial shock (resilience); and
4. to save for larger life goals that cannot be funded from a single income cycle (meeting financial goals).

Financial needs

FIGURE 1



The reasons for using money are referred to as use cases. All use cases can be categorised into one of the financial needs; so, they are a way to summarise and classify all the different use cases for analysis purposes.

For example, saving for retirement, your children's education, or buying a house are use cases that can be classified under the meeting-goals need. If a person expresses a use case in a need category, it is counted in that category. This enables to draw broader conclusions at the needs level.

Everybody meets their financial needs in some way, be it through with on savings, credits from family and friends, by adjusting their consumption or work patterns, or on the government's support. These strategies are called financial devices³ which are used to meet each use case.

2/ This categorisation corresponds largely to that identified by others. FSD Kenya, for example, through the financial diaries and other research, refers to "bridges" (liquidity), "safety nets" (resilience) and "ladders" (meeting goals) as three core functions of financial services towards financial health. CFSI (2016), also as part of a measurement framework for financial health, classifies the need to (i) spend, (ii) plan, (iii) save, and (iv) borrow. Spend spans the ability to spend less than current income and pay bills on time and in full (liquidity need). Save has a liquidity and resilience component (the ability to have sufficient liquid savings to meet day-to-day needs), as well as a meeting goals and 'longer-term' resilience component, (what CFSI term 'have sufficient long-term savings or assets'). Under borrow, they classify having a sustainable debt load and having a prime credit score (which contributes to meeting goals and resilience). Lastly, under plan it is classified having appropriate insurance (resilience need) and the ability to plan ahead for expenses (meeting goals). Follow-up research conducted to apply the CFSI framework globally, via a dedicated demand-side survey of more than 1,000 respondents in Kenya and India as well as 89 qualitative interviews (Dalberg, 2016), lists key needs as meeting day-to-day needs plus shaping and smoothing volatile income (corresponding to our liquidity and transfer of value categories), pursuing opportunities and building financial reserves (meeting goals) and building resilience. Likewise, CGAP (Peachey & Arora, 2016) classify functional value rendered by financial services as supporting customers to deal with health and other shocks (resilience), to balance cash flows between income and expenditure cycles (liquidity) and to seize opportunities to enhance income and assets (meeting goals).

3/ The term was taken from the financial diaries' methodology (see, for example, Collins et al., 2009, and Zollman, 2014), which maps all financial tools or instruments people used under the term "financial devices".

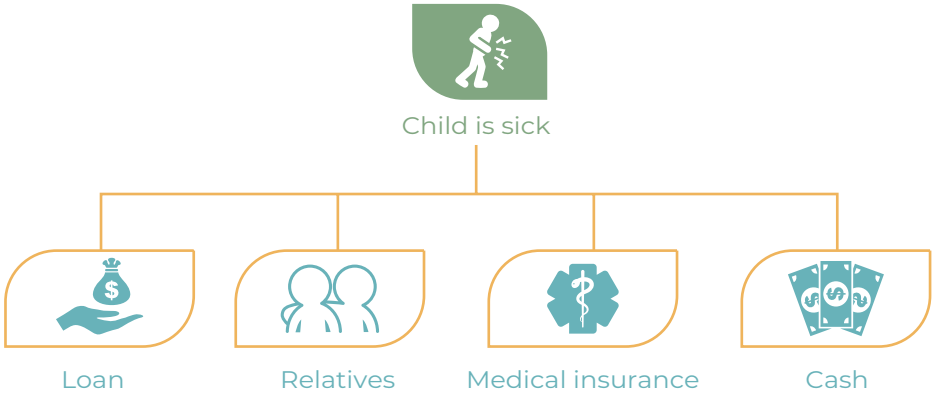
A financial device is any physical, social, or electronic mechanism that stores, accumulates, distributes, or transfers value, and can be used to meet a financial need. Cash at home or physical assets would be a “personal” mechanism, while assistance from family and friends would be a “social” mechanism. While a financial device includes any financial service, it is a broader concept than formal financial services provided by financial institutions. In short: a financial device is what people use to meet a financial use case.

In deciding how to meet a use case, people not only consider formal financial products such as credit, payments, savings or insurance, but also the other options available to them, such as their social or family network, cash at home or liquid assets. They may use a combination of these devices, depending on the use case.

Figure 2 illustrates how people may use different types of devices to respond to a single use case of covering medical costs for a sick child.

Example of devices used to meet specific use case

FIGURE 2



The needs measurement framework used in this report, explores the financial needs of a population and considers the uptake of different types of financial devices to respond to use cases linked to each need. By building a picture of the portfolio of financial devices that people use for each need (see Box 1 for examples), insights can be drawn on how different types of financial services complement, or substitute for, meeting each financial need. For financial services providers, such insights highlight untapped market opportunities that can be used in the financial product or channel design. From a policymaker perspective, the framework helps to identify market gaps where the formal financial sector is not serving the needs of the population, and guiding public policies, or regulatory strategies.

Financial device categories

Box 1

Formal	Any transaction through an authorised and supervised financial institution, such as banks, credit unions, insurers, or savings and credit cooperatives.
Informal ⁴	Any device provided by a third-party institution that is not a licensed financial service provider, such as an informal moneylender.
Social	Borrowing or assistance from friends, family, employer, any collective or community-based device such as savings clubs.
Personal	Cash kept at home, at hand, or personal assets (watches, jewellery, cars, etc.)
Under this framework, financial devices can also be categorised by type of product: savings, payments, credits or insurances.	

4/ When contrasting overall formal uptake to other devices, the term “informal” is also used broadly to refer to any device not provided by a regulated financial institution. Thus “informal,” applied in the broad sense, groups together informal devices and social and personal devices, such as cash.

METHODOLOGY

This study applied a new research approach that combined a face-to-face survey on financial needs with transactional data from a commercial bank. It wanted to build a deeper understanding of the population's financial lives.

First step. A survey was administered to 1,154 adults in Puebla State, in December 2017, to analyse needs, usage, and drivers. *Insight2impact* designed the survey in collaboration with CNBV, and sub-contracted a pollster enterprise to administer it. The survey's methodology design allowed capturing a sample that is representative of Puebla's adult population. This State was chosen as its demographics roughly resembles that of the Mexican population to yield findings that are indicative of the overall adult population.

The survey data was analysed according to the four financial needs (i.e. transfer of value, liquidity, resilience, and meeting goals), and in more detail by relevant use cases. The findings cannot be generalized at a national level and should be read alongside the findings of the National Financial Inclusion Survey (ENIF 2018).

Second step. A commercial bank provided anonymous transactional data from 616,867 clients (a representative sample of its full client's base) across different types of financial service accounts; so, *insight2impact* can analyse the usage patterns. This included transactions over a one-year period from saving accounts, credit cards, insurance products, and credits, as well as the corresponding demographic information. Transactional data from a financial service provider complements survey data by providing more granular and reliable data on actual usage patterns. The transactional data was used to characterise clients, based on how intensively they used formal financial products, such as credit and debit cards, and their demographic characteristics.

Third step. The survey was administered to an additional 400 respondents drawn from the commercial bank clients' sample, to create a merged data set that links the same customer's demand-side and supply-side data. The use of a merged dataset allowed assessing how consumers use formal and informal devices to meet their financial needs; also, to understand with greater depth their financial lives.

Overview of study methodology

BOX 2



Sample	1,154 adults, representative of Puebla State Fieldwork completed in December 2017
Booster sample	400 individual bank clients Fieldwork completed in July 2018
Bank clients' sample	616,867 clients, transactional data for a period of 12 months

This methodology complements both the ENIF 2018, which is representative and measures access and uptake; also, the Financial Diaries, which is an in-depth longitudinal study that provides an in-depth understanding of households' financial decisions (see Box 3 for an overview of findings).

This study analyses quantitative findings on the usage of financial services to meet needs, and the outcomes of this usage. Table 1 shows how the three studies complement one another for a deeper understanding of the financial lives of the Mexican population.

Comparison of financial needs survey, ENIF 2018 and Financial Diaries

TABLE 1

	Insight2impact survey in Puebla	ENIF 2018	Financial diaries in Mexico
	State-wide	National and regional	Municipal
Sample	1,154	14,500	185
Survey type	Transversal	Transversal	Longitudinal
Aspects considered:			
Sociodemographic characteristics	√	√	√
Cash flow	√	√	√
Means of payment	√	√	√
Savings	√	√	√

	Insight2Impact survey in Puebla	ENIF 2018	Financial diaries in Mexico
Credits	√	√	√
Income sources	√	√	√
Unforeseen expenses	√	√	√
Saving frequency and activity	√	Partially included	√
Goal achievement	√	√	X
Remittance transfers	√	X	√
Usage incentives	√	X	Partially included
Socio-economic context	√	√	Partially included
Retirement savings	Partially included	√	√
Financial channels	Partially included	√	√
Insurance	Partially included	√	√
Asset ownership	√	√	√
Reasons for no uptake/use	√	√	Partially included
Financial education	√	√	√

Highlights from Mexico's Financial Diaries

Box 3

Households operate on very tight budgets.
On average, they earn income from over seven different sources but still struggle to smooth income.
Respondents make over 85% of all purchases and financial transactions within 30 minutes' walking distance from home.
During the study, households on average used seven financial instruments and relied more heavily on informal financial devices.
Credit allows families to cover daily expenses, acquire assets that make their lives better, start and run small businesses.
Due to a reliance on credit, some families channel short-term savings to credit repayments.
Some households use informal savings, like savings groups, due to the rigid structures of formal financial products, such as minimum account balance requirements.
Preparing for emergencies and achieving key aspirations such as building a home, buying land, and financing education are the primary motivations for saving.
Transactions for saving at home are of meaningful size, suggesting a potential opportunity for formal savings.
Respondents value certainty and predictability, but at the same time, they appreciate and need flexibility in financial products.

FINDINGS

This section has two parts:

- The first section outlines how people meet their financial needs. It uses the data from the survey to explore common use cases and the financial devices that people choose. The outcomes are analysed from a market perspective to see whether the financial sector contributes to needs satisfaction.
- The second section takes a closer look at the transactional data from the commercial bank about the usage of financial products. There are statistical techniques to identify distinct customer segments based on the intensity of usage of debit and credit cards. Also, there is a comparative exercise about the usage of formal and informal financial devices of persons that hold a saving account. It was made based in the merged data set, which links transactional data with the survey's data.⁵

How do people meet their financial needs?

Even though Mexico has made remarkable progress in extending financial inclusion, the study of financial needs shows that the formal financial sector is generally not the primary channel for people to meet their financial needs. Cash continues to dominate when they need to make or receive payments. When people faced a financial shock or cannot meet their liquidity needs within an income cycle, most of them turn to their families and social network first, rather than to formal financial services. When it comes to meeting goals, people tend to use the cash saved at home,

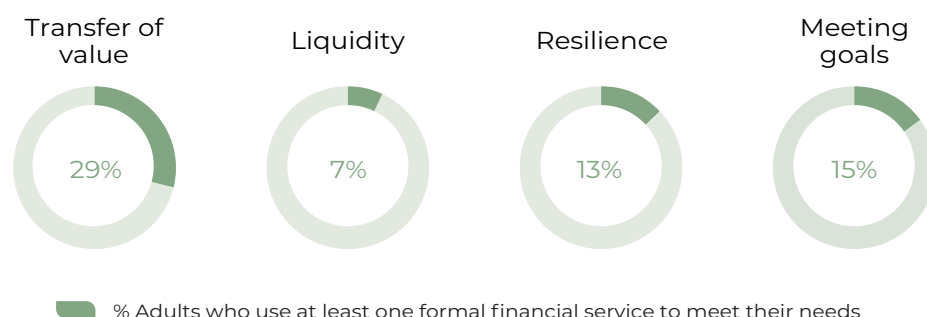
rather than formal savings or credits. This highlights a significant gap in the market not yet served by formal financial services.

Figure 3 shows the split between formal and informal financial devices usage for each of the four needs. Each circle represents the adults who expressed use cases linked to that need. For example, of all the adults who are expressing a use case for meeting goals (such as wanting to buy a house or save for their children's education), only 15% reported using a formal financial service.

5/ Note that the sample of clients in the merged data was too small to conduct meaningful statistical analysis. Thus, it was used to derive indicative insights across the two data sources.

Use of formal financial services, by adults expressing each need⁶

FIGURE 3



Source: Puebla Financial Needs survey (2017).

To understand why the uptake of formal financial services towards needs is so low; first, it is needed to understand why people choose specific services and not others. To this end, the survey included a series of questions designed to gauge the importance of certain products or providers attributes in determining why people choose certain device mixes to meet their use cases. This generated a large volume of information from which there are the following patterns:

- Formal services are selected more for their functional benefits (i.e. the product delivers functional value at a reasonable cost).

- Informal or social devices are chosen for their relational benefits (i.e., the population trusts the provider and feels a sense of belonging when using their product).

- All socio-economic strata skew towards the relational aspects provided by social devices, except for the highest socio-economic segments, which emphasise functional benefits instead.

The following sub-sections, unpack the details of how people meet their use cases in each of the four need categories.

Transfer of value

Most respondents expressed the need to transfer cash or digital value from one person to another. The transfer of value use cases can be grouped into how people receive income and how they make payments. For example, the income include wages and remittances, and payments include daily purchases such as rent, school tuitions, and utilities, as well as sending remittances to others.

The following results are based on all adults in Puebla. The bars represent how the income was received, or the payment was made: was it through a digital (formal) channel or in cash?

Income

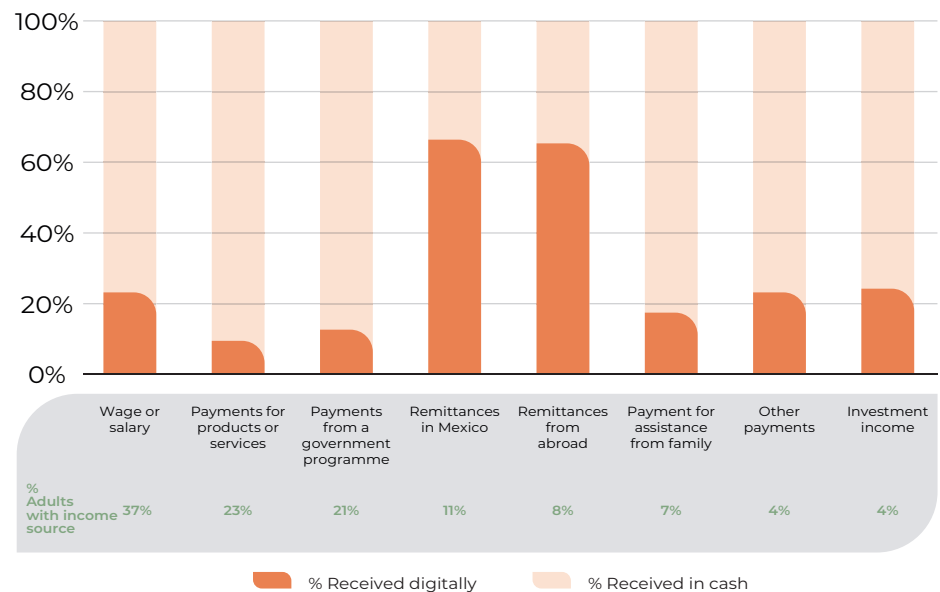
Most adults receive an income in cash. For example, 37% of adults receive an income from wages, but more than three-quarters of those receive it in cash. Although a high proportion of remittances are received digitally (international 67% and domestic 64%), only a small number of adults in Puebla receive such remittances (11% and 8%, respectively). Based on this, remittances seem to be the most digitised financial service. However, a large

6/ Transfer of value n=1,139; Liquidity n = 700; Resilience n = 561; Meeting goals n = 683

proportion of those transactions are through e-money transmitters (44%). This implies a cash link, as the transaction is conducted over the counter, where a sender cashes in an amount that is wired digitally and finally cashed out.

How do people receive their income?⁷

FIGURE 4



Source: Puebla Financial Needs survey (2017).

Note. The survey did not capture how value is stored once it received. If received digitally, is it converted to cash or vice versa? This line of inquiry would add value to future surveys.

Payments

Cash also remains the dominant means of making payments. The two most significant use cases reported for payments are daily expenses or purchases (91%) and regular payments (90%), which includes the use cases of rent, school fees, and utility payments. Both of these are predominantly paid in cash (94% and 90%, respectively). Fewer adults expressed a use case for other regular payments for non-essentials such as TV and insurance (45%).

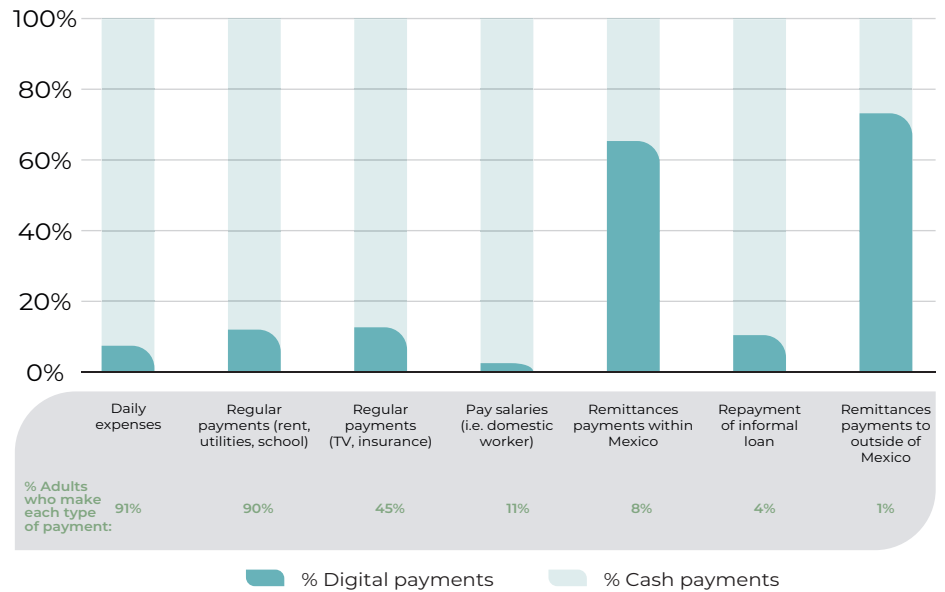
Consistent with the findings on income from remittances, most people who send money domestically (64%) or outside the country (75%) use the formal financial sector to do so. However, this use case represents only a small number of adults (8% and 1%). Furthermore, only 25% of those who send remittances do so via bank transfers, rather than using cash or e-money transmitters.⁸

7/ n= 1,154

8/ In the case of e-money transmitters, remitters often deposit cash with an agent or withdraw cash from agent. Therefore, this type of transaction is distinct from an end-to-end digital transaction such as an electronic bank transfer.

How do people make payments?⁹

FIGURE 5



Source: Puebla Financial Needs survey (2017).

The ENIF 2018 data revealed a similar pattern, the bulk of adults in Mexico (91%) use cash as predominant payment means when making purchases of 500 pesos or less; for purchases of 501 pesos or more, the percentage decreases slightly to 87%.

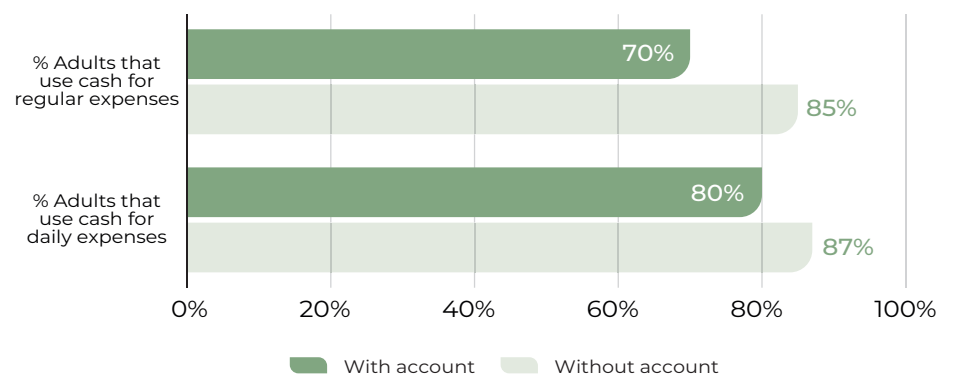
Bank account ownership, financial literacy and cash usage

The findings show that the use of cash remains high, even for those who have an account. It complements the ENIF 2018 findings that show that cash usage is high even for those who hold an account.

The two largest transfer of value use cases (daily expenses and regular payments) remain heavily cash-based. As illustrated in Figure 6, 80% of adults who have a bank account still use cash for daily expenses, which is only slightly lower than adults without an account (87%).

Cash usage by adults with and without bank account¹⁰

FIGURE 6



9/ n = 1,154

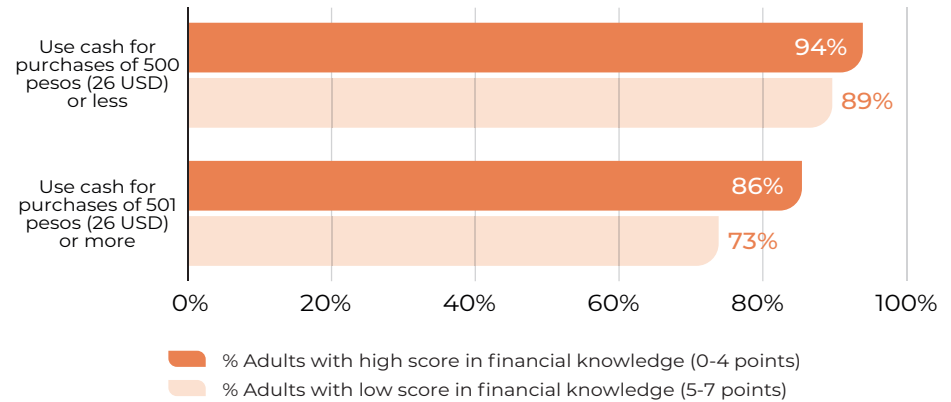
10/ Regular expenses n = 1,154; Daily expenses n = 1,145; With account n = 293; Without account n = 859. Note that this does not denote exclusive cash usage.

Source: Puebla Financial Needs survey (2017).

At the same time, ENIF 2018 reveals that usage of cash is almost the same, regardless of the financial knowledge of the respondent¹¹. The difference between those adults with a high financial knowledge score (5-7 points) and those with a low score (0-4 points) is less than 5%, as illustrated in Figure 7.

Cash usage by
score of financial
knowledge

FIGURE 7



Source: ENIF 2018, nationally representative.

Summary

Cash dominates across all transfer of value use cases. A notable proportion of adults have an account, yet the majority of them continue to make payments in cash. Even when income or payments are primarily conducted via the formal financial sector, as is the case for remittances, there is often still a cash link. As the discussion in Section 4.2 shows, many digital transactions also involve cash-in or cash-out at an ATM.

This preference for cash is not a function of low financial literacy. From a policy perspective, strengthening an environment with more digital-payment options and receipt of income is fundamental to reduce the use of cash. Supporting policies would need to incentivise regular payment providers as well as small and medium-sized merchants to offer digital-payment solutions for customers, and must ensure that, for consumers, digital payments are just as cost-effective, convenient and ubiquitous as cash. The introduction of the CoDi instant payment system in Mexico bodes well for digital payments to mimic and compete with cash¹². However, it is about to launch.

11/ Financial knowledge is gauged in the ENIF 2018 survey using the OECD methodology, as contained in the 2015 OECD Toolkit for Measuring Financial Literacy and Financial Inclusion. The maximum score for this sub-index is 7 points.

12/ For an overview of the CoDi payment system for Mexico, see for example, https://cbpaymentsnews.com/assets/CBPN_Volume1/CBPN-December-2018-Vol1_4_Web.pdf. The isight2impact study in Nigeria showed rapid uptake of the instant payment equivalent in Nigeria, NIP.

Managing liquidity

The liquidity need is about balancing your income and expenses across income cycles. People use financial services to enable such consumption smoothing. When a person is unable to meet their expenses within a regular income cycle, it creates liquidity distress and triggers a need for financial services to help regain liquidity. An important financial inclusion objective is to understand whether people are at risk of relying on situations that reduce their long-term wealth to stay afloat in the short term.

People experience liquidity shortages to varying degrees. In this sample, there is a distinction between people who did not experience a liquidity shortfall within the past 12 months (classified as “no distress”), those who report experiencing a liquidity constraint in one month (“some distress”) and those who experienced it in more than one month (“severe distress”).

As Figure 8 indicates, close to half of the population (48%) experienced severe distress in the last year, while

14% experienced some distress. Only 39% of the population could cover day-to-day expenses out of their regular income throughout the year. These results are similar to those obtained in the ENIF 2018, in which 42% of the population were not able to cover their monthly expenses in any month of the last year.

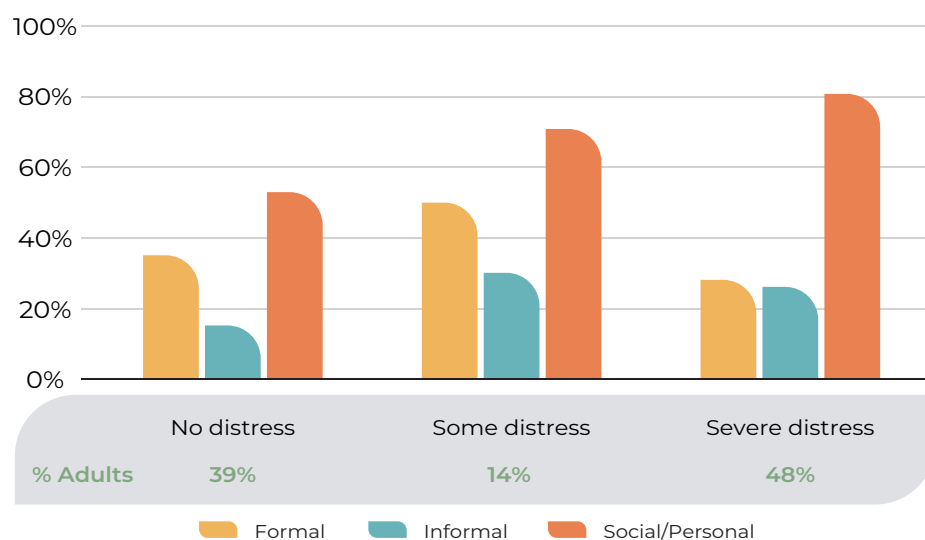
Dealing with liquidity shortfalls

Figure 8 shows the uptake of all financial devices by people who experienced different states of liquidity distress, divided into the following categories: informal, formal, and social/ personal devices.

The results show that across all categories of distress, there is a strong reliance on social networks, relatives, and personal devices (i.e. money at home, selling an asset or cutting back on consumption), rather than formal financial services. There is a correlation between overall reliance on social, personal mechanisms and the level of liquidity distress experienced.

Device uptake by liquidity distress level¹³

FIGURE 8



13/ n = 1,154. This graph shows the uptake of all financial devices regardless of whether a device was used towards managing a liquidity need.

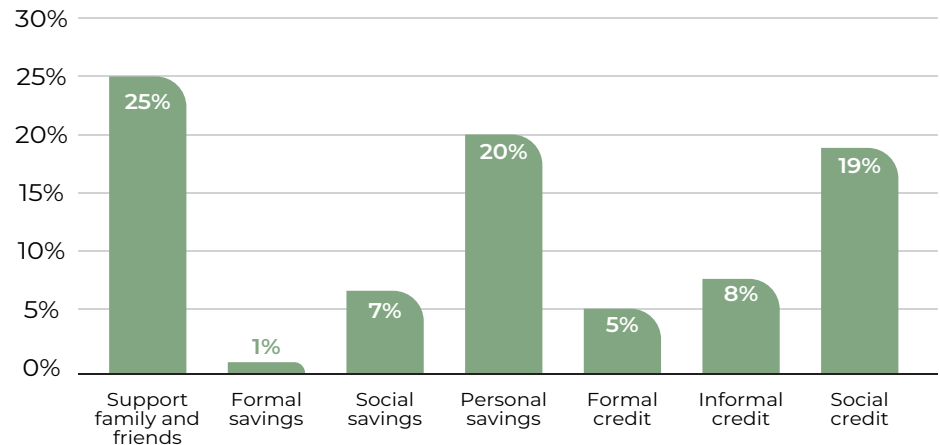
Source: Puebla Financial Needs survey (2017).

Further questions in the survey explored the product market lens for those experiencing liquidity distresses. Which devices did people turn to when they experienced liquidity distress? Was the device that people turned to during times of liquidity need any

form of credit? Did it come from savings? Was it a donation? Figure 9 suggests that the distribution between assistance, credit, and savings is similar, with slightly more people drawing on credit than on savings.

Percentage of adults that use different devices towards liquidity need¹⁴

FIGURE 9



Source: Puebla Financial Needs survey (2017).

Again, these findings support that of the ENIF 2018, which shows that 62% of those who could not to cover their expenses used their personal savings in response, 63%

used social credit and only 9% used formal credit¹⁵. These percentages show very little variation with regard to financial knowledge scores¹⁶, as illustrated in Figure 10.

Percentage of persons with distress using different types of products to meet liquidity needs, by financial knowledge score

FIGURE 10



Source: ENIF 2018, nationally representative.

14/ n = 700.

15/ The sum of the percentages may be greater than 100%, as the respondent could answer with more than one option.

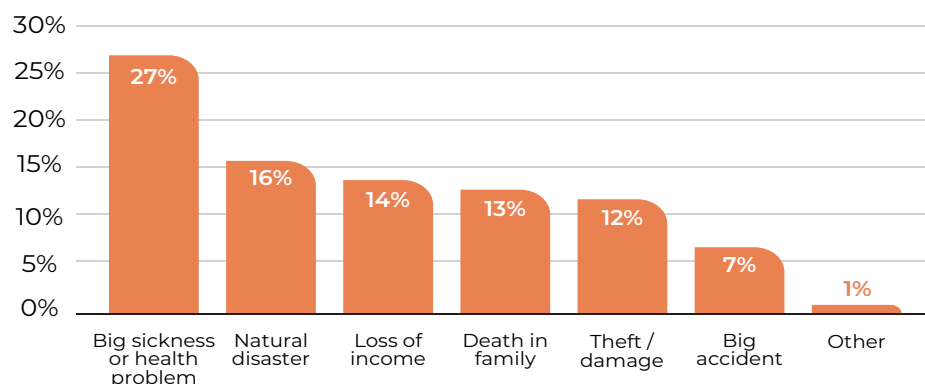
16/ The maximum score for this sub-index is 7 points (OECD, 2015).

How do people address resilience needs?

The resilience need refers to the claim for dealing with unexpected shocks that have a financial impact. Figure 11 shows the most commonly cited resilience use cases amongst all adults. Sickness and health-related costs represent the largest use case (27%), followed by natural disasters (16%) and loss of income (14%). It is important to note that Puebla suffered an earthquake earlier during the year in which the survey was administered, which may have inflated the number of adults expressing about natural disasters.

Financial shocks experienced by respondents in the last 12 months¹⁷

FIGURE 11



Source: Puebla Financial Needs survey (2017).

Coping with the impact of financial shocks

As with liquidity, Figure 12 shows that most people who experienced a resilience use case turned to their social circle to cope with the impact of the shock, rather than using formal financial services. Nearly a third (32%) of adults who experienced a shock in the last 12 months turned to their social network for credit, while 30% relied on support from within their social circle. Dealing with financial shocks with their own resources also plays an important role. This includes using their savings or other means, such as selling an asset (together 32%). The formal sector plays a small role in addressing resilience needs: almost no-one had insurance¹⁸, and only 10% turned to formal credit providers.

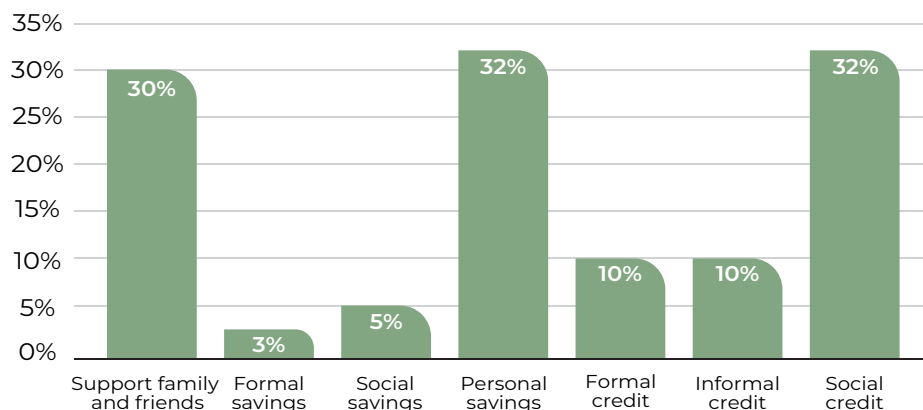
This highlights the opportunity for formal financial services to play a more significant role, providing better-suited products that help people address their resilience needs.

17/ n = 1,154.

18/ Note that the ENIF 2018 survey, which is nationally representative, detected higher levels of insurance penetration overall.

Devices to address resilience use cases¹⁹

FIGURE 12

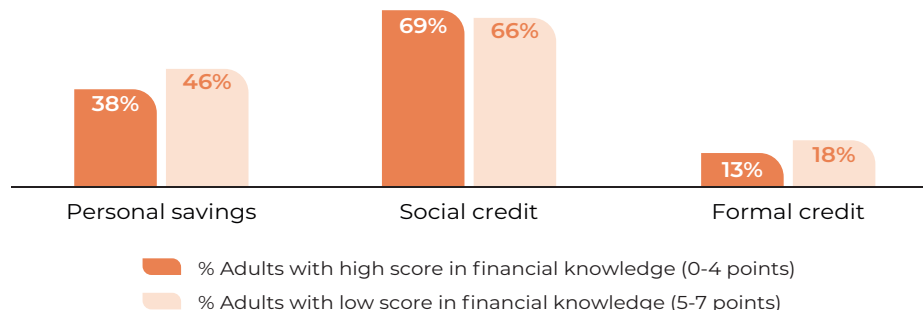


Source: Puebla Financial Needs survey (2017).

Again, these findings support the results from the ENIF 2018: when asked a hypothetical question on how they would pay for an economic emergency equivalent to one month's income, 67% of adults said they would ask for a credit from family, friends or acquaintances, 43% would pay with their savings and 16% with formal credit²⁰. These percentages show very little variation with regards to financial knowledge score of population, as illustrated in Figure 13.

Devices to pay for a hypothetical economic emergency by the score of financial knowledge

FIGURE 13



Source: ENIF 2018, nationally representative.

Ability and time to recover from a financial shock

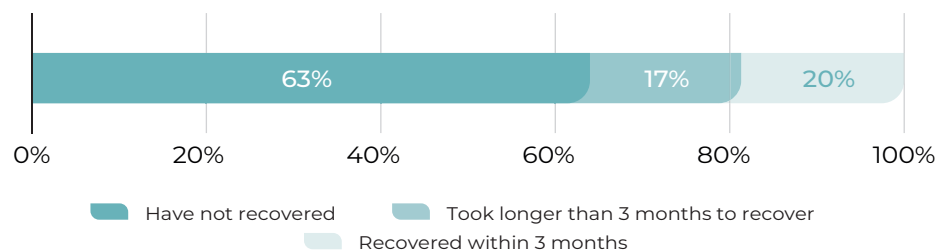
Survey respondents who had experienced a financial shock more than three months ago during the last year were asked about how long it took them to recover. At the time of the survey, 63% had not yet recovered, as indicated in Figure 14:

19/ n = 561

20/ The sum of the percentages may be higher than 100%, as the informant could answer with more than one option.

Proportion of people who experienced a financial shock more than three months ago, by recovery status²¹

FIGURE 14



Source: Puebla Financial Needs survey (2017).

These results point to high levels of vulnerability: almost two out of every three respondents are not able to recover their previous financial position within three months of a risk event, suggesting that they are not resilient to financial shocks. This creates a policy imperative to ensure that the financial sector works to support building people's resilience. Although people rely primarily on informal mechanisms, these choices are not ensuring that they recover without welfare losses. A complementary relationship between the formal and informal sector could deliver better outcomes and reduce the time it takes to recover from a financial shock.

The next section looks at how people engage with the financial sector to meet their long-term financial needs.

How do population meet their goals?

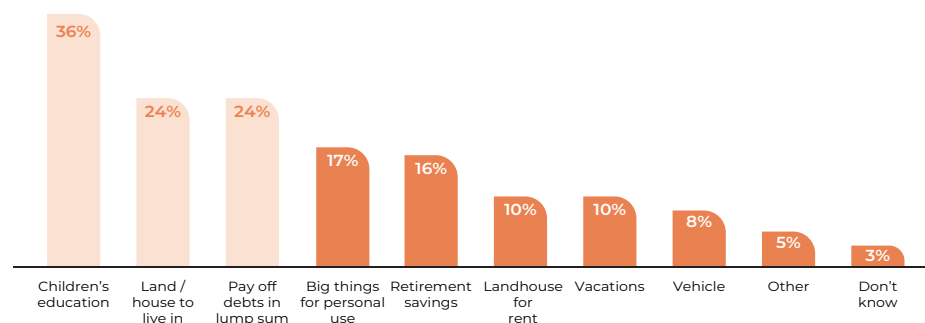


The meeting-goals need refers to people's long-term funding plans to achieve life or business objectives or obligations that require funding across multiple income cycles. Of all adults of Puebla's survey, the most commonly expressed goals

were children's education (36%), buying land or a house to live in (24%) and paying off debts (24%). In Figure 15, the top three use cases are highlighted light orange. These findings closely mirror the Financial Diaries findings.

Percentage of adults expressing different goal's use cases²²

FIGURE 15



Source: Puebla Financial Needs survey (2017).

21/ n = 408.

22/ n = 1,154.

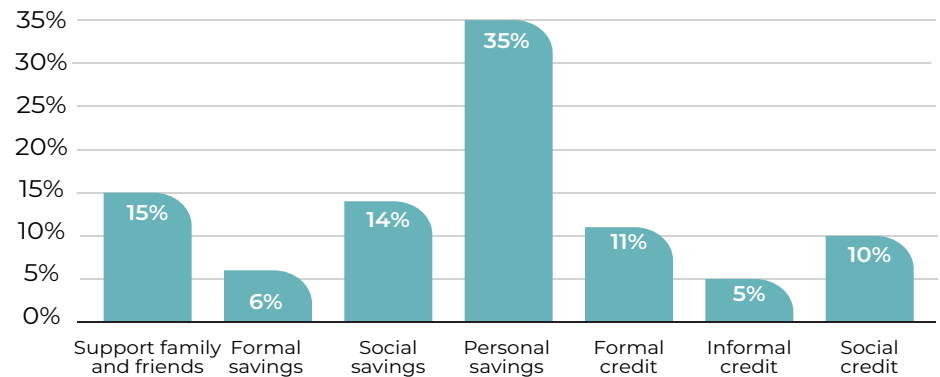
Device choices for meeting goals

As Figure 16 shows, most of the respondents who expressed a use case for meeting goals utilise their savings (35%). Social networks also play a prominent role, with 15% of people seeking support from family and friends, 14% using the money

saved within their network and 10% borrowing from their social circles. The formal sector plays a larger role in meeting goals relative to the other financial needs. The usage of both formal credit (at 11%) and formal savings (6%) is higher for meeting goals than for resilience and liquidity.

Device usage to meet goals, as percentage of all adults expressing the meeting-goal need²³

FIGURE 16



Source: Puebla Financial Needs survey (2017).

The highlighted opportunity is for targeting formal products to help people attain their goals, for example savings products earmarked for education expenses.

The ENIF 2018 findings emphasize retirement as a use case where there is a particular opportunity for the formal financial sector. The most common response to the question of how adults expect to do during their retirement is through financial support from family and friends (57%). The second most chosen financial device is through

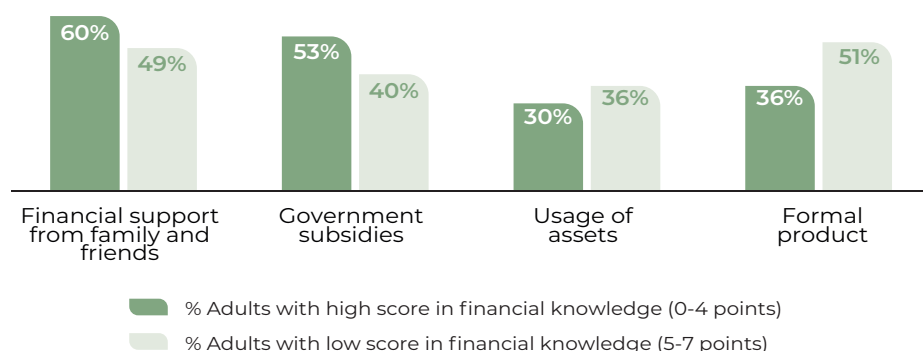
government subsidies (48%). Of all adults, 35% indicate that they will draw on their assets (rent or sale). Significantly, just less than half of the population (47%) mentioned that they would use on a formal financial device for their retirement²⁴. This shows a significant role in the formal financial sector in meeting the retirement use case. Unlike for the other needs, financial knowledge does make a significant difference in the likelihood of taking up a formal financial device towards retirement, as Figure 17 illustrates.

23/ n = 683.

24/ The sum of the percentages may be greater than 100%, as the informant could answer with more than one option.

Percentage of adults planning to cover expenses during retirement through various devices, by financial knowledge score

FIGURE 17



Source: ENIF 2018, nationally representative.

Use of financial devices

Building up from the financial needs, the following analyses how consumers use the financial devices that they do have. By using transactional data, together with the survey data, the new knowledge generated can add value for understanding financial inclusion, with important implications for related policy and market approaches.

Most of the analysis in this section is based on transactional data from a sample of clients that use debit and credit card from a commercial bank. This per-customer transactional data, with its associated demographic information, gives a more accurate snapshot of the frequency of card usage, plus savings and spending behaviours. Subsequently, a more detailed analytical process was then used to cluster customers into usage intensity segments, profile each segment according to its demographic profile, and build a model to explain the determinants of usage.

Finally, the transactional data for a sub-sample of clients were linked to the same customers' responses in an additional sample of the Puebla's survey to gain more understanding of such customers' use cases and financial lives.

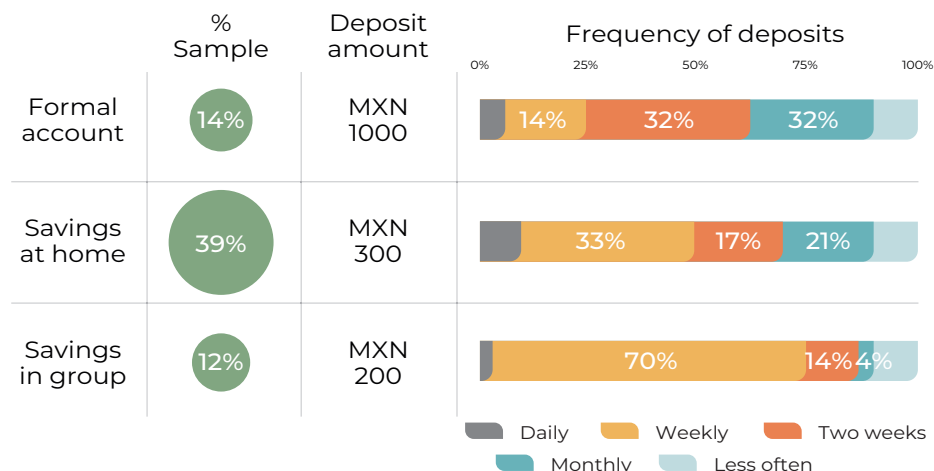
Savings behaviour

The survey results suggest that savings behaviour differs between informal and formal devices. In Figure 18, it is seen that – of the respondents in Puebla who reported saving money – the majority (39%) save their money at home in relatively small amounts. Likewise, those saving in social groups save

only small amounts (an average of 200 pesos), but savings are mostly made weekly. In contrast, those who save using formal accounts tend to make higher-value (at a median value of 1,000 pesos) deposits on a less frequent (fortnightly or monthly) basis.

Savings behaviour²⁵

FIGURE 18



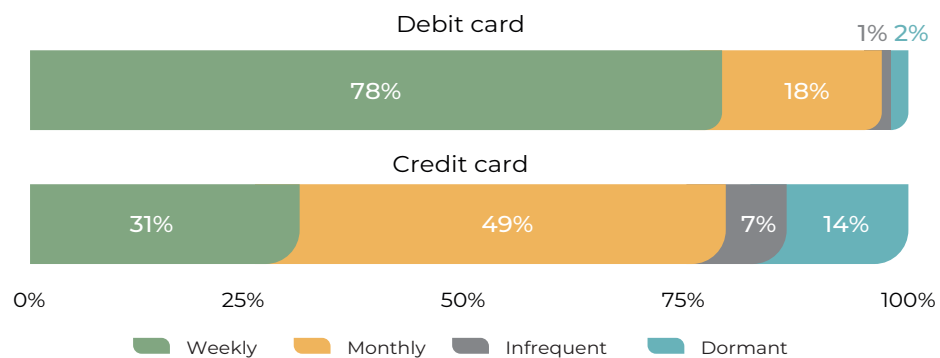
Source: Puebla Financial Needs survey (2017).

Frequency of transactions

Transactional data allows exploring the frequency of bank account and card usage with a higher degree of accuracy than what is rendered by the survey. High levels of debit card usage were found, with 78% of customers using their cards every week. Credit card usage is also wide, with almost half using their cards on a monthly basis and 31% using them weekly. Although the data is from a single bank, and as such is only indicative, it suggests a relatively high frequency of card usage.

Frequency of card transactions²⁶

FIGURE 19



Source: Bank transactional data.

25/ Group savings n = 146, Savings at home n = 457, Formal account n = 124

26/ Debit card n = 357,572; Credit card n = 77,697

27/ In ENIF 2018, adults were asked about the reasons for not using credit and debit cards, the two most frequent cited reasons for debit cards were "prefer to pay in cash" (61%) and "lack of trust" (12%). The two most frequent cited reasons for credit cards were "only use it for emergencies" (39%) and "do not like to be indebted" (35%).

The next sub-section explores how the cards are used by customers, followed by a more detailed analysis on merchant transactions²⁷.

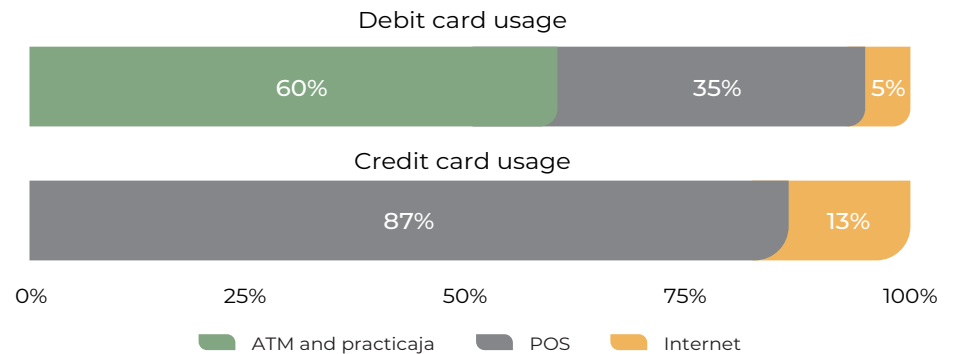
Channels used

The transactional data was further analysed to identify how customers used their cards (see Figure 20). This revealed that 60% of debit card usage was at an ATM or in-store terminal ("practicaja") transactions. The prevalence of channels with a cash interface resonates with the findings

on high cash usage to meet daily needs and regular payments, even by those with accounts. However, 35% of debit card usage and 87% of credit card usage was for purchases using point-of-sale (POS) machines and a smaller amount in online sales (5% and 13%, respectively).

Usage of cards, by channel²⁸

FIGURE 20



Source: Bank transactional data.

The following sub-section addresses the specific merchant types that drive card usage to identify insights on specific use cases for digital payments.

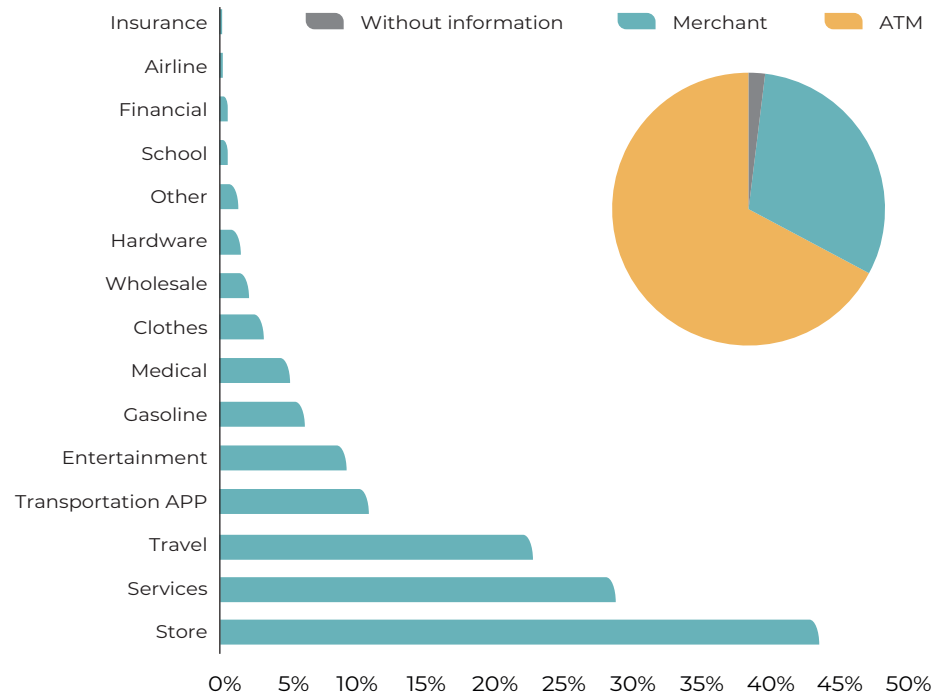
Merchant analysis

Using the codes linked to POS transactions, it was possible to roughly identify how people spent their money when using a credit or debit card. In Figure 21, the pie-chart represents the share of debit card usage at merchant POS terminals, and the bar chart represents the categories for POS usage.

28/ Debit card n = 357,572; Credit card n = 77,697

Merchant analysis for debit card POS payments²⁹

FIGURE 21



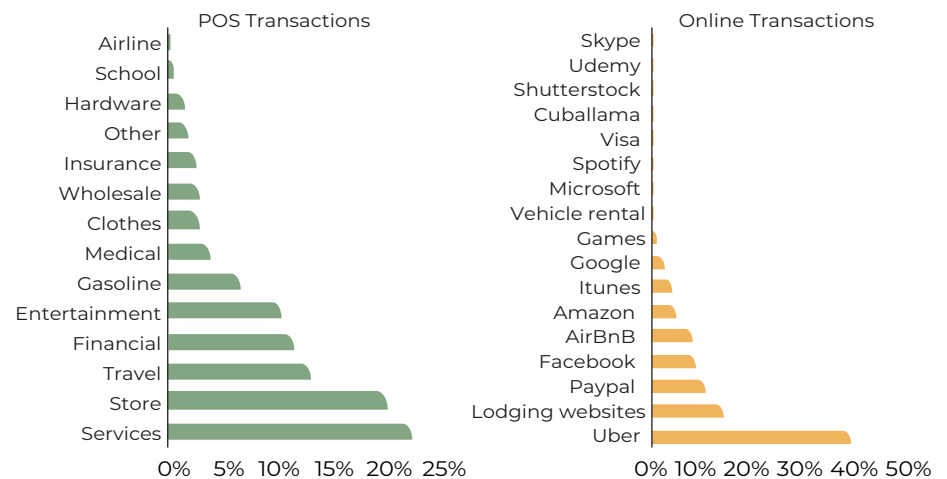
Source: Bank transactional data.

The full details for each merchant were not available; thus, some of the groupings are quite broad, such as "store" and "services." Nevertheless, the data gives insights into where digitisation is making inroads with merchants. Notable is the sizable proportion spent on transportation and travel through digital platforms.

Figure 22 shows what credit cards were used for, using both POS and online purchases. The most recurrent online payments are via international digital platforms. POS transactions with credit cards are similar to debit card usage.

Credit card usage for POS and online transactions³⁰

FIGURE 22



29/ n = 9,734,193.

30/ POS n = 4,965,299; Internet n = 964,676

Source: Bank transactional data.

What drives higher usage?

To know what drives usage, statistical modelling approaches were applied to determine a usage intensity score³¹, which combined the information about the frequency of use and the date, the average monetary value of the transaction, and for how long they had been a client. Usage intensity was then modelled against demographic variables in the dataset to determine statistically significant determinants of higher usage. This revealed that:

- Income is the most important driver of usage, by a factor of several times.
- Education is strongly associated with higher usage.
- Living as a couple is also associated with higher usage, though less so than education and much less so than income.
- Gender and age have small but statistically significant effects.

However, this analysis does not provide a complete picture, as it only reveals the usage of formal financial services, particularly the credit card and debit card usage. It also cannot draw on determinants

other than the demographics included in the dataset to explain usage. For example, when asked about their reasons for device choice, the Puebla's survey respondents indicated that trust, a sense of belonging and convenience all play into these choices – a finding that held across most socio-economic strata. The transactional database usage model cannot account for such variables.

Moreover, transactional data cannot pronounce on how usage interplays with people's underlying financial use cases. Adding an understanding of the consumer perspective on device choices in response to financial needs reveals new insights on usage patterns and why customers choose certain device mixes.

In the following two sub-sections, transactional data is employed to create clusters based on usage patterns and demographics. Then, by linking the survey data for the same customers, customer usage profiles are developed and compared formal versus another device uptake towards financial needs.

31/ Each of the input variables was standardised, capped, and floored and divided into quintiles. Individuals were then assigned a usage score equal to the aggregate of their values (1-5) for each of the quintiles. The inverse of recency was used, to account for its inverse relationship with the other input variables.

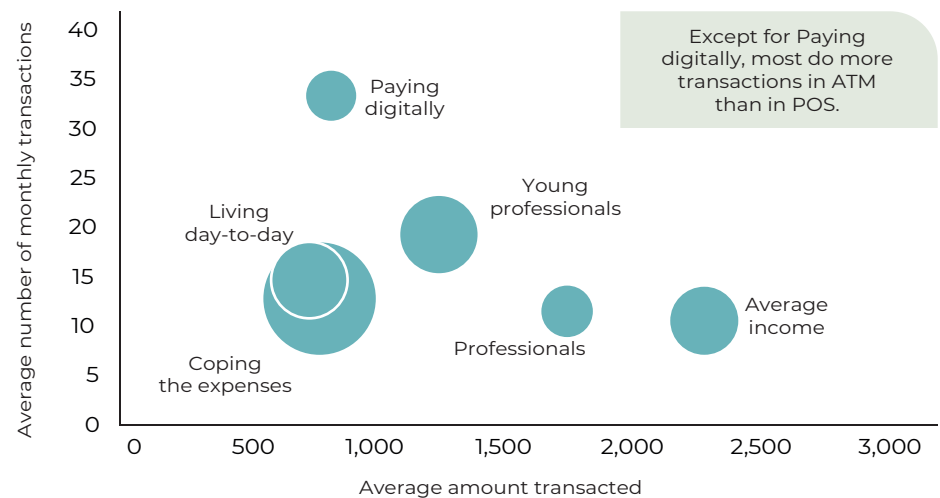
Using transactional data to create customer segments³²

Creating usage profiles reveals insights into customer behaviour and the size of those customer groupings. By separating the clusters, the differences can be shown to identify ways to deliver better value to customers.

Using statistical clustering techniques³³ applied to the debit card transactional database, customers who have similar usage profiles were identified. There were six statistically different segments based on the average value of a client's transactions and the number of monthly transactions. To each segment was assigned a pseudonym to describe their characteristics. These segments are laid out in Figure 23. The higher up the bubbles, the more frequently the group transacts. Each segment transacts relatively frequently, ranging from 11 to 33 transactions per month. The population segments represented by the bubbles to the right transact with higher values than those to the left.

Customer segments³⁴

FIGURE 23



Source: Bank transactional data

The largest cluster of clients is "Coping the expenses." These are typically young, lower-value and lower-frequency transactors. A large proportion of clients are grouped into the relatively high-frequency transactor segments of "Young professionals" or the high-value transaction "Average income". All customers segments, except for the small "Paying digitally", transact predominantly using ATM rather than POS or online sales.

Figure 24 provides a more detailed profile of each group, including their income, marital status, and level of education, which the regression analysis indicated to be the biggest drivers of usage.

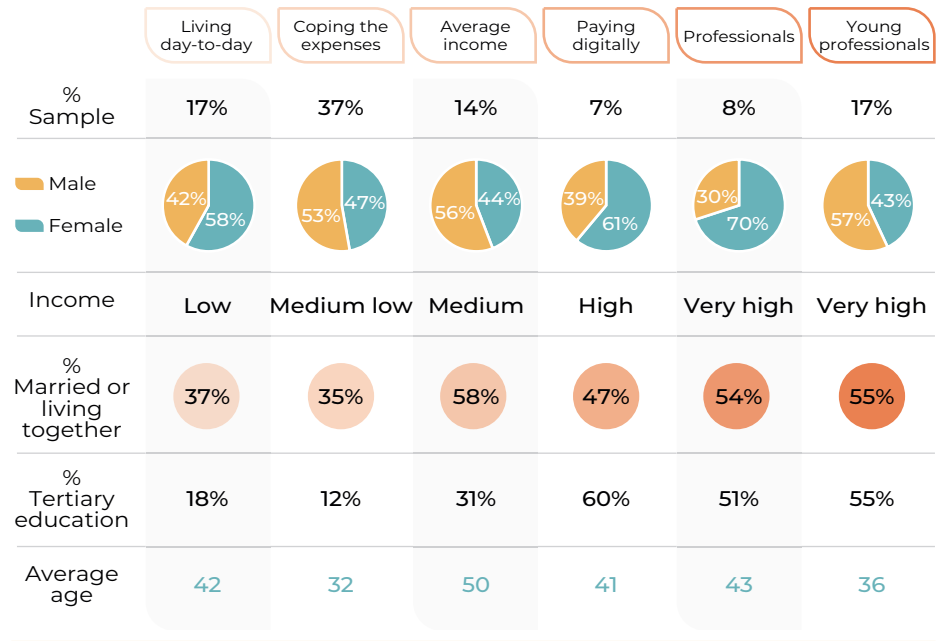
32/ A clustering exercise is a mathematical technique to identify clusters of observations that are most similar along a specified set of dimensions. This technique does not establish causality but is a descriptive tool that should be complemented by a thorough understanding of the context.

33/ K-means clustering on debit card data using the following as input variables: average number of transactions, average amount transacted, gender, age, income, and education.

34/ n = 350,674

Customer segment profiles³⁵

FIGURE 24



Source: Bank transactional data

- The “Living day-to-day” group, along with “Coping the expenses,” are the lowest-usage groups. It also has the lowest income and level of education and is mainly female.
- The “Average income” segment transacts in high amounts, but this may represent large ATM withdrawals to meet their needs and those of their families, given their higher average age and likelihood of being married.
- The “Paying digitally” and the “Professionals” segments are predominately women in their early 40s, with high levels of education and income.
- “Young professionals”, who transact more frequently than the “Professionals” cluster, have a lower average age and are more likely to be male.
- Although the “Paying digitally” segment transacts in smaller amounts, their average number of transactions is significantly higher than others, suggesting that they may be more likely to use their cards for smaller day-to-day payments.

New insights from combining the transactional and demand-side data

The bank data shows customers with reasonably high levels of usage of formal financial services: all six clusters transact relatively frequently on their bank accounts, with values, depending on income levels. However, adding data from the survey for the same customers reveals that formal accounts are only part of the picture. This analysis shows that across all clusters, customers meet their needs mostly outside of the formal financial services sector. Only the “Paying digitally” segment a larger proportion reported using formal financial services instead of informal devices to meet all their needs.

Note that the challenges with linking bank customers in the sample database with demand-side surveys, as outlined in Section 3, resulted in a small sample. Thus,

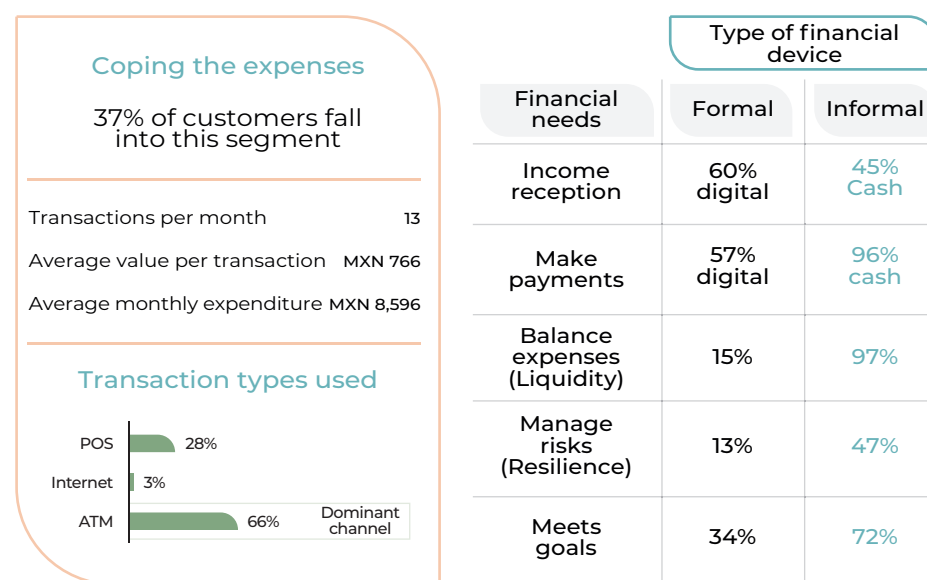
the findings here are indicative of patterns and trends in how bank customers transact both formally and informally, but they are not representative.

Three of the six profiles are outlined below, drawing on the merged dataset. The profiles combine the transaction data insights (left) and the survey data (right-hand side table), which reveals the percentage of the cluster reporting formal versus informal³⁶ device uptake towards each need. It is important to note that most customers use both digital and cash to meet needs; hence, the percentages indicated add up to more than 100%.

The “Coping the expenses” segment is the largest cluster, and customers in this cluster make the fewest transactions per month.

“Coping the expenses” profile³⁷

FIGURE 25



Source: Merged dataset (debit card transactional data overlaid with demand-side survey responses for the same respondents)

36/ Applying the broad definition of informal, namely any device provided by an informal institution, or any social or personal device.

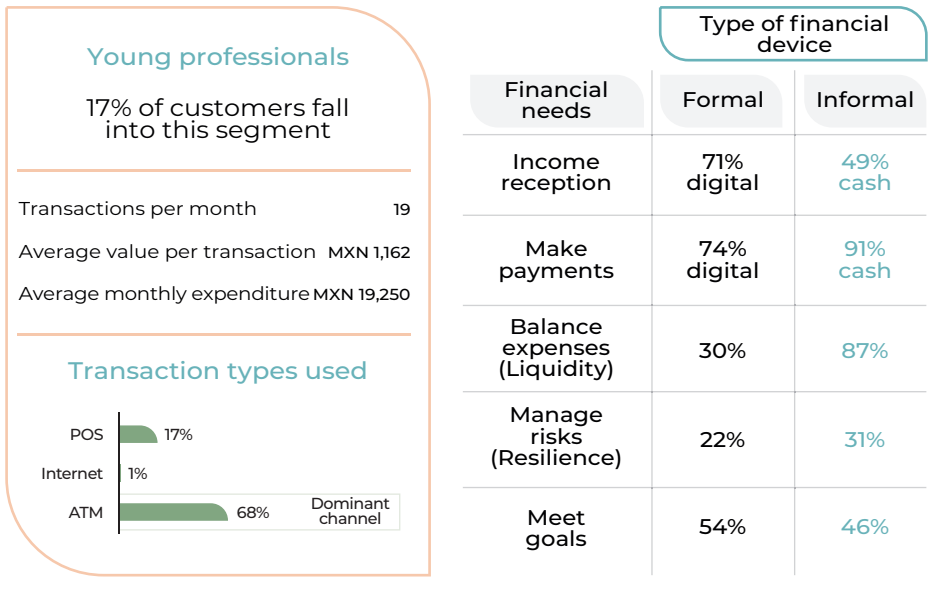
37/ Merged sample n = 68;
Transaction sample n = 129,433

Although their ATM usage is high, their use of POS is higher than some higher-income clusters, such as the “Young professionals.” Adding the data from the survey shows us that, in meeting their needs, “Coping the expenses” use a mix of formal and informal devices. Although 57% make some payments using digital means, they almost all use cash as well. The choice of informal devices dominates for liquidity, resilience, and meeting goals.

The “Young professionals” have a higher income and a corresponding higher monthly spend, but they make fewer POS transactions than the “Coping the expenses” segment. Although 74% report making digital payments, cash is used as well by almost all. The majority of customers use informal means to meet liquidity needs, but interestingly a higher number of customers use formal (as opposed to informal) means to meet goals.

“Young Professionals”³⁸

FIGURE 26



Source: Merged dataset (debit card transactional data overlaid with demand-side survey responses for the same respondents)

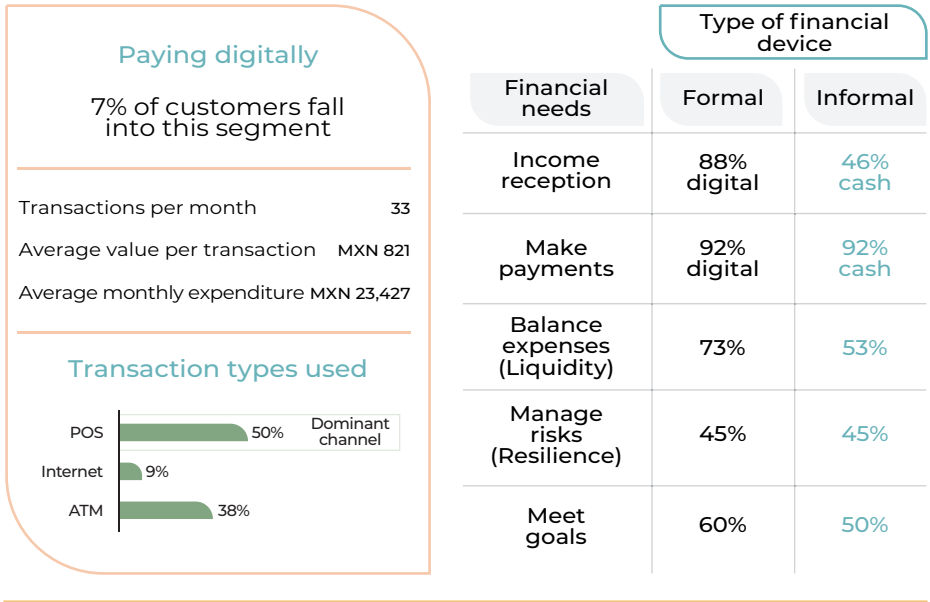
38/ Merged sample n = 38;
Transaction sample n = 59,895

The “Paying digitally” segment is a small group that has the highest frequency of transactions, often in smaller average amounts. This is the only cluster that uses POS as a dominant channel (rather than ATM) and that uses formal devices more than informal devices, towards each

need. Interestingly, cash, or cash as well as digital, is still used by 91%. As with the broader findings from the demand-side survey on how people meet use cases to transfer value, cash continues to be a dominant mode of payment, albeit alongside digital here.

"Paying digitally"³⁹

FIGURE 27



Source: Merged dataset (debit card transactional data overlaid with demand-side survey responses for the same respondents)

39/ Merged sample n = 72;
Transaction sample n = 25,669

WHY DO THESE FINDINGS MATTER?

The discussion above has shown that surveys and transactional datasets provide a view of people's financial lives and how they meet their needs. By merging the datasets for some customers, indicative profiles are developed of customer usage and behaviours. These insights can, in turn, be used by policymakers and financial service providers to state better strategies and approaches that can support financial inclusion for enhancing welfare.

Falling short of its policy purpose

Despite some formal device growth points, particularly pensions and accounts (ENIF 2018), remittances and receiving income (as outlined in Figure 4), the findings suggest that, overall, consumers' choice of the portfolio of devices that they use in each case of use, favors informal financial devices. This holds across socio-economic strata⁴⁰ and all four financial needs.

The ENIF 2018 has shown that levels of financial knowledge and awareness are reasonably high; thus, people are making rational choices to use cash and informal services instead of the available formal financial services. The survey data reveals that informal services are preferred for the relational aspects, ease of access, and trust. Social and family networks are easy to access and flexible in times of need (for example, no minimum account balances or charges, and offer flexible access to funds). Cash is preferred because it is available, easy to use, interchangeable, and bears no apparent cost to consumers. The findings thus suggest that there is a mismatch between people's financial needs and the current market offering.

The policy imperative for leveraging financial services is strong, given high levels of financial vulnerability among the population: Thirty-seven percent (37%) of adults in the survey ran out of money in more than one month in the past year. Two out of three persons who had experienced a shock had still not recovered after three months. These issues affect those with, and those without, access to formal financial services. Thus, formal financial inclusion has a limited contribution at present in improving welfare. Using informal financial services does not ensure resilience either, despite people's preferences for such devices. This reinforces the imperative for a policy and market strategy to ensure that the formal financial sector can match the value proposition of informal, social and personal alternatives to meet people's underlying financial needs effectively.

40/ The demand-side survey data quoted throughout this report was segmented and analysed by key variables such as gender, education, and socio-economic class to compare device choices across consumer segments. Many of the findings held across socio-economic groups, including the use of cash and reliance on social networks to meet needs. The length of this report does not allow for the inclusion of all analysis details, but further details are available upon request.

A substantial market opportunity

The current prevalence of informal devices in meeting most use cases presents a market opportunity for financial service providers. Table 2 outlines how we see these opportunities panning out for each of the financial needs markets.

Market Opportunities

TABLE 2

Need	Transfer of value	Liquidity	Resilience	Meeting goals
Market opportunity (%) ⁴¹	71%	92%	90%	85%
Imperatives to unlock opportunity	Digital products must compete with cash on fungibility, presence, convenience and cost. Existing growth points: income receipts, remittances, payments.	Large opportunity if consumer incentives can change towards formal by ensuring that formal offering matches ease of access and flexibility of social and personal devices.	Informal cannot fully protect or build enough resilience. This presents an opportunity for formal financial services tailored to specific use cases, for example use-case earmarked savings and loans for health, or tangible, bundled insurance benefits.	ENIF 2018 shows pensions as an anchor for retirement use case. Opportunity for the same to happen for other key use cases, i.e. for housing or education, through goal-targeted product offering.

41/ "Untapped" is used here to denote percentage of respondents expressing a use case in this need category, but not using any form of formal device towards that use case.

