



BIG DATA FOR FINANCIAL INCLUSION, EXAMINING THE CUSTOMER JOURNEY

PARTNER: UNITED NATIONS CAPITAL DEVELOPMENT FUND (UNCDF), BANGKOK

PROGRAMME AREA: TRADE AND COMPETITIVENESS

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SUMMARY

Pulse Lab Jakarta collaborated with the UNCDF Shaping Inclusive Finance Transformations (SHIFT) programme to undertake an analysis of financial services usage, particularly among women in the ASEAN region. The project analysed customer savings and loan data from four Financial Service Providers (FSPs) in Cambodia to understand the factors that affect savings and loans mobilisation, as well as how usage of these products explains economic issues in Cambodia. Although women and men in Cambodia have equal access to financial services, women have a lower level of financial service usage. The first phase of analysis showed that for all FSPs, women had lower average loans and savings mobilised. The Lab is conducting a second phase of analysis to gain further insights into women's financial service usage and broader socioeconomic issues.

BACKGROUND

UNCDF is the UN's Capital Development Fund. UNCDF's Shaping Inclusive Finance Transformations programme aims to improve the level of financial inclusion in the ASEAN region by connecting the poorest and most vulnerable – especially women and small businesses owned, managed or predominantly serving women – to formal financial services in Cambodia, Lao PDR, Myanmar and Viet Nam.

Globally, there has been great progress on financial inclusion. In the ASEAN region, the gender finance access gap is very small. For example, in the ASEAN countries where a MAP Financial Inclusion diagnostic¹ has been conducted, there exists only a slight gender gap in Myanmar, no gender gap in Thailand and, in Laos and Cambodia, women are marginally better served. Both Findex² and FinScope³ tell a similar story of a very small, if at all, gender gap in the region. Women's financial inclusion is important in the ASEAN context. It is estimated that if women are able to achieve their full economic potential, they could add as much as US\$ 1 trillion to the South East Asian economies by 2025, contributing an extra 8 per cent to the regional GDP.⁴ The reality, however, is that there exists a significant gender gap in the economy. In addition, women in South East Asian countries generally have lower levels of formal employment, labour participation ratios, literacy rates,⁵ and financial literacy.⁶

Throughout the ASEAN region, formal financial services are not reaching low-income, rural and/or marginalised populations. According to Finscope data, less than 60 per cent of people in Cambodia (59 per cent), Laos (47 per cent), Myanmar (30 per cent) and Viet Nam (31 per cent)⁷ have a financial account. While men and women in the Asian economies have somewhat equal access to formal financial services, much less is known about the actual usage of financial services by men and women. Thus, there is a need for gender, age and other household disaggregated data analysis on financial service usage, which is the data gap that this research aimed to address.

Financial service providers capture significant amount of customer data through regular banking operations. This data can enable FSPs to better understand the behaviour of their clients, and could help inform product innovation or provide improved services. Customers, and especially women and low-income groups, can therefore receive

products tailored to their needs, thereby promoting financial inclusion and contributing to the achievement of the Sustainable Development Goals (SDGs).

Pulse Lab Jakarta collaborated with UNCDF to analyse customer data from four FSPs in Cambodia in order to understand the factors affecting savings and loans mobilisation and how savings and loan data can explain economic issues.

ANALYSING CUSTOMER DATA JOURNEY TO EXPLORE FINANCIAL INCLUSION IN CAMBODIA

This project is part of the Customer Journey Action Research (CJAR) data analytics training and research programme utilised by UNCDF-SHIFT's Data Hub to capacitate FSPs and regulators with technical and analytical support to track and manage their financial inclusion objectives. UNCDF provided training to four Cambodian FSPs in analysing and utilising customer data to help inform product innovation and financial inclusion policies. This included a data analytics training workshop for FSP staff from various departments and a knowledge management workshop with FSP management to discuss further action on data analytics findings. Over a six-month period, SHIFT trained and engaged 68 managers on how to analyse and use customer data journey. Pulse Lab Jakarta analysed customer savings and loan data provided by the four FSPs for the period 2010-2016. The project curated around 6.5 million savings and loan records for 2.6 million customers to help examine savings account dormancy and borrower exit, as well as improve financial service usage. With a total adult population of 9.9 million people, this data represents almost a quarter of Cambodia's adult population.

During the first phase of analysis, the four datasets were analysed separately for comparative purposes and the data was disaggregated by gender. The data was analysed using various statistical methods, such as descriptive analysis, distribution analysis and simple survival analysis using hazards ratio. Analysis of the datasets included:

- Average loan and savings mobilised (US\$) by gender, marital status, provinces.
- Customer retention for savings (probability for men and women to stop saving <US\$ 5 and borrowing).
- Customer retention for savings and loan (probability for men and women to stop saving and borrowing (<US\$ 5 account & not taking follow-up loan).

Pulse Lab Jakarta is undertaking the second phase of analysis on the FSP datasets, which utilises a gendered financial inclusion and economic vulnerability lens by disaggregating data by gender, age and marital status, voluntary and compulsory deposits, and different types of savings and loan products. The Lab plans to develop a survival model to investigate risk-to-exit by incorporating socio-demographic variables (gender, age and marital status) together. The project will also be extended to other Cambodian FSPs.

INSIGHTS AND OUTCOMES

The first phase of data analysis revealed the following key findings:

- Despite having equal access to savings and credit services, women in Cambodia had US\$ 658 lower savings balances and US\$ 825 lower loan amounts on average compared to men.
- 70 per cent of the customers had low value or dormant deposit balances below US\$ 5, and women more often had dormant accounts (75 per cent) compared to men (59 per cent). Savings mobilisation remains a challenge in Cambodia, particularly outside of Phnom Penh (30 per cent gap) and for older people (31-42 per cent gap between young people below 25 and older people above 55).
- The majority of borrowers (78 per cent) exit the FSPs within the first 3 years, which implies there is a limited long-term borrowing relationship. While women stay longer in the borrowing relationship for individual loans, they received lower individual loan amounts compared to men.
- The typical depositor in Cambodia is a female (69 per cent of depositors), married (80 per cent), older than 25 years (92 per cent), who lives outside Phnom Penh (92 per cent) and has a savings account as opposed to a term deposit (97 per cent). Amongst borrowers, 82 per cent are female, 98 per cent live outside of Phnom Penh, 84 per cent are married and 95 per cent are older than 25 years. However especially, older male depositors and young male borrowers living in Phnom Penh had stronger customer journeys.
- The study estimates that reducing savings account dormancy and borrower exit by 10 per cent could add an additional 52-172 million US\$ deposit portfolio (+10 to +33 per cent for 2015 portfolio levels) and 304 million US\$ loan portfolio (+24 per cent) for the 4 FSPs as well as reduce operating expenses by US\$ 54 Million.

CONCLUSIONS

The project showed the potential for using FSP customer journey data to understand gender dynamics related to savings and loan mobilisation. For FSPs, this provides valuable insights into how their customers are using products and services. It also informs efforts to improve customer retention, particularly for women, and later can give insights to increase access to formal financial services for low-income, rural and/or marginalised populations.

The project also highlighted the benefit of data partnerships. Access to this wealth of financial data, for instance, provided a valuable entry point for examining financial issues more broadly, such as understanding economic resilience and recovery.

IMPLICATIONS AND RECOMMENDATIONS FOR FSPs

- Develop financial services that are linked to the profile and needs of customers, specifically to increase savings account usage among older women in rural areas, and improve borrower retention particularly for individual loans for men in Phnom Penh.
- Launch and promote digital saving wallets and link remittances and domestic payments to those savings accounts. Link savings accounts to regular income streams including wages and pensions. An example is the AMRET Family savings product, a digital e-wallet that links income streams to a family savings and payment account.
- Design different savings products; promote term deposits and develop commitment savings products. Avoid the offer of compulsory savings accounts, since the majority of them are not utilised by customers. Look into commitment savings as an alternative to simple open savings account.
- Offer financial literacy services and awareness campaign to promote savings and loans. FSPs can send push SMS- and other messages to existing depositors that have low value savings account to get them to actively mobilise savings. With approximately 62 per cent of adults requiring information on how to save, there is a need for increasing financial awareness of customers through financial literacy programs and consultations on benefits of savings product.
- With 89 per cent of Cambodians describing managing their personal finances as stressful, and 50 per cent of the population spending more money than is available to them (Finscope 2015), offering financial literacy and business management trainings to borrowers and savers can support FSPs in controlling costly customer exit rates.
- Design customer loyalty programmes and, among others, reduce interest rates for follow up loans and borrowers that actively mobilise deposits. Retained customers are more cost-effective and take up larger loans and savings compared to new customers, yet pricing models or staff incentive systems of banks do not always reflect this pattern.
- Improve data analysis capacity of FSPs by setting up a product development data team. FSPs can benefit from additional data analytics on clients' loan and savings usage to improve customer satisfaction and retention. FSPs can use demographic and geographic disaggregated customer data to tailor saving, credit and payment products to customers.

HOW TO CITE THIS DOCUMENT:

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¹ <http://cenfri.org/map>

² <http://www.worldbank.org/en/programs/globalindex>

³ <http://www.finmark.org.za>

⁴ McKinsey & Company (2015) The Power of Parity: How Advancing Women's Equality Can Add \$12 Trillion To Global Growth. McKinsey Global Institute.

⁵ UN Women (2015) Progress of the World's Women 2015-2016: Transforming Economies, Realizing Rights. Blog: <http://cenfri.org/blog/completing-the-picture-in-asean>

⁶ Klapper L., Lusardi A., Van Oudheusden (2015) Financial Literacy Around the World: Insights from the Standard & Poor's Ratings Services Global Financial Literacy Survey.

⁷ Vietnam data is from Findex: <http://www.worldbank.org/en/programs/globalindex>