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**Mobile Money Usage: G2P
Programs and Financial Health
in Colombia**

FLPFI RESEARCH BRIEF



The Fletcher Leadership Program for Financial Inclusion (FLPFI) works with policymakers and regulators to design innovative and inclusive policies. The Research Brief Series is an integral part of the Eight Question Method for Policy Development (8QM), the core of the FLPFI curriculum.



EXECUTIVE SUMMARY

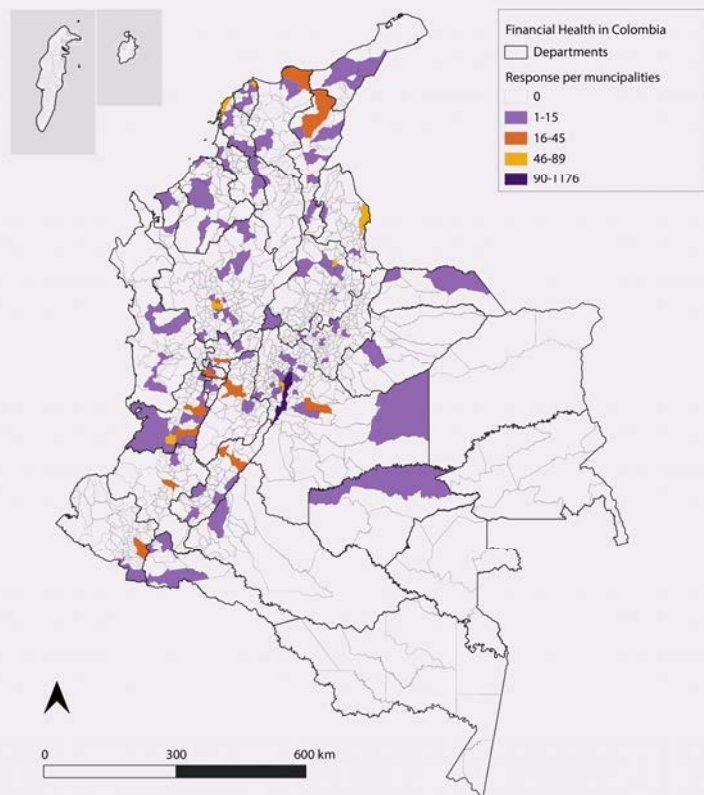
This brief presents the preliminary findings of a study that was conducted with the financial support and technical assistance of The Fletcher School Leadership Program for Financial Inclusion (FLPFI) and Bocconi University. The research project was designed and managed by the FLPFI Fellow Samir Kiuhan, as part of his PhD dissertation. He partnered with MOVii, the first regulated mobile money Fintech in Colombia, to perform a user study using survey methods to i) typify users, ii) evaluate how these idiosyncratic characteristics determine financial health (FH); and iii) test the effects of unconditional cash transfers on FH in an experimental environment.

Colombia, like many other countries, observed an important increase in the number of digital accounts during 2020 and 2021 due to social distancing measures, an unprecedented demand for remote services¹, and pandemic-related policies leveraging digital accounts to disburse government-to-person programs (G2P).

This study shows that these **new users have different saving and transactional profiles, as they are more prone to cash-out their subsidies rather than use the digital wallet for their financial activities.** To promote digital wallet usage and the economic empowerment that comes from it, this analysis shows **the correlation between having a debit card and the usage of the digital ecosystem enhance perceptions of mobile money's usefulness and ease of use, as well as promote financial education.** Furthermore, G2P users who opened accounts before the pandemic have higher levels of digital wallet usage and lower cash outs than those recently banked, an association that might point to a learning curve that should be explored in further research.

This demand-side study is a contribution to the policy discussion in different jurisdictions regarding using consumption smoothing programs to advance the additional goal of increasing financial inclusion. Given the recent advancements in terms of access, policymakers should now focus on digital wallet usage and financial health to improve long-run wellbeing.

1. Cambridge Centre for Alternative Finance, World Bank and World Economic Forum (2020) The Global Covid-19 FinTech Market Rapid Assessment Report, University of Cambridge, World Bank Group and the World Economic Forum.



Survey sample and distribution by Colombian municipalities

BACKGROUND

In 2020, the Government of Colombia, both at national and regional levels, chose digitally oriented financial institutions to disburse pandemic-related emergency cash assistance through mobile money. Since many of the beneficiaries were previously unbanked, this cash transfer program aimed to financially include a significant part of the population. The number of active electronic deposit accounts in the country rose from 2.1 million in December 2019 to 7.6 million a year later². MOVii, the first regulated fintech company in the country³, was chosen to disperse G2P funds using its digital wallet infrastructure to unbanked recipients and previous MOVii subsidy recipients. Due to this partnership with the government and a skyrocketing demand for remote services, the number of accounts open in MOVii more than doubled, reaching 2 million.

Since the positive effects of financial inclusion are not directly derived from the ownership of accounts, but from their appropriate and consistent use⁴, it is of utmost importance to analyze how

these new clients are using their financial accounts and what influences higher usage to ensure real financial inclusion and economic empowerment.

RESEARCH QUESTION, SAMPLE SELECTION, AND METHODOLOGY

This study aims to typify the mobile banking user, employing demographic and socioeconomic characteristics, and to find which of these stimulate mobile usage. Furthermore, the study analyzes the effect of cash transfers on different components of financial health.

For this purpose, the study conducted a survey to a subsample of MOVii users. The data collection process compiled information on demographics, socio-economic status, risk management, assets, financial education and perceptions of mobile money's usefulness and ease of use. The information from the survey was combined with administrative data from MOVii regarding basic demographics and G2P reciprocity status for robustness checks.

2. Financial Superintendency of Colombia. 2021. Financial Inclusion Report 2020.

3. Movii operates under a Specialized Society for Electronic Payments license, a type of financial institution created by the Financial Inclusion Law. Various Colombian FLPFI Alumni were involved in the design of this regulation, as documented by Welch, et al. 2017. Laying the Foundation: A Case Study on Colombia's Landmark 2014 Financial Inclusion Law.

4. World Economic Forum. (2018). "Advancing Financial Inclusion Metrics: Shifting from access to economic empowerment" https://www3.weforum.org/docs/WEF_White_Paper_Advancing_Financial_Inclusion_Metrics.pdf

The online survey was sent via SMS to around 50,000 active users using an individual level random process stratified by gender and G2P reciprocity status. The sample of 2,523 users that answered the survey is representative for both the total of MOVii users and the national digital account holder population⁵.

The questionnaire sent has different modules, aiming to characterize users in a comprehensive manner. Besides usual questions on demographic and socioeconomic characteristics, the survey asks users about financial burden, assets, risk strategies, financial education, financial access, and a module on technology acceptance that includes questions on perceived usefulness and ease of use of the app.

Finally, in the experimental part of the study, participating users were informed before completing the survey that they were entitled to receive a monetary gift, randomly assigned. They could opt out of the survey at any moment but would not receive any transfer until the survey was finished. This transitory income shock was not expected by the users, so no previous adjustments

in consumptions were anticipated. The effect of these incentives, emulating unconditional cash transfers, are measured on self-reported data. The randomized nature of the intervention allows a clear identification of the causal effects of the cash transfers.

Different regression analyses are run with this dataset using, as dependent variables, various gauges of financial health, including usage, and risk management strategies. The set of independent variables are mainly demographics and other user characteristics from the survey and the administrative data.

KEY FINDINGS

This study is one of the few studies from the demand side that typify mobile banking users in Colombia. Furthermore, **the survey manages to describe a new population segment that accessed financial services for the first time due to a pandemic-related cash emergency program**⁶. The most important takeaways from the characterization are the following⁷:

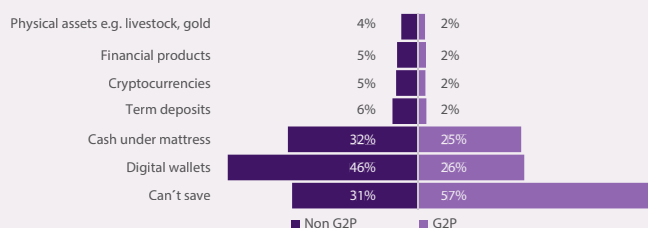
5. The sample distribution for variables such as socioeconomical strata (proxy for income) and occupation varies from the reported by the National Statistics Office DANE for the overall population. However, by comparing the collected data to the Financial Supervisor -SFC Financial Inclusion Report and DNP's CONPES 4005/2020, the sample shows a similar distribution regarding key characteristics such as gender, access to financial services, income and education.

6. 49% of the total sample are G2P beneficiaries and 90% of these did not have an account before the social assistance program.

7. Comparisons in brackets are between the groups described. Means of the variables shown are statistically different at the 5% significance level using T-tests.

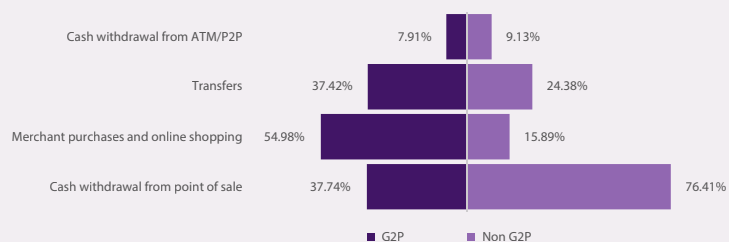
G2P recipients report different saving instruments and women save for different purposes compared to men

Saving instruments by subsidy status (multiple answers)



G2P recipients self-report a very different transactional profile

Transactional profile by G2P recipients (multiple answers)



• **G2P recipients report different saving behaviors compared to regular users:** They don't make enough money to save (57% vs 31%), and those able to save use mainly cash (25% vs 32%) and digital wallets (26% vs 46%).

• **Beneficiaries self-report a very different transactional profile:** G2P recipients are more prone to use their account to withdraw money (76% vs 38%), but less likely to use it for merchant purchases and online shopping (16% vs 55%) or perform transfers or P2P operations (24% vs 37%).

• **Those using MOVii for longer periods are more prone to use the digital ecosystem:** Those G2P recipients who opened a mobile money account

voluntarily before the pandemic do less cash out operations (57% vs 82%) and carry out more purchases (41% vs 8%)⁸.

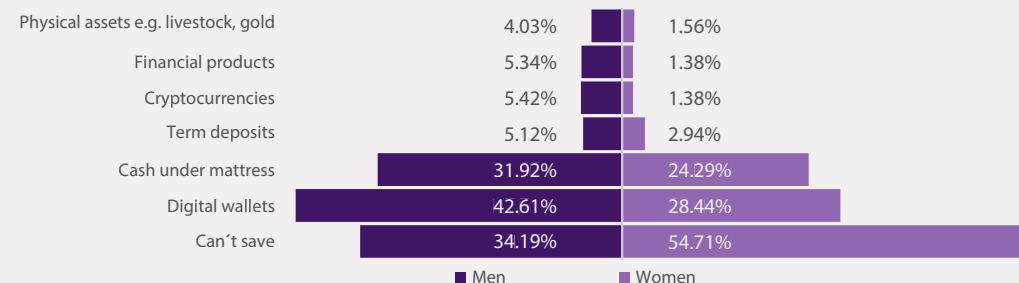
• **Subsidy recipients are demographically and socioeconomically different:** Compared to non-recipients, beneficiaries are relatively more often women (61% vs 31%), more prone to have a family (45% vs 32%), with more children (1.59 vs 0.66 kids), live with more people within the household (4.0 vs 3.67), are less educated (40% have more than a high school degree vs 65%), scored lower in the financial education test⁹(1.02 vs 1.23 right questions in average) and earn less than the minimum wage (65% vs 46%).

8. Given that the decision to cover individuals by G2P programs is based on a proxy means testing system, these two populations are likely to have similar socioeconomic conditions. However, the number of G2P MOVii users before the pandemic, 299, hinders the external validity.

9. This score is a context modified version of the methodology proposed by Lusardi, A., & Mitchell, O. (2011). Financial Literacy Around the World: An Overview. *Journal of Pension Economics and Finance*, 10(4), 497.



Saving instruments by sex (multiple answers)



- Women save for different purposes compared to men:** They are more likely to save to buy a house (47% vs 42%), but less prone to save for other motivations such as informal pensions (5% vs 8%), to fund entrepreneurship (24% vs 31%), buy appliances and other movable assets (10% vs 21%) or to fund vacations (15% vs 21%).

- Migrant population is more vulnerable:** Migrants represent 5.3% of the total sample, mostly from Venezuela. To the question of how they would get the money to deal with an emergency, they report to have less savings to cope with it (33% vs 46%),

they would expect to work more (24% vs 17%) and more likely be out of options in that scenario (21% vs 10%). Almost half of the participants who are migrants say they would have to rely on family or friends in case of a risk materializing.

In order to evaluate the effects on usage and financial health, a Probit robust regression analysis is run controlling for several idiosyncratic characteristics. Self-reported usage and access to financial services are used as dependent variables, as well as other indicators capturing financial management behavior:



- **Cash outs are predominant:** Some user characteristics that are strongly associated with PoS and ATM withdrawals are performed by 57% of the sample. Being a recently banked G2P recipient increases the probability of withdrawing money, while for old MOVII users receiving subsidies, the increase in probability is lower (29% vs 18%) compared to non-recipients. Having higher education and financial skills impact negatively the chance of using the app for cash outs. Using a household asset-based wealth index ¹⁰ and self-reported income categories, it is observed that income is negatively associated with cash out behaviors.
- **There are challenges to promote merchant purchases and online shopping:** Only 36% of the sample reports using the app for purchases, and this behavior is less common among G2P recipients. Regression analysis shows that new G2P users have a 20% lower probability of making transactions compared to non-G2P users, while for old users this probability is just 8% lower.

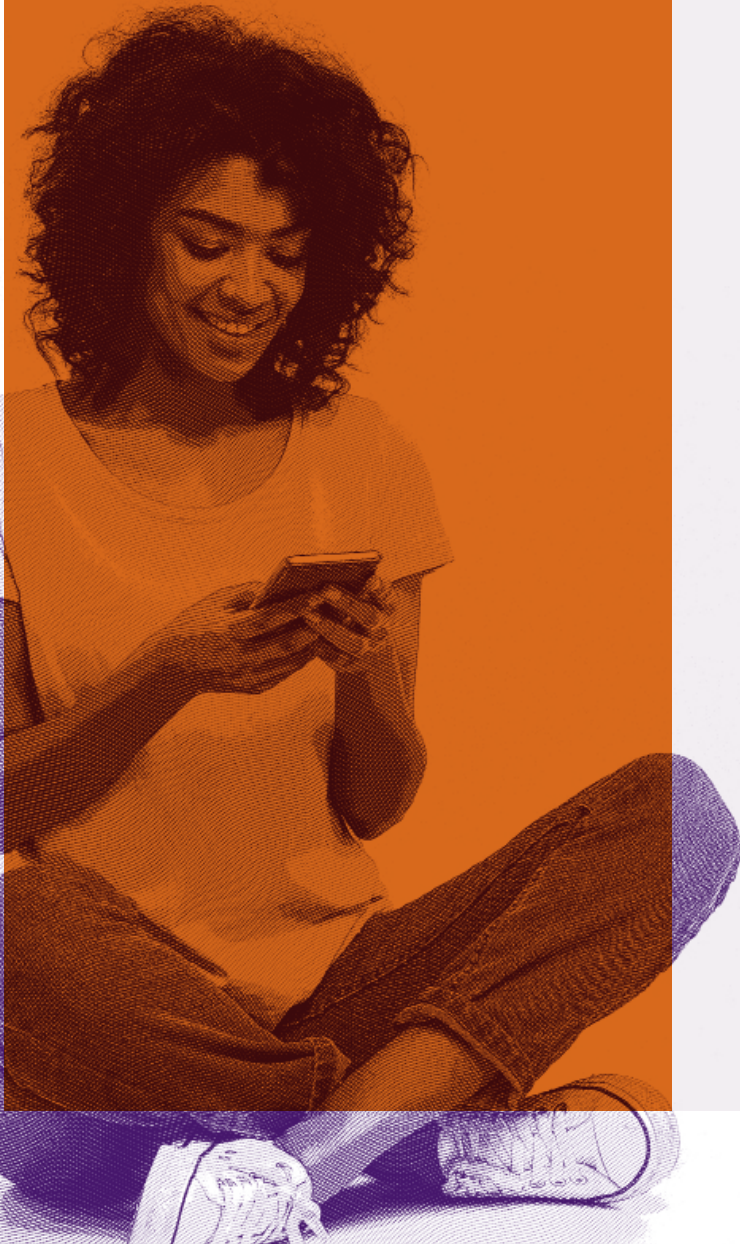
Being women, head of household and married, also negatively affects the likelihood of usage. The study also shows that having a debit card linked to the digital wallet is associated with an increase in the probability of using the account for purchases by 40%. The questions capturing users' perception to explain technology acceptance show that finding the app useful, innovative, and trustworthy are positively associated with higher purchases.

- **Correlates of Financial Health:** A continuous financial health indicator (FHI) is built following IPA's survey manual, where questions are classified between Access-to-Funds, Access-to-Finance and Financial Behavior ¹¹. Variables related to the type of debt that users have, preferences regarding different savings alternatives, planning profiles and coping mechanisms in cases of financial emergencies, access to credit and other types of financial services were included to generate the FHI, using a principal component analysis. Regression estimates ¹² show the positive relationship between the FHI and

10. This index was created using a principal components and factor analysis (PCA), as depicted in Ngo, Diana K.L., and Luc Christiaensen. (2019). "The Performance Of A Consumption Augmented Asset Index In Ranking Households And Identifying The Poor." *Review of Income and Wealth* 65 (4): 804–33. <https://doi.org/10.1111/roiw.12387>.

11. Innovations for Poverty Action. (2020). "Measuring Financial Health around the Globe: Survey Manual". https://www.poverty-action.org/sites/default/files/publications/Measuring-Financial-Health_WebPDF.pdf

12. Ordinary least squares at the 10% significance level.



having a professional degree, higher income, being employed, owning a mobile phone and a debit card. On the other hand, females, head of household and G2P recipients are negatively associated with higher levels of financial health.

Finally, the research design included an experimental stage. Users were then randomly assigned to one of three different types of financial incentives: COP 5,000, COP 10,000 or COP 20,000¹³. Without using incentives, the survey response rate is almost zero. Thus, those receiving COP, 5000 where considered the baseline and the two other amounts are bundled as the treatment group, since there are no significant differences in the answers between them. The effect of the treatment is examined in variables capturing risk preferences and risk management strategies using regression analysis with a binary dependent variable.

- **Cash transfers modify investment decisions positively:** Users are asked if they are willing to invest in innovative products such as person

person (P2P) lending and crowdfunding. Those receiving higher incentives are less likely to invest their savings in start-ups or entrepreneurship (5% less probability than baseline recipients). However, they are also more prone to lend their money to people in need (3% more probability). It is plausible that the mechanism here is altruism given the unexpected income flow.

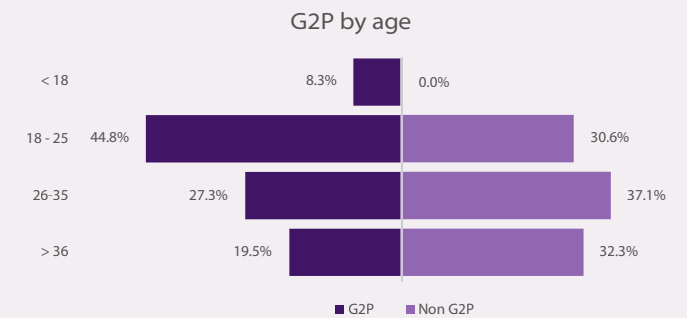
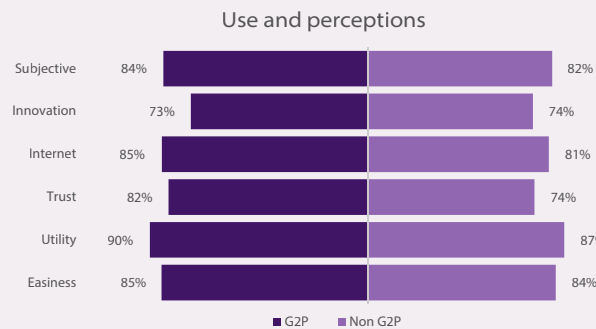
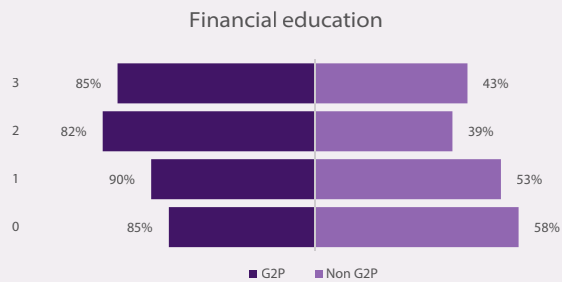
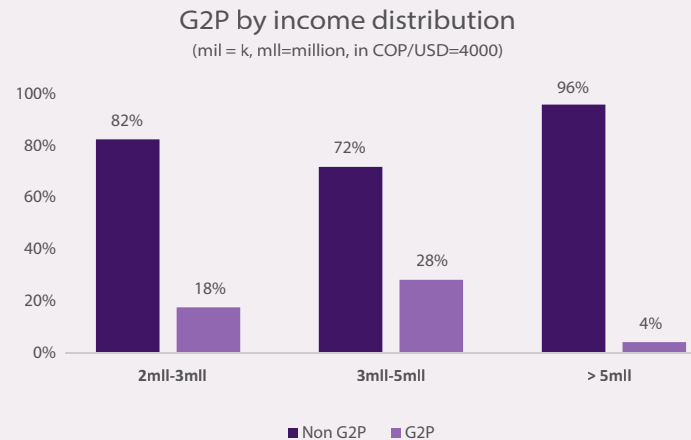
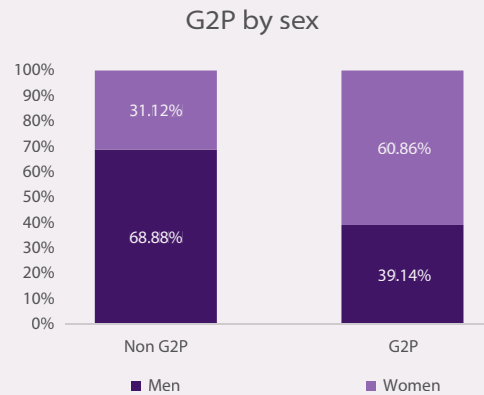
- **Cash transfers modify the portfolio of strategies expected to be used to cope with shocks:** The transfer modifies the risk management strategies individuals expect to use should a shock occur. Particularly, users receiving higher incentives are less likely to expect to reduce expenses, ask a financial institution for a loan or pawn/sell assets (all three options are reduced by 3%). This implies that the cash transfers might affect how individuals perceive their own vulnerability and their appropriate planning for emergency situations.

13. Amounts equivalent to USD 1.1, 2.3 and 4.5 at current exchange rates. Respectively, these amounts are also approximately 39%, 78% and 155% of the daily mean income in Colombia according to Cardenas, M., 2020, "Introducción a la Economía Colombiana", BookAlpha editorial.

Insights of digital wallet users in Colombia and their financial behaviors

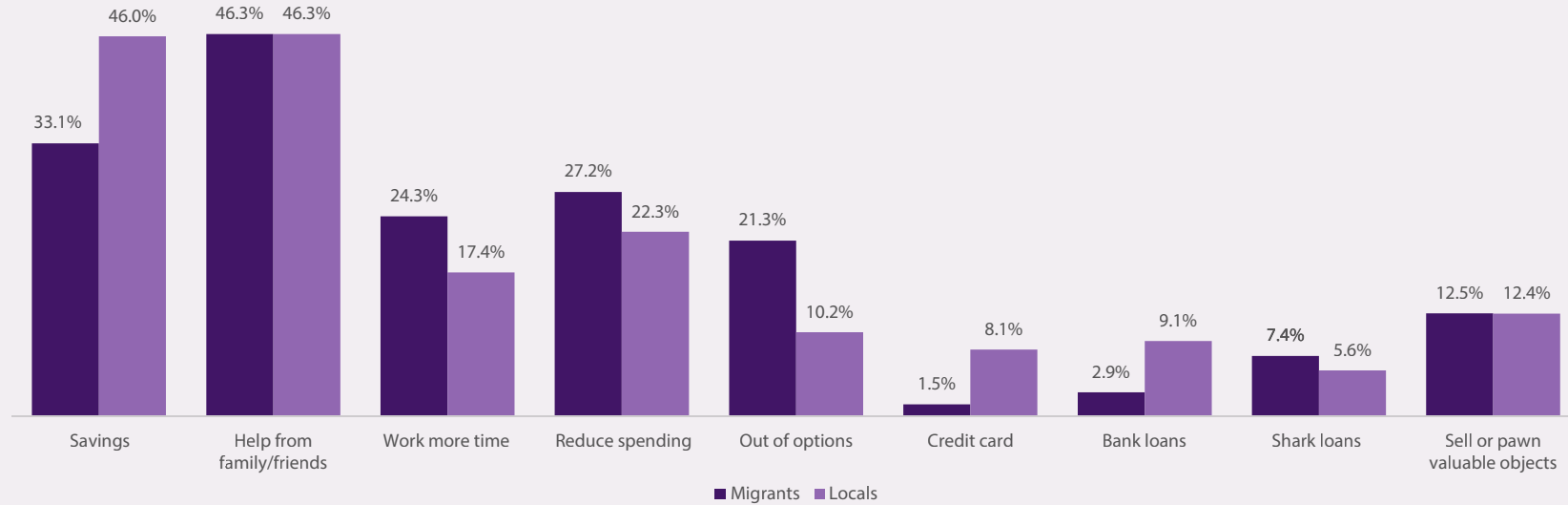
These infographics present the findings of a study on financial health and transactional behaviors of users of a digital wallet in Colombia, resulting from a survey of 2,523 MOVii users in Colombia.

Subsidy recipients are demographically and socio economically different from regular users



Migrant population is more vulnerable

How would migrants vs locals get money to deal with an emergency



Cash transfers distribution by subsidy recipients

