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Understanding Barriers to Financial Access: Insights from Bank Pricing Data

Berhe Beyene, Fozan Fareed, Christiaan Loots, Andrea Quevedo, Kameshnee Naidoo, and Kazuko Shirono

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ABSTRACT: Greater availability of financial access related data in recent years is increasingly enabling policymakers to better track and monitor financial access trends and developments. However, data on barriers to financial access, including costs associated with using financial services—a key factor of financial exclusion—remain scarce. To gain insight into the costs of financial access faced by the low-income segments of population, this paper presents an analysis of a novel dataset on bank pricing containing information on fees and charges associated with various banking services—collected as part of the United Nations Capital Development Fund's (UNCDF) Making Access Possible (MAP) program—based on a market research approach for 34 low- and middle-income countries in the ASEAN, SADC, and WAEMU regions. The results of our affordability analysis reveal that the costs of maintaining a bank checking account and conducting a few basic transactions can exceed 5 percent of monthly income for consumers in more than 10 percent of the countries in the sample, mainly in the WAEMU and SADC regions. These findings underscore the considerable challenge of affordability as a significant barrier to access to financial services, especially for low-income households and SMEs. The analysis also highlights the need to collect more granular data on the affordability aspect of financial access to facilitate more effective policymaking.

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1. Introduction

Financial inclusion is widely acknowledged as an important driver of sustainable economic growth, fostering equitable opportunities, and bolstering economic resilience for both individuals and communities (Aghion and Bolton, 1997; Cull et al., 2014; Sahay et al., 2015). At the heart of financial inclusion lies the concept of affordability—a fundamental pillar that enables individuals and businesses to access and benefit from formal financial products and services. For many low-income households and small businesses, the costs associated with using formal financial services can be a significant barrier, effectively excluding them from participating in the financial system or limiting their participation. High maintenance fees, minimum balance requirements, and substantial transaction costs can make accessing basic financial services such as bank accounts, transactions through certain channels, and mobile banking products unaffordable for those with limited resources. As a result, these individuals often resort to informal and often inferior financial alternatives, perpetuating their cycles of financial and economic exclusion and limiting their opportunities for economic advancement (Bros et al., 2022; Mathai et al., 2020; Beck and Levine, 2018).

Significant strides have been made in recent years to gather and disseminate data related to financial access, as exemplified by the supply-side data provided by the IMF's Financial Access Survey (FAS) and the demand-side data offered by the World Bank's Findex (IMF, 2022; Demirgüç-Kunt et al., 2022). However, data on barriers to financial access, including costs associated with using formal financial services—a key factor of financial exclusion—remain scarce. While numerous studies acknowledge the significance of financial service costs as a primary driver of financial exclusion (Beck et al., 2008; Allen et al., 2016; Fareed et al., 2017), there is a noticeable absence of comprehensive cross-country data (and analyses) on bank pricing across various income strata to gain a deeper insight into this issue.[2] This lack of data hampers our understanding of cost related barriers and dynamics that hinder the usage of affordable financial services for underserved populations. Without comprehensive and detailed data on the pricing and affordability of financial services, policymakers, financial institutions, and researchers face obstacles in designing evidence-based interventions and formulating targeted strategies to address issues pertaining to financial exclusion.

Against this backdrop, this paper presents and analyzes a novel dataset on bank pricing containing information on fees and charges associated with various banking products and services, collected as part of the United Nations Capital Development Fund's (UNCDF) Making Access Possible (MAP) program (Box 1). The data were collected using a market research approach from 197 banks in 34 countries to provide insights into the affordability aspect of financial access, mainly focusing on costs faced by low-income individuals and small and medium enterprises (SMEs) in Africa and Asia, across three regional groups—Southern African Development Community (SADC), West African Economic and Monetary Union (WAEMU), and Association of Southeast Asian Nations (ASEAN). The banking products and services discussed in this paper include checking accounts, mobile money accounts (provided by banks), as well as related services and transactions through bank branches, automated teller machines (ATMs), and mobile/internet banking platforms.

[2] According to the best of our knowledge, only a few studies have looked at this issue comprehensively in the past. For instance, Beck et al. (2008) collected information from about 209 banks in 62 countries to develop new indicators of barriers to banking services. These indicators encompassed various barriers, such as minimum account opening costs and account maintenance expenses. However, the study was somewhat restricted in scope as it focused only on a few selected number of bank products and offered limited information pertaining to the cost dimension of financial products and services.

The bank pricing database presented in this study is a unique resource that partially addresses the data gap surrounding barriers to financial inclusion. Notably, it fills a crucial void by offering detailed insights into the affordability aspect of financial services specifically relevant to underserved populations, an aspect where detailed data are often absent in existing supply-side and demand-side databases on financial access. The database encompasses a comprehensive range of information, meticulously documenting fees, and charges for up to 105 different product fee lines associated with various banking services in 2022.[3] While this bank pricing database has some limitations, such as limited coverage of banks in certain countries due to issues with data availability, the high level of granularity it offers can potentially enable researchers and policymakers to gain a better understanding of the cost structure of financial services, facilitating in-depth analyses of affordability for different population segments. Moreover, the database enables comparative analysis and benchmarking across countries and regions, which can provide the basis for evidence-based policy-making and decision-making processes.

Box 1: UNCDF's MAP Program

The MAP program was a multi-country initiative, launched by the UNCDF in 2013 and concluded at the end of 2023, to promote financial inclusion and expand access to financial services in developing countries,[4] through a process of evidence-based country data, diagnostics, and stakeholder dialogue, leading to the development of national financial inclusion roadmaps that identify key drivers of financial inclusion and recommended action. The aim of the program was to provide policymakers, regulators, and financial service providers with the necessary tools, knowledge, and evidence base to develop inclusive financial systems that can effectively serve low-income and underserved populations.

The program took a livelihoods approach to financial inclusion and used extensive and rigorous nationally representative demand-side surveys, co-developed through a strong stakeholder approach, including national steering committees, official government approval, and approval by national statistics offices of the resulting data collected. The program combined demand-side information with supply-side data and regulatory consultations to inform public policy decision making.

To compliment the evidence base that the program has generated in 20 countries between 2013 and 2023, the program collected data on bank pricing covering eight years (2016 to 2023). Based on the successful pilot data collection first in six and then in sixteen countries (2016 to 2018), this was extended into a larger database in 2021 (covering 35 countries and three years—from 2019 to 2021) and repeated in 2022 and 2023. These data aimed to identify differences in pricing and pricing strategies, specifically in the low-income and micro and small and medium enterprises (MSME) market, across the 35 countries, to better understand the dynamics of the financial services sector with regards to serving low-income consumers and MSMEs.

The main findings of the paper bring into focus the challenge of affordability as a major barrier to financial inclusion, specifically in relation to basic financial products and services. The basic affordability index presented in this paper highlights that in many countries, particularly within WAEMU and SADC regions, individuals face higher costs when it comes to maintaining bank accounts and conducting transactions,

[3] 2022 data were used, as 2023 data were still being collected at the time when this paper was being prepared.

[4] See https://www.uncdf.org/map/homepage for details.

exceeding 2 percent of average monthly income (proxied by monthly GNI per capita) in about one-fourth of the countries and exceeding 5 percent in more than 10 percent of the selected countries in this paper. These elevated costs act as deterrents for individuals with limited income/earnings, impeding their access to formal financial services. The paper also presents a country case study on Botswana, utilizing household data and employing certain simplifying assumptions to mitigate the challenges posed by data availability. This case study exemplifies how such detailed data can be effectively applied within a specific country context and underscores the need for evidence-based targeted interventions to address affordability challenges for all segments of the population.

The rest of the paper is structured as follows. Section 2 delves into the data and methodology employed to gather detailed bank pricing information. Building upon this foundation, Section 3 offers a holistic view of the financial access and pricing landscape, scrutinizing various facets of costs linked to banking products and services, and putting forth a basic affordability analysis to understand cost as a potential barrier to access. To further enrich the analysis, Section 4 investigates application of the bank pricing data in combination with other financial inclusion livelihoods data, specifically for Botswana, and provides further insights into bank pricing dynamics and affordability at a country level.[5] Finally, Section 5 concludes with the key insights derived from this analysis and the data collected.

2. Data Collection Methods

2.1. Methodology and Data Selection

The analysis primarily relies on UNCDF's bank pricing data that were collected based on a market research approach by Africa Analysis,[6] covering 197 commercial banks in 34 countries. The countries were selected based on UNCDF MAP's country footprint in Africa and Asia (Table 1). Historically, the MAP program has operated in 20 countries, covering three regions—SADC, WAEMU, and ASEAN.[7] For comparability, the bank pricing data collection was expanded to include all countries in these three regions. In each of the countries included in the database, data were collected for four to six retail commercial banks (see Annex II for details), depending on the size of the domestic financial sector,[8] with the aim to cover more than 70 percent of the share in each country.

[5] Botswana was selected for the case study primarily based on good data availability and its relatively mature financial inclusion policy landscape.

[6] A market research consulting house based in South Africa and working across Africa, with 20 years of experience.

[7] The MAP program's countries of operation also included Nepal. The pricing data collected therefore also included Nepal (totalling 35 countries in 2022) but it was not included in our analysis because of the focus of the paper on three broader regions (SADC, WEAEMU, and ASEAN).

[8] Mainly based on bank assets.

Table 1: List of countries in the sample

Region	SADC	WAEMU	ASEAN
Countries	Angola	Benin	Brunei Darussalam
	Botswana	Burkina Faso	Cambodia
	Comoros	Côte D'Ivoire	Indonesia
	Democratic Republic of the Congo (DRC)	Guinea-Bissau	Laos
	Eswatini	Mali	Malaysia
	Lesotho	Niger	Myanmar
	Madagascar	Senegal	The Philippines
	Malawi	Togo	Singapore
	Mauritius		Thailand
	Mozambique		Vietnam
	Namibia		
	Seychelles		
	South Africa		
	Tanzania		
	Zambia		
	Zimbabwe		

The data collection process involved a combination of secondary and primary research methods First, secondary research was conducted that relied on accessing publicly available information on pricing from various sources such as banks' websites, publications by banks, regulators, and third-party sources. To the extent possible, validation of the bank product and service prices was undertaken by sourcing fees filed by the various banks with the financial sector regulatory authorities. In instances where bank product and service fees were obtained from the bank's web site, the bank was contacted by e-mail to verify the fees published on the bank's web site. This was done particularly in situations where it was unclear which specific year the bank fees were applicable to.

The secondary research served as the foundation for identifying any data gaps, which prompted the need for primary research. To ensure comprehensive data coverage, primary research involved direct contact with banks through methods like phone calls, emails, or online conferencing platforms. The collected data were systematically recorded into a structured template.

Sample selection of banks was done primarily based on a market share analysis, combined with local expertise in case data availability was an issue, with the objective of including the largest banks that represent the majority of the domestic market share in each country (i.e., at least 70 percent of the market share in terms of total assets).[9] An additional criterion applied in selecting banks was the relevance of products and services that the banks provide; banks that offer products aimed at low- and medium-income groups were prioritized over those that focus on the high-income group, hence the selected banks may

[9] The list of the selected banks and the market share analysis are available from the UNCD website (see link, here).

have lower market share than the targeted majority. The dataset, along with a detailed description of the methodology and the names of the selected banks, is publicly accessible through the UNCDF website.[10]

Product selection for the data collection included consideration of services that mainly target low-income individuals and micro to small businesses, based on the product features and pricing (i.e., typical products used by low-income consumers and micro and small business customers), or by being explicitly stated, for instance, in marketing materials and branding. No investment products, such as investment in stock exchange shares (equity) or unit trusts were included in the product suite. The product suite was informed by typical products offered to these customer groups by the largest banks in South Africa, with an additional plausibility check based on banks in Malaysia.[11] Definitions for the various bank products were developed to ensure that data are gathered for comparable products across all banks across all the countries researched (see Annex IV for a detailed description of definitions of products and services).

Once the data on bank fees and charges were collected for each individual bank, median, average, minimum, and maximum costs for each product and service were calculated at the country level. The data used in this paper are the median country value for each product fee line (also referred to as variables or indicators). Data were collected in terms of local currency denominations, and converted to USD,[12] and include the applicable sales tax / VAT for each country.

While pricing data are collected for a large number of indicators, only a subset is considered in this paper. This selection primarily stems from considerations of both their significance in the context of financial inclusion and the uneven data coverage within the dataset. For instance, among the total of 105 pricing variables available in the dataset for the low-income group, only 50 possess data for at least half of the countries, and only 20 variables encompass data for at least three-quarters of all countries. The coverage issue is even more pronounced for small businesses related indicators, with only 30 out of the 97 variables

[10] The data and methodology can be accessed from the UNCDF website (see link, here). As mentioned, banks were selected based on their ability to serve the target customer segments and offer the specific bank products and services included in the data collection, which were aimed at the low-income/mass market and SME segments. Many of these banks have a regional presence within their respective areas, including Maybank, Coris Bank, Stanbic, KCB, Ecobank, and Barclays. Additionally, some graduated microfinance institutions, such as Myanmar Microfinance Bank (MMB), were also included. While Islamic banking products and banks were not a specific focus of the study, Islamic banks offering products that align with those selected for the study were included in the sample. For example, in Brunei Darussalam, Bank Islam Brunei Darussalam (BIBD) was part of the study.

[11] Both these countries have a higher GNI per capita than the typical countries in the group (USD 14,140 for South Africa and USD 28,730 for Malaysia as of 2021) and have well-developed financial markets in their respective regions. As a result, they offer a comprehensive suite of bank products and services, including those targeted at lower income groups. In 2021, South Africa had 34 banks, 3,382 bank branches and 18,672 ATMs, while Malaysia had 42 banks, 2,146 branches and 13,652 ATMs. The number of bank branches and ATMs per 100,000 population are also comparable across the two countries (8 and 44 for South Africa, and 9 and 54 for Malaysia).

[12] Conversion to USD was done using the average exchange rate for the calendar year to date at the time of data collection. The conversion from the domestic currency into USD was done using an Africa Analysis proprietary exchange rate application. The application draws exchange rate data from SIX Financial Information, a Swiss-based global provider of financial data.

having data available for at least half of the countries.[13] In light of these limitations, this paper primarily centers its analysis on essential financial metrics with better data coverage such as the monthly checking account fee, branch and ATM withdrawal fee, savings account fee, annual card fees, and mobile money account fees for low-income group individuals and SMEs. Moreover, this paper mainly focuses on the 2022 data as these are the most comprehensive, having the highest average number of indicators with available data per country. Summary statistics for the variables used in this study can be found in Table 2 below.

Table 2: Descriptive Statistics

Statistic	N	Mean	St.Dev	Min.	Max.
Low Income Group					
Checking Account Monthly Account Fee	31	1.3	1.8	0	8.3
In-branch Cash Withdrawal Charges from Checking Account per 100 USD	30	2	2.8	0	9.1
Mobile Money Monthly Account Fee	12	0.3	0.9	0	3
Send money to Mobile Money account (within own bank)	18	0.5	0.8	0	3
Savings Account Opening Fee	24	9.8	20.8	0	72.7
Savings Account Monthly Maintenance Fee	26	0.4	1.3	0	6.5
Withdrawal (own bank ATM)/ per 100 USD	32	0.3	0.6	0	3
Annual Card Fees	29	6.8	5.5	0	17.9
SME					
General Business Account Monthly Maintenance Fee	30	8.7	10.9	0	55
Cash Withdrawal (in-Branch)/ per 100 USD	26	1.7	2.3	0	8.7
Inter-account transfer at a branch (within own bank)	27	1.3	2	0	7.4

Note: N denotes the number of countries with data for each variable. Mean, Minimum, and Maximum statistics denote dollar amounts.

[13] The number of indicators with available data per country is also crucial for gauging data constraints. Only four countries in the dataset have data for more than 75 percent of the indicators concerning low-income groups (with just three for small businesses), while 19 countries have data for over 50 percent of these indicators (but only nine for small businesses). Notably, data availability is highest for the SADC region, albeit with particularly low levels for Comoros, the Democratic Republic of the Congo (DRC), and Mozambique. Conversely, data availability is relatively low for ASEAN countries.

2.2. Data Limitations

While the UNCDF's bank pricing database is a unique and valuable resource that attempts to provide a better understanding of financial inclusion from an affordability perspective, it does have some limitations which are important to keep in mind.

First, although extensive efforts have been made to ensure the best coverage of commercial banks possible, the database may not capture majority of the market share in all cases.[14] This issue arises primarily due to data availability gaps, particularly in regions with limited financial infrastructure or where data collection mechanisms are not well established. Despite attempts to mitigate this limitation by consulting field experts and utilizing alternative data sources, the coverage bias may still restrict the database's ability to provide a comprehensive view of affordability in certain contexts.

Second, the database predominantly focuses on commercial banks, potentially overlooking other significant financial service providers such as state-owned banks, microfinance institutions, cooperatives, or non-bank mobile money operators. By primarily centering on commercial banks, the database may omit important pricing information and insights from these alternative financial institutions, which can be vital for a holistic understanding of financial inclusion with regards to low-income households in some countries.

Lastly, although the database provides detailed pricing information, it may not capture the complete range of product features and conditions. Factors like interest rates, loan terms, collateral requirements, or eligibility criteria, which profoundly impact the accessibility and affordability of financial services such as credit, are not adequately represented in the current database and consequently not discussed in this paper. Similarly, remittances and cross-border payments are crucial aspects from the perspective of financial inclusion. However, this paper does not delve into their discussion.

Recognizing these limitations can help contextualize the findings of this paper and encourage further exploration of other dimensions impacting financial inclusion beyond pricing information, prompting a nuanced understanding of the specialized focus required to collect more granular data.

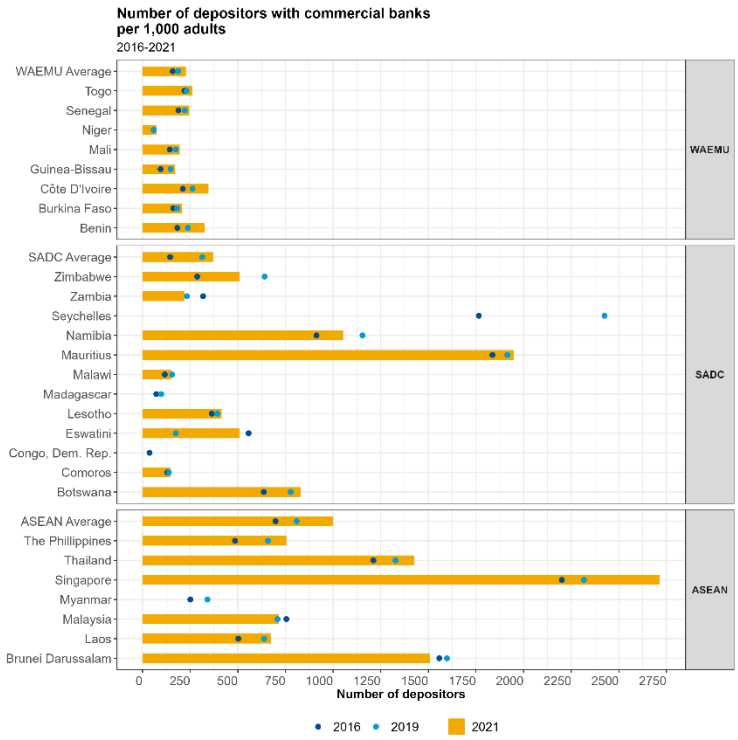
3. Financial Access and Cost of Banking Services

Prior to delving into bank pricing data, it is useful to assess where countries stand in terms of financial access. There has been significant improvement in financial access worldwide in recent years, empowering individuals and businesses who were previously underserved or excluded from the formal financial system. Globally, as of 2021, 76 percent of adults had an account at a bank or regulated institution such as a credit union, microfinance institution, or mobile money service provider, up from 51 percent in 2011 (Demirgüç-Kunt et al., 2022).

[14] Note that the emphasis is placed on banks catering to the low-income market, implying that the approach may not consistently encompass the majority of the commercial bank market share in every instance.

However, the degree of financial access including banking service penetration varies greatly across countries. While bank account ownership has improved over time globally as well as in WAEMU, SADC, and ASEAN regions, the level of bank account ownership, measured by the number of depositors with commercial banks, remains low particularly among WAEMU countries—only about a quarter of adult population has bank accounts (Figure 1).

Figure 1. Depositors with Commercial Banks



Sources: IMF's Financial Access Survey (FAS); Authors' calculations.
Note: Regional averages are weighted using total population. Depositors for Botswana, Burkina Faso, Brunei Darussalam, Mauritius, Namibia, Niger, Seychelles, Singapore, and Thailand are not uniquely identified. In some countries, large numbers can also be because of a high number of nonresident depositors.

A major reason behind this exclusion is the lack of affordability of financial products and services provided by banks. As of 2021, about one third of adults in low and middle-income countries without a formal bank account cited affordability as the main reason for their financial exclusion (World Bank, 2021).

The scarcity of granular data on affordability and bank pricing often hampers a deeper understanding of financial inclusion, as it limits our ability to identify specific barriers and challenges faced by underserved populations. Without detailed information, it becomes difficult to design evidence-based targeted interventions and measure the effectiveness of initiatives aimed at promoting inclusive financial services. Using bank pricing data from the selected 34 countries, the following subsections attempt to better understand the pricing aspect of financial products and services and provide more granular insight into affordability as a barrier to financial inclusion.

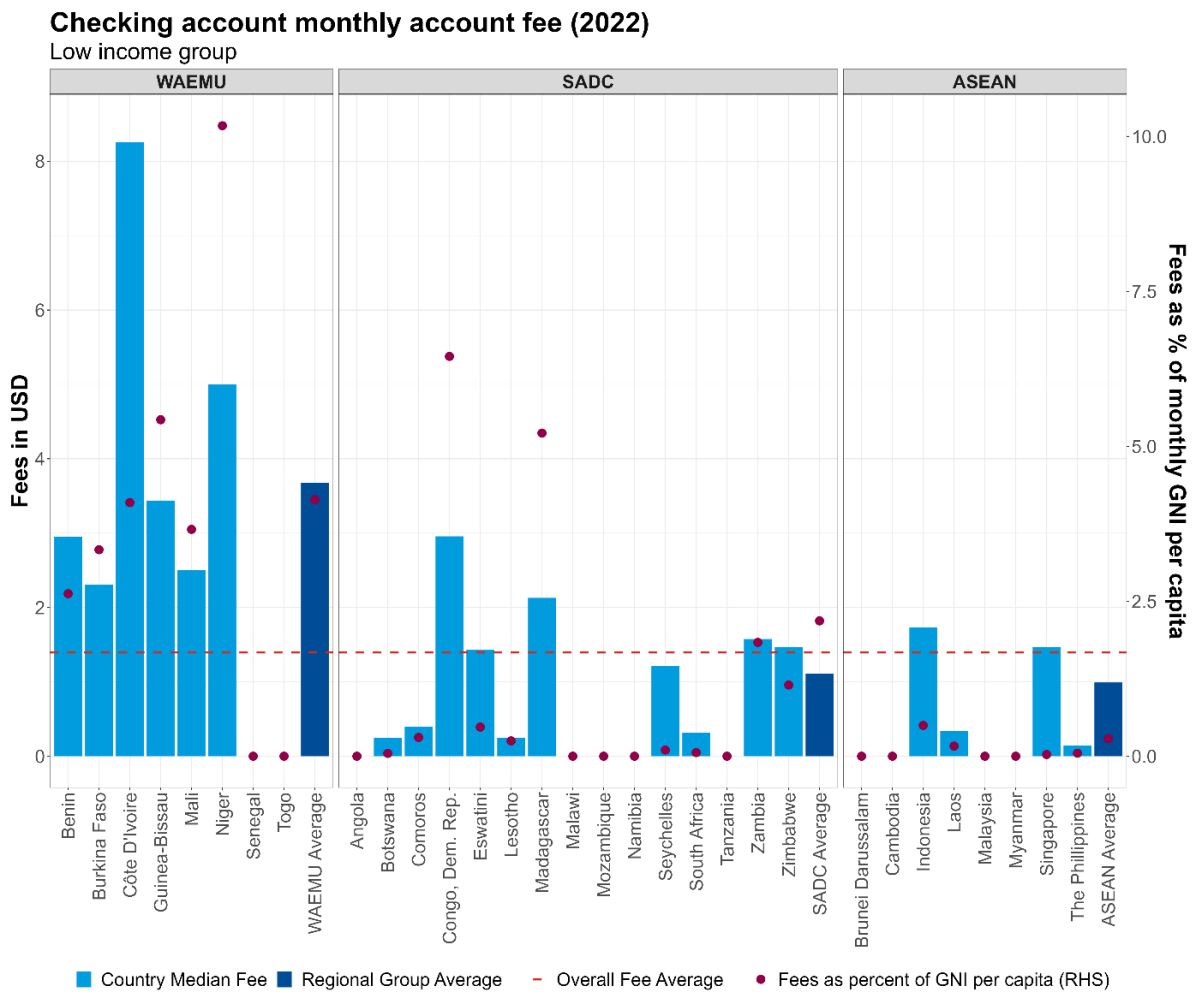
3.1. Cost of Banking Services for Low-Income Households

The cost of banking services can be a significant burden for low-income households, given their limited financial resources. These households often struggle to access and afford basic banking services such as maintaining a checking or savings account, making electronic transfers, or using services such as ATMs and bank cards. This section takes stock of different types of fees and charges and provides a comparison of how they vary across countries in WAEMU, SADC, and ASEAN. We present the nominal costs (in USD) as well as the normalized costs relative to monthly GNI per capita (as a proxy for monthly income) to have a better understanding of affordability across countries.

Nominal costs of financial services

The data reveal that commercial banks in several countries impose a high monthly fee on maintaining a basic checking account. This fee can be in excess of USD 5 per month, as is the case in Niger and Cote D'Ivoire, and can also exceed 5 percent of monthly GNI per capita, as is the case in Guinea-Bissau, Niger, DRC, and Madagascar. On average, the monthly cost of maintaining a checking account is the highest in WAEMU countries (3.5 percent of monthly GNI per capita, on average), which corroborates with lower bank account ownership in the region as shown above, whereas it is the lowest in the case of countries in ASEAN, with countries such as Malaysia and Myanmar not charging any monthly fees on personal checking accounts (Figure 2). This high monthly maintenance fees can be a deterrent to opening bank accounts for low-income consumers, particularly in countries where this cost represents a relatively large proportion of their monthly income.

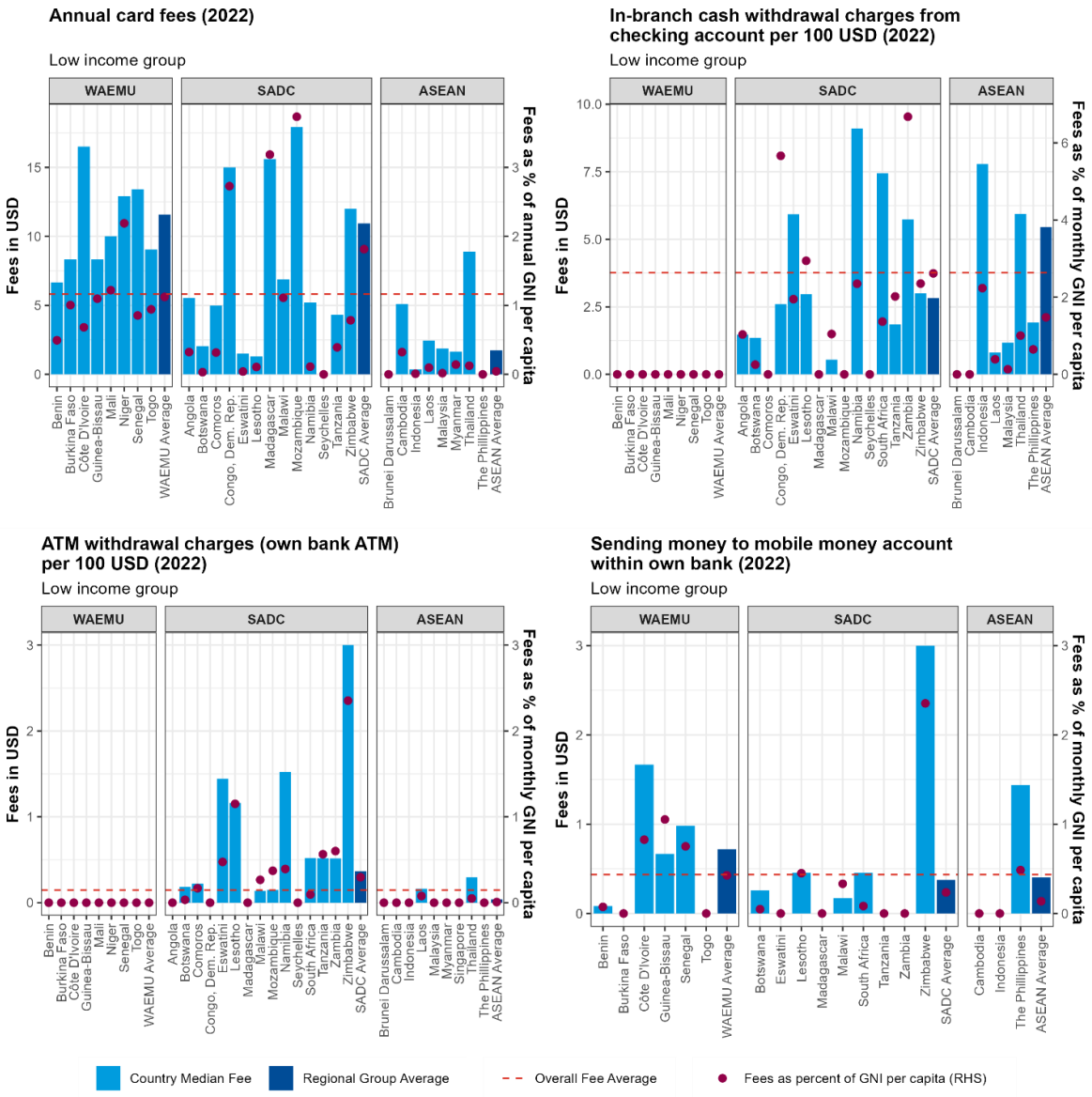
Figure 2. Checking Account Monthly Fee



Sources: UN Capital Development Fund (UNCDF); Authors' calculations.
Note: Fees represent median values, inclusive of VAT. Regional and overall averages are weighted using total population. Overall fee average is the average value of checking account monthly fees in USD for all countries in the sample.

Similarly, using bank debit cards, conducting in-branch or ATM transactions, and sending money via mobile money accounts can come with high fees in several countries, particularly in WAEMU and SADC regions. For example, in the case of Mozambique and Madagascar, annual median card fees can be more than $15, which can be a potential barrier for ATM usage. Although opening a mobile money account (operated by banks) can be free of charge in most countries, the transaction fees vary, albeit remaining low compared to traditional bank accounts, as highlighted in the right bottom chart in Figure 3. Lastly, data on the costs associated with in-branch cash withdrawals and ATM transactions also vary significantly across countries, with countries in SADC charging more on average than other countries (left bottom chart in Figure 3).

Figure 3. Costs of Banking Products and Services



Sources: UN Capital Development Fund (UNCDF); Authors' calculations.
Note: Fees represent median values, inclusive of VAT. Regional and overall averages are weighted using total population.

Affordability Analysis

To have a better understanding of bank pricing across countries, we construct two indices of affordability—basic affordability index and advanced affordability index—and use them to assess the affordability of financial services for low-income households as discussed in the rest of this subsection.

First, to capture the most basic forms of affordability for individuals, an affordability index is constructed that captures the monthly fees of maintaining a bank checking account along with the cost of doing one ATM withdrawal per month.[15] The indicator is then again normalized by average monthly GNI per capita, to control for differences in income levels across countries. The composition of this basic affordability index corresponds with UNCDF's MAP program findings (UNCDF, 2016) that most low-income customers use their bank accounts as a mailbox, whereby they receive their income in a bank account and then immediately withdraw all the money and spend it in cash.

The results of the basic affordability index show that even the most basic bank product package varies by country in terms of affordability, and the costs can reach in excess of 5 percent of monthly average income, as is the case for four countries in the sample (blue bars in Figure 4). These results suggest that low-income households in WAEMU pay on average higher costs (for the basic affordability product package) as compared to countries in SADC, while households in ASEAN countries pay on average the lowest costs (for the same product package).

While the basic affordability index is instrumental in assessing the initial accessibility of financial services, it may not adequately encompass the broader financial requirements and well-being of individuals. In light of this, we introduce an advanced affordability index that factors in a more intricate usage pattern of financial products and services. The selection of the additional usage criteria was primarily informed by the findings of the demand-side FinScope[16] survey conducted in selected countries within our sample.[17]

The advanced affordability index assesses four distinct dimensions: (i) monthly cost of maintaining a checking account; (ii) monthly cost of having a bank debit card; (iii) two ATM transactions from own bank equivalent to $100 each; and (iv) two in-branch cash withdrawals equivalent to $100 each. By adding these dimensions to the analysis offers an opportunity to better explore the affordability of financial services, extending beyond mere account usage, and thereby providing a more nuanced perspective to allow for further context of what will be required to enhance participation of low-income households.

The advanced affordability index (yellow bars in Figure 4) shows that there is a lot of heterogeneity across countries, with countries in SADC having higher costs on average than countries in WAEMU, which is a switch from before highlighting countries in SADC pay more for services such as in-branch cash withdrawals and ATM transactions. In the case of a few countries in ASEAN, the advanced index corresponds to zero, suggesting that even the advanced usage package of financial services has minimal cost.[18] Overall, for about one-third of the countries in our sample, costs of advanced usage can be in excess of 5 percent of monthly GNI per capita.

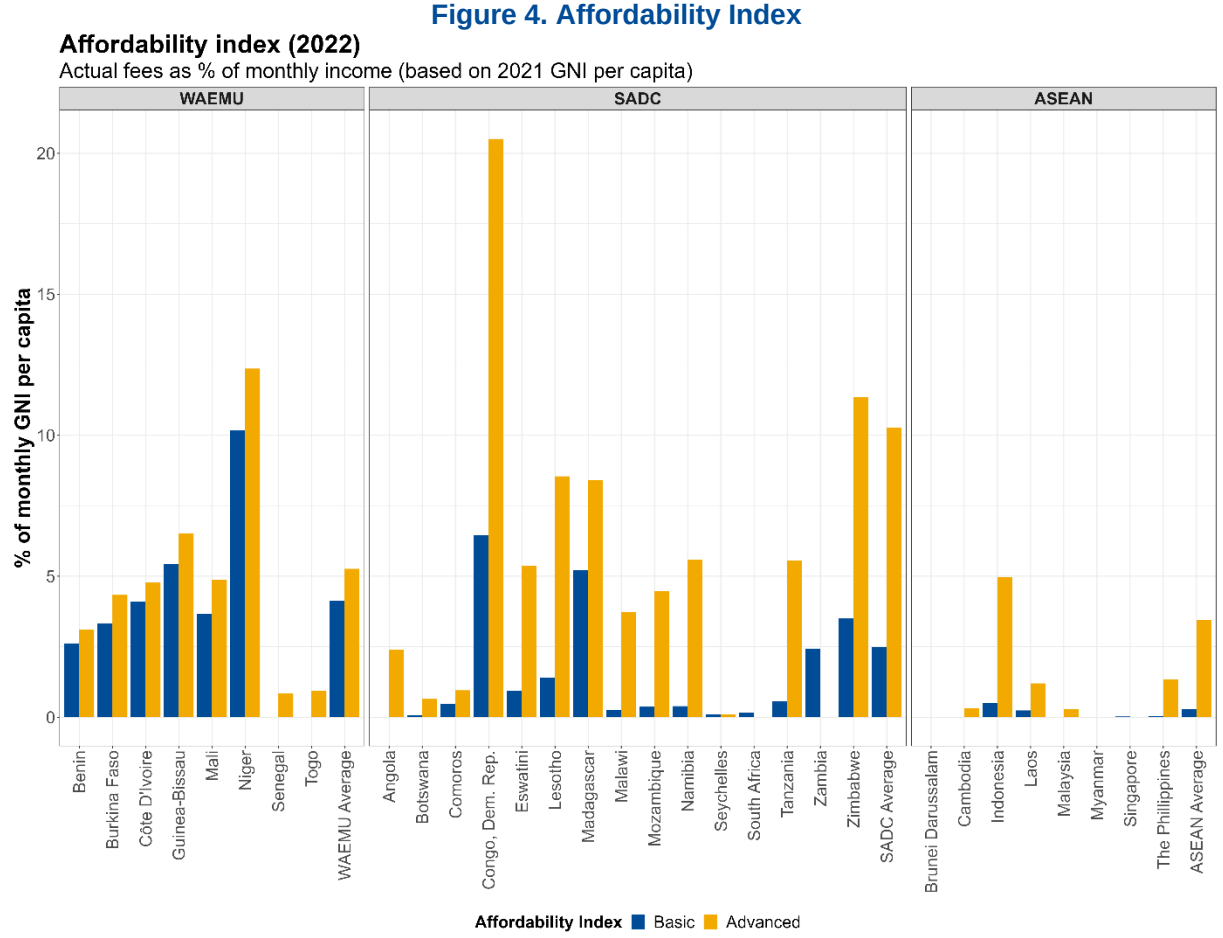
[15] The indexes employ equal weights by simply aggregating the costs, effectively summing them up.

[16] The FinScope Consumer survey is a nationally representative, demand side survey with an end user focus (individual or household) of financial services and products, which is widely used by both governments, to direct policy development, and financials service providers, to build more relevant and profitable financial products and services.

[17] For instance, see the results discussed in the Botswana case study in Section 4 for further details.

[18] Annex V presents the chart with GNI per capita in PPP (current international $) terms, highlighting similar regional trends.

Figure 4. Affordability Index



Sources: UN Capital Development Fund (UNCDF); Authors' calculations.
Note: Fees represent median values, inclusive of VAT. Regional and overall averages are weighted using total population.

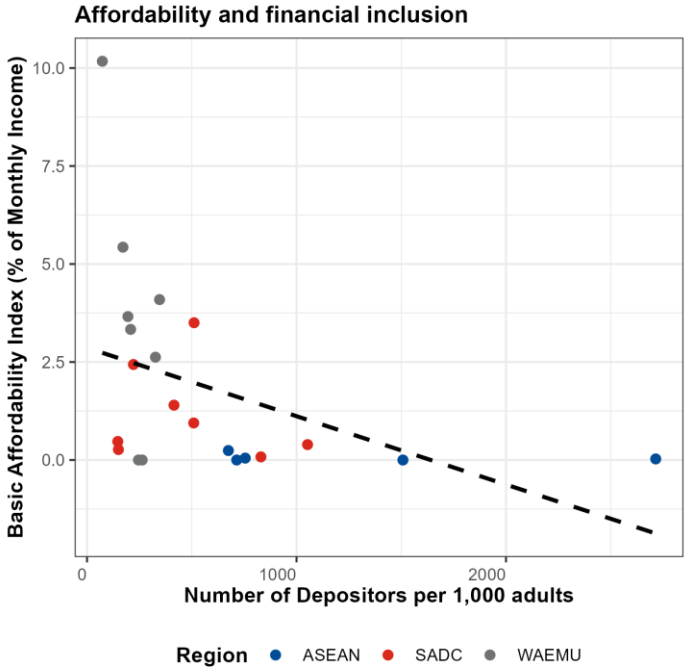
Barriers to financial access: Possible impacts and drivers

These financial barriers associated with affordability can further exacerbate financial exclusion, calling for policymakers and financial institutions to find innovative and affordable solutions to address cost issues. Indeed, the affordability index is found to be negatively associated with financial inclusion (Figure 5), highlighting that higher costs associated with banking services can hinder financial inclusion.[19] Our

[19] Currently, over 63 jurisdictions worldwide have either implemented a financial inclusion strategy or are in the process of developing one to enhance financial access and services in their respective regions (World Bank, 2022). The World Bank's Financial Inclusion and Consumer Protection Survey (2022) investigated the policies enacted by nations to foster financial inclusion, revealing targeted interventions in several countries aimed at serving low-income segments and underserved regions. These interventions include tax incentives, exemptions, and subsidies to facilitate financial access, particularly in underserved areas. For a detailed overview of these policies, Annex IV offers some insights.

econometric estimations also show that higher costs of financial services are negatively associated with financial inclusion, even after controlling for a broad range of variables such as income level, institutional quality, labor market dynamics, human development, legal rights, and digital infrastructure (see Annex III for details). However, given the limited number of country-level observations and cross-sectional nature of the data, we are not able to draw causal inferences at this juncture, and our analysis is primarily focused on identifying correlations.

Figure 5. Higher costs of financial services are negatively associated with financial inclusion.



Another crucial aspect to explore is the factors influencing the variability in the affordability of financial services across different countries. We examine correlations between the cost of financial services and pertinent macroeconomic indicators to gain insights into these relationships. The results indicate that higher costs of basic financial services are associated with factors such as regulatory quality, competition in the banking sector, and the level of digitalization within a country, among other factors. These findings suggest that these elements potentially play significant roles in shaping the financial access and affordability landscape.

Results highlight that a higher level of regulatory quality[20] in a country is associated with lower costs of accessing basic financial services (Figure 6). Similarly, we find that an increase in digital connectivity in a country, measured by the enhanced digital access indicator (EDAI),[21] is correlated with lower costs of financial products and services (Figure 6). This highlights the importance of promoting affordability and focusing on enhancing access to new technology-based solutions such as digitalized products and channels to lower operational costs and promote increased access to financial services. Lastly, we also demonstrate that a higher number of banks and bank branches within a country, which serves as a rough proxy for competition in the banking sector, is associated with lower banking fees (Figure 6). This suggests that increased competition among banks may lead to more favorable pricing for consumers, enhancing the overall affordability of financial services.

Due to the limited availability of bank pricing data and relevant control variables, this paper does not perform any econometric analysis to further understand these drivers. This gap underscores a vital area for future research. Delving deeper into these correlations with more detailed and robust datasets could provide

[20] Regulatory quality indicator captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. For details, see here.

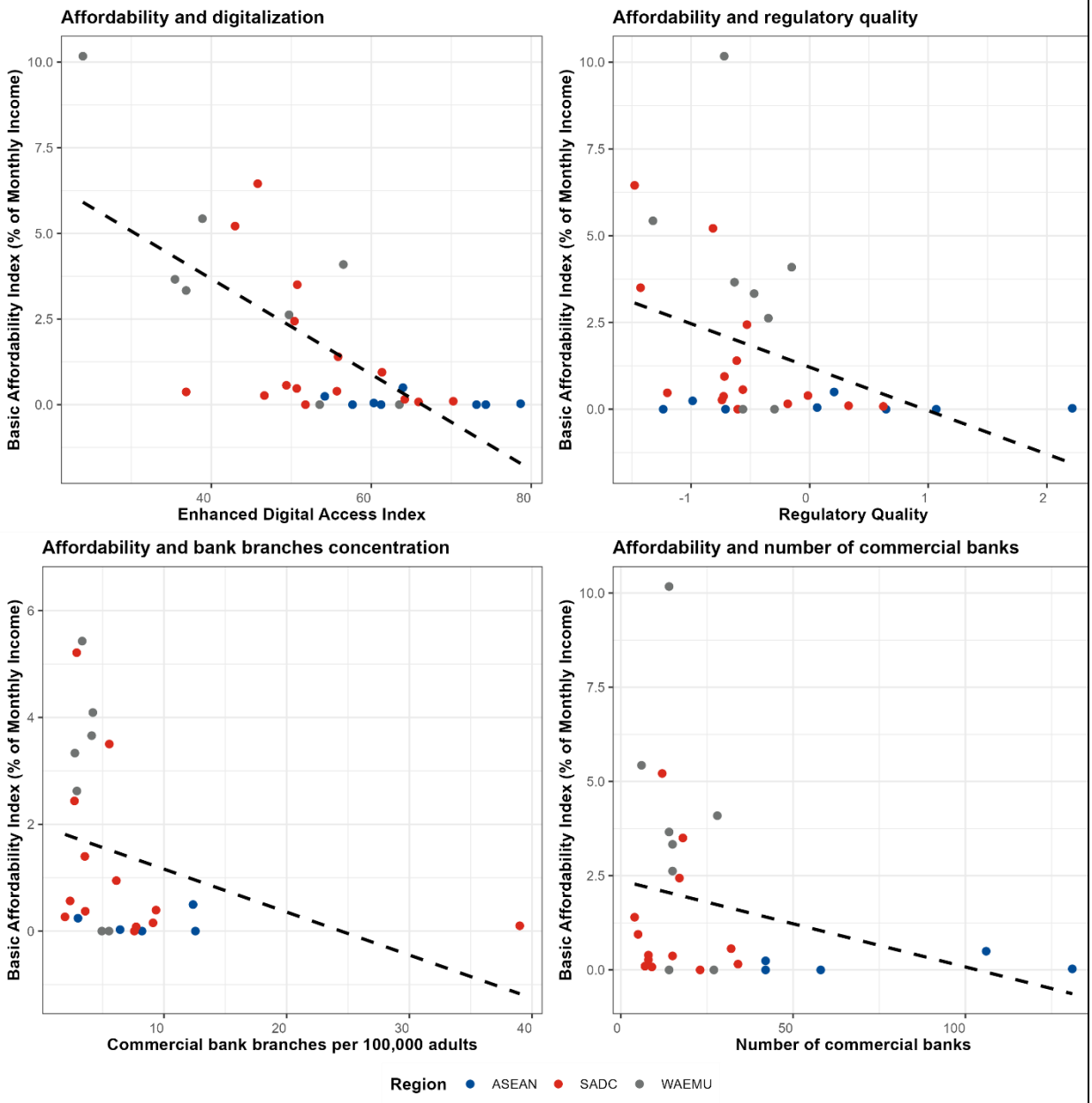
[21] The index captures the level of digital connectivity at the country level by considering five different dimensions of digitalization: availability of digital infrastructure, affordability of digital access, educational level of the population, quality of information and communication technology services, and actual internet usage. See IMF (2020) for details of the index.

valuable insights into developing strategies to enhance the affordability and accessibility of financial services globally.

At more micro levels, detailed analyses of the affordability and costs of financial services across 19 MAP program countries and cross-country consumer behavior insights are available through detailed country diagnostics and knowledge series publication.[22] The findings from the first six MAP pilot countries indicate that the pricing models for bank accounts serve as a disincentive for the majority of adults. While these models vary significantly, qualitative research in these countries shows strong opposition to monthly service fees because they erode the value stored in accounts. This resistance points to a broader issue within the financial services ecosystem that fails to cater effectively to low-income individuals. Moreover, the necessity to create and strengthen a market-based institutional environment becomes evident, as exemplified by findings from Nepal, where bank savings products lack diversity and do not offer tailored solutions for low-value savings, highlighting a key area for improvement in market affordability strategies (UNCDF 2021; UNCDF 2020).

[22] They can be accessed from the MAP website (see link).

Figure 6. Higher costs of financial services are negatively associated with regulatory quality, digital access, and competition in the banking sector.

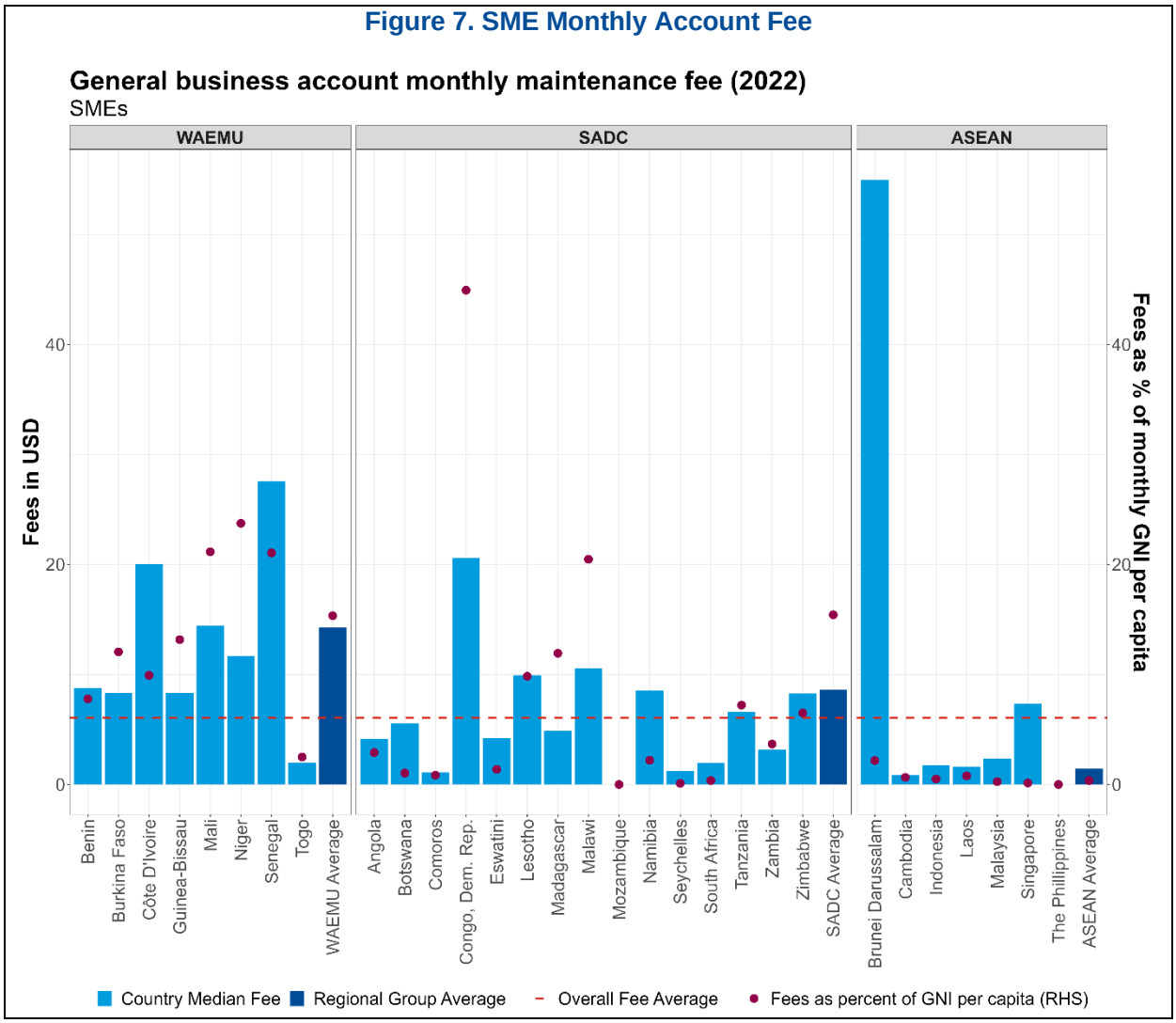


Sources: IMF's Financial Access Survey (FAS); UN Capital Development Fund (UNCDF); World Bank; ITU; Authors' calculations.
Note: A higher number for basic affordability index (percentage of monthly income) suggests that the costs associated with availing basic financial services are high.

3.2. Cost of Banking Services for SMEs

The data reveal that the cost of banking services for SMEs is also quite significant, with substantial variations across countries and regions. The overall average monthly maintenance fee for a general business account stands at USD 6.1 (equivalent to an average of 2.1 percent of monthly GNI per capita), with the highest fee observed in the WAEMU region at an average of USD 14.3 (15.3 percent of GNI per capita), while the lowest average fee is found in the ASEAN region (USD 1.4, or 0.4 percent of GNI per capita). At the country level, differences become even more pronounced. For instance, general business accounts for SMEs in Brunei Darussalam incur a higher monthly maintenance fee,[23] whereas the service is provided free of charge in the case of Philippines and Mozambique (Figure 7).

Figure 7. SME Monthly Account Fee

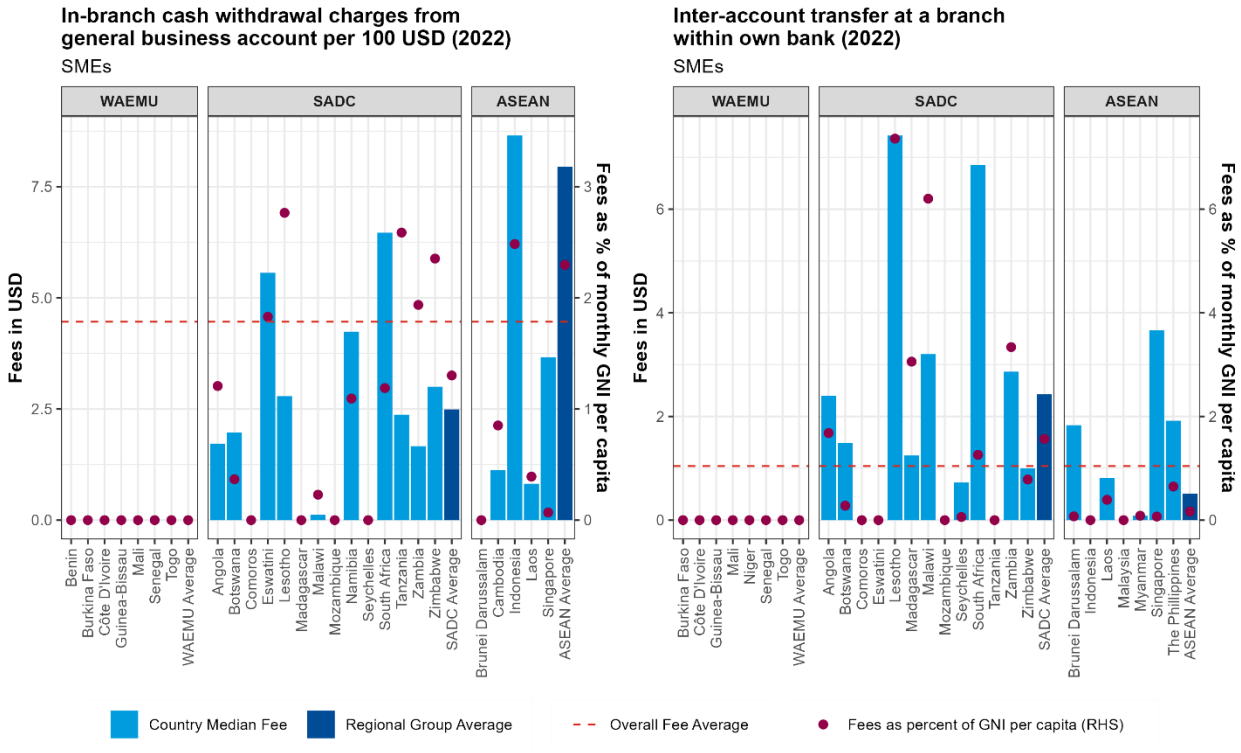


[23] This is a standard account fee payable on a monthly basis to the bank and it does not include monthly deposit requirements, although there may be penalty fees for going below a minimum balance which are not captured in this indicator. See Annex I for a detailed overview of definitions. Also, GNI per capita was used for normalization instead of monthly revenues because of data availability issues as cross-country comparable data on SMEs monthly revenues or profits are not readily available for majority of the countries.

Sources: UN Capital Development Fund (UNCDF); Authors' calculations.
Note: Fees represent median values, inclusive of VAT. Regional and overall averages are weighted using total population.

Cash withdrawal and transfer fees are also not negligible for general business accounts, although they do not necessarily follow the same pattern as monthly maintenance fees across countries and regions (Figure 8). On average, in-branch cash withdrawal from general accounts costs about USD 4.5 per USD 100 transaction. Interestingly, all WAEMU countries with available data offer free withdrawal services, while SMEs in SADC and ASEAN pay an average of USD 2.5 and USD 8, respectively, for a withdrawal of USD 100 from their general account. Similarly, inter-account transfers (within the same bank) at bank branches are the highest for SADC with a regional average of USD 2.4, followed by ASEAN (USD 0.5). Notably, this service is also free of charge for all WAEMU countries.

Figure 8. Costs of Banking Services for SMEs



Sources: UN Capital Development Fund (UNCDF); Authors' calculations.
Note: Fees represent median values, inclusive of VAT. Regional and overall averages are weighted using total population.

4. Case Study: Botswana

Expanding upon the regional analysis presented above, this section delves into a country case study, specifically examining the financial inclusion landscape in Botswana,[24] with the goal to offer more granular insights into bank pricing dynamics, the usage of bank products, and overall affordability. To this end, this section also leverages other data sources, most notably Finscope data, to supplement the bank pricing data discussed above.

4.1. Overview of Access to Banking Services in Botswana

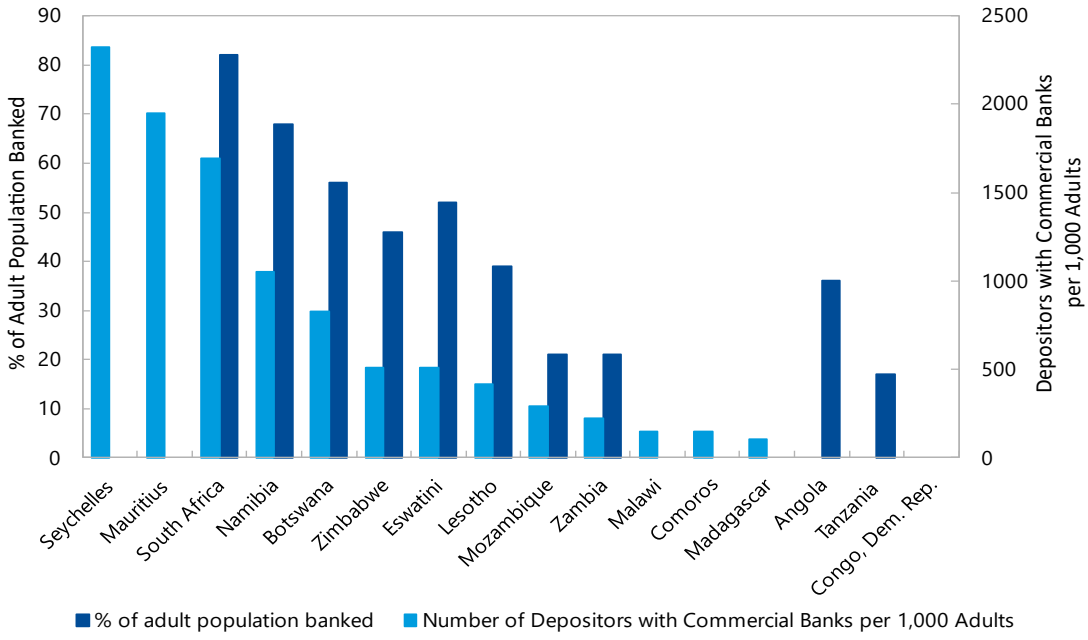
While the level of financial access in Botswana is higher than for many of its peers in the SADC region—in part reflecting the efforts of the government to improve financial inclusion[25] and the relatively lower cost of banking services than its regional peers—a significant proportion of the population remains unbanked in the country (Figure 9). According to the latest FinScope data, as of 2020, about 44 percent of adult population in the country was without a formal bank account[26] compared to 18 percent in South Africa and 32 percent in Namibia. Similarly, supply-side data from the Financial Access Survey (FAS) show that access to banking (measured as the number of depositors with commercial banks per 1,000 adults) is yet to reach the entire adult population in 2022. This underscores the ongoing challenges and the need for further interventions aimed at improving access to banking and financial inclusion in Botswana.

[24] Botswana is an upper middle-income country with a small adult population of 1.64 million people. Botswana has one of the highest GDP per capita of any mainland country in the SADC region (UNCDF, 2021). Botswana is chosen for the case study because it has the most representative (the bank pricing data in Botswana cover six banks with a combined market share of about 90 percent—one of the highest in the sample) and reliable data.

[25] Financial inclusion holds significant importance for policymakers and regulators in Botswana, leading them to devise a National Financial Inclusion Strategy (NFIS) and roadmap spanning from 2015 to 2021.

[26] A bank account in FinScope is considered a formal financial service and includes only accounts with commercial or state-owned banks. Non-bank entities like MFIs are therefore not included.

Figure 9. Access to Bank Accounts in Botswana vis-a-vis Regional Comparators



Sources: Financial Access Survey (FAS); FinScope Data; Authors' calculations.
Note: FinScope data for each country represents the latest available information on percentage of banked population between 2017 to 2022.

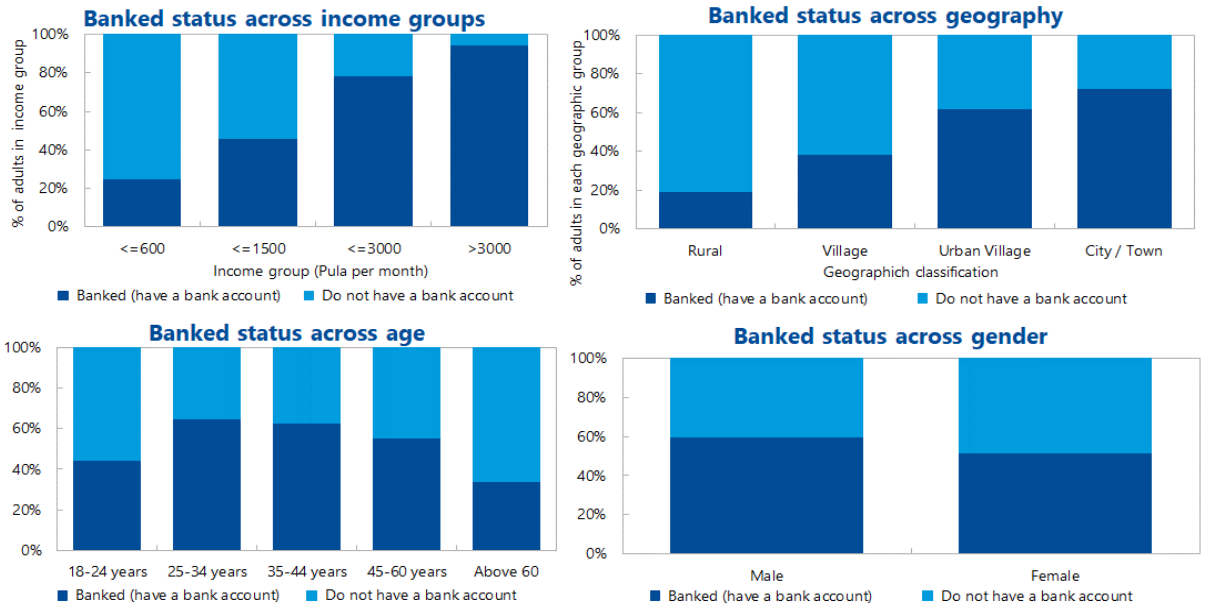
To some degree, this is driven by prevailing incidence of poverty and low-income levels, making it crucial to closely look at the affordability landscape to better understand costs associated with banking services as a barrier to financial inclusion. As of 2021, about 21 percent of the population lives below the national multidimensional poverty line. [27] According to the FinScope data, a large proportion of these low-income households seem to have lower access to bank accounts as compared to households with relatively higher incomes. For instance, the proportion of people with bank accounts is only 25 percent for the lowest income group while it reaches 94 percent for the highest income group in Botswana (top left chart in Figure 10). This implies that affordability can play an important role in the uptake of bank accounts; it is therefore crucial to analyze affordability for different income levels to better understand barriers for financial inclusion.[28]

The usage of bank accounts is also strongly associated with other socioeconomic characteristics including age, sex, and location as shown in Figure 10. The likelihood of having a bank account is the lowest for those above 60 years (34 percent) followed by the youngest age group while access to a bank account is the highest for those in the middle age groups. In addition, the proportion of people with a bank account increases with urbanization levels while males are also more likely to have a bank account.

[27] Geographic classifications are as used by Statistics Botswana. There are seven defined cities/towns in Botswana. Additionally, villages and urban villages are determined by population size, the presence of a tribal authority and availability of certain facilities such as schools, clinics or health centres, tribal administration offices, Botswana Police offices, water reticulation, etc. Hence, villages are more urban than rural areas.

[28] According to FinScope, most people receive their income in cash (60 percent), and the second biggest channel is a bank account (31 percent). While the use of mobile money is high, only 4 percent of people receive their income into a mobile money account.

Figure 10: Access to bank accounts across different socioeconomic characteristics (2020)



Source: FinScope Botswana 2020; Authors' calculations.[29]

4.2. Bank Pricing in Botswana

The cost analysis presented in Section 3 shows that fees charged by banks in Botswana for both the low-income group and small businesses are in general lower compared to fees in most SADC countries.[30] However, in Botswana, like most SADC countries, commercial banks charge higher fees for maintaining general business accounts compared to checking accounts for low-income individuals. A few additional takeaways from an analysis of bank fees in Botswana and its regional comparators include the following:

- The fees for all the services covered in the analysis are lower than the average fees for SADC, the differences (from the regional average) are particularly significant for checking account monthly maintenance fees, annual card fees, and in-branch cash withdrawals. On the other hand, the gap for mobile money account transfers (within the same bank) is relatively modest.
- In contrast to countries like Comoros, Madagascar, Mozambique, and Seychelles, where in-branch cash withdrawals are free, customers in Botswana typically incur a fee for this service.
- Finally, similar to most SADC countries, in-branch withdrawals cost substantially more than ATM withdrawals. Sending money to a mobile account (within the same bank) is only marginally higher than an ATM cash withdrawal. Payments to an account and inter-account transfers in general are much cheaper at an ATM or through online banking, compared to in-branch.

[29] Geographic classifications are as used by Statistics Botswana. There are seven defined cities/towns in Botswana. Additionally, villages and urban villages are determined by population size, the presence of a tribal authority and availability of certain facilities such as schools, clinics or health centres, tribal administration offices, Botswana Police offices, water reticulation, etc. Hence, villages are more urban than rural areas.

[30] There are only a few types of fees for which Botswana charges abnormally high as compared to its regional peers, for example dishonored cheques, unpaid debit orders, and unpaid future dated payments. However, these are not the typical banking products that low-income customers use frequently, as they require more sophisticated product usage, while small businesses can arguably better afford these fees.

4.3. A Closer Look at Affordability in Botswana

With the above background in mind, this section presents affordability analysis for different income groups of the banked population. We use the bank pricing data discussed in Section 3 and the FinScope Botswana 2020 Consumer Survey data—a complementary demand-side survey that includes detailed information on usage of banking services by income group. This analysis expands on the affordability indices developed in Section 3 by exploring the actual reported product usage across different income groups.

By dividing the adult population into roughly four equal income quartiles using data from FinScope,[31] we highlight the differences in the usage and affordability of financial products and services across different income groups in Botswana (left-hand side chart in Figure 11).[32] Given their banked status, all income groups own a checking account. Most of the population also seems to withdraw money from their checking account at least once a month, but the frequency of ATM withdrawals declines with income levels with the lowest income group not making any withdrawal at an ATM. Services such as ATM transactions, savings accounts, and internet banking[33] are used mainly by the two higher income groups. Cellphone banking, although significant—is used by less than 40 percent of adults even in the highest income group.

Based on the usage pattern and frequency of using bank services (as reported in FinScope), we identified a more suitable bundle of (basic) services (as compared to the affordability indices in Section 3) for each income group in Botswana as follows:

- **The low-income group (1st income quartile):** Maintaining a checking account and one in-branch withdrawal per month.
- **The 2nd income quartile:** Maintaining a checking account, one ATM withdrawal, and one cellphone banking transaction per month.
- **The 3rd income quartile:** Maintaining a checking account, one ATM withdrawal, one cellphone banking transaction, and a savings account maintenance fee per month.
- **The highest income group (4th income quartile**): Maintaining a checking account, three ATM withdrawals, three cellphone banking transactions, and a savings account maintenance fee per month.

We then estimated the cost of the common bundle of services for each income group (normalized by median/mean income of each group) according to the product suite and prices discussed in the previous section. Despite there being an increase in both product usage and the number of products used in higher income quartiles, costs as a percentage of their income tend to decline significantly as we move to higher income quartiles (right-hand side chart in Figure 11). We find that the lowest income group (over a quarter of income earning adults) has to pay about 5 percent of their monthly income, on average, to just have a checking bank account and make one withdrawal (in-branch) per month. The higher income groups spend a significantly lower percentage of their income, though they use a higher number of services, and use

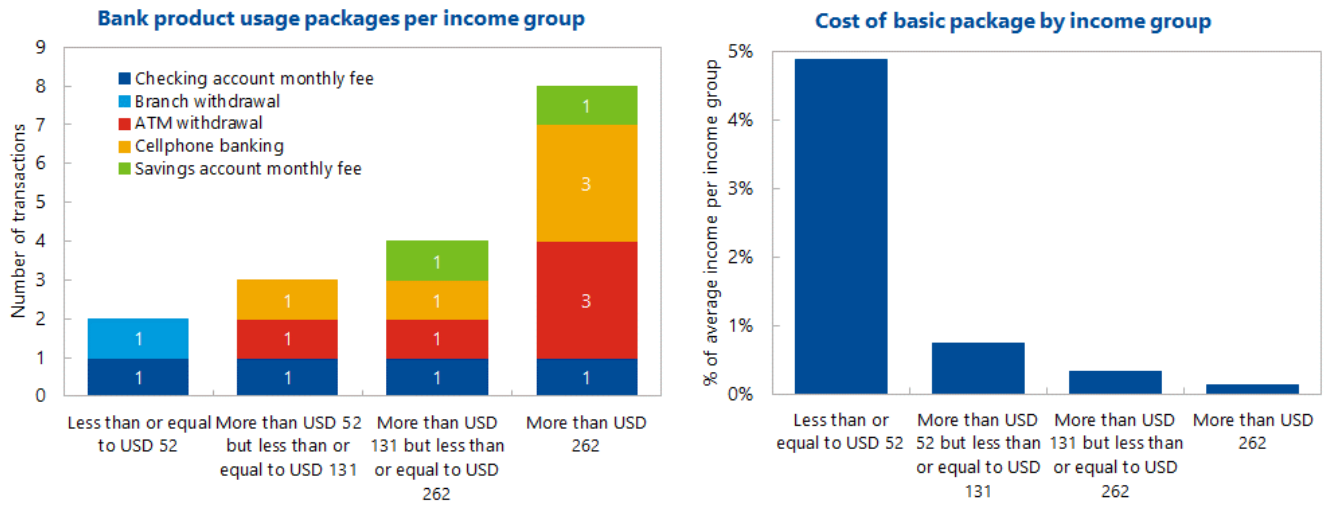
[31] As reported in FinScope Botswana 2020—those who reported receiving an income.

[32] FinScope reports the following bank services/products which are linked to UNCDF's bank pricing data: ATM/debit card; credit card; savings/transaction account; current/cheque account; fixed deposit bank account; cell phone banking; internet banking; mobile banking, e.g., Instant Cash.

[33] Cellphone and internet banking refer to an online banking platform that allows users to access the functionalities of the bank services that they are using, like transacting etc. These are services that can typically also be done at a branch or ATM, but instead are done on an online platform through a computer (internet banking) or a cellphone (cellphone banking). This does not include mobile money, which is a specific product line banks offer, although this product can in some cases be accessed through cellphone or internet banking.

these services more frequently. Our results show that, overall, about 36 percent of income-earning adults in Botswana would need to pay more than two percent[34] of their monthly income to access a basic bank account and conduct one in-branch withdrawal.

Figure 11: Bank product monthly usage packages and affordability per income group



Source: FinScope Botswana 2020[35]; Authors' calculations.

4.4. Affordability for Micro and Small Businesses

A similar analysis is conducted for micro and small businesses in Botswana. Using FinScope 2020, we derive two groups—micro businesses with no hired employees (69 percent of the sample), and micro and small businesses who have employees (31 percent of the sample). MSMEs tend to use formal financial services more than households, and usage is therefore similar to the usage of personal accounts by higher income groups, where the highest usage reported is for ATMs, savings accounts, and cellphone banking, with significant usage also of current accounts, internet banking, and mobile banking products.

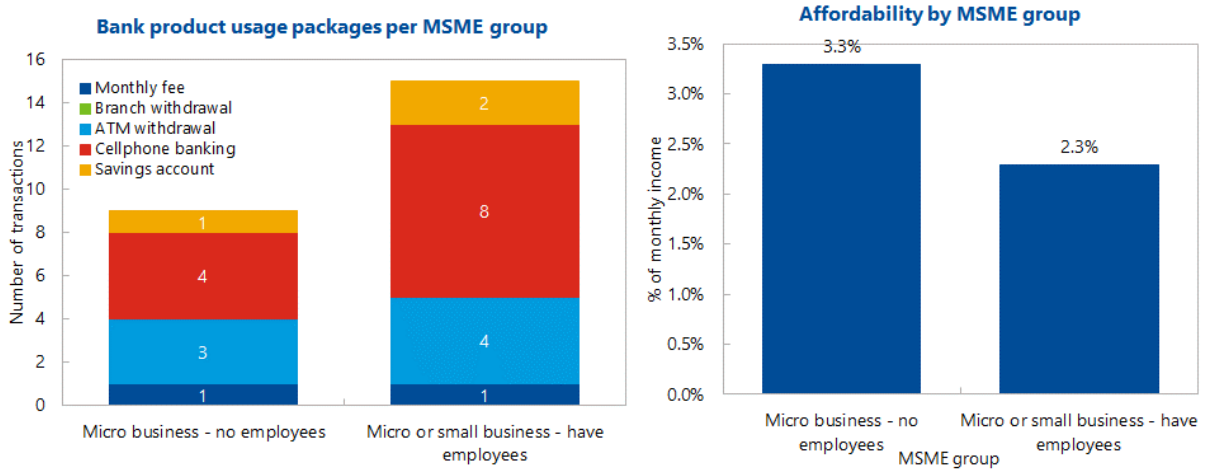
Figure 12 below portrays differences in the usage of financial products and services across micro and small businesses with and without employees, based on the reported usage and frequency of products in FinScope for each group (similar to the above methodology for personal accounts). Both groups that have accounts would pay a monthly maintenance fee for a business account. In addition, there is likely to be between 3 to 4 withdrawals at an ATM per month; this is based on the detailed data on frequency of ATM usage where more than 50 percent of each group who do use ATM's report using it only on a monthly basis, but between 33 and 41 percent of the two groups report using ATMs more frequently (weekly or to a lesser degree daily). A similar approach yields on average 4 instances of cellphone banking per month for the first group, and 8 for the second group. For savings accounts, we identify one interaction per month for the first group, but two for the second group.

[34] The two percent benchmark is based on (Beck, 2016).

[35] Product package for income groups were calculated based on the proportion of each income group that reports using specific bank products/services, as well as the reported frequency of use of these products (for those who do report usage).

Using the same average personal income from the same FinScope survey as a proxy for business earnings,[36] the affordability of the resultant product packages for micro and small businesses are depicted in the right-hand side chart in Figure 12. The results show that the proportion of monthly income spent by micro businesses with no employees on banking costs is higher (3.3 percent of their monthly income on average) than the one spent by micro or small businesses with employees (2.3 percent of their monthly income).

Figure 12: Micro and Small business bank products usage and affordability, Botswana (2020)



Source: FinScope Botswana 2020; Authors' calculations.

In sum, the above analysis shows that while the cost of banking services in Botswana is comparable to or even lower than those in SADC countries, it still poses a significant financial burden, particularly for low-income households. The cost of basic banking services (measured as a percentage of monthly income) is high for the low-income group—on average, more than a quarter of the bottom income earning adults spend about 5 percent of their monthly income to access basic services (to open a checking account and make one in-branch withdrawal per month). Similarly, micro-businesses (with no employees) incur relatively higher fees for the usage of banking products and services compared to micro and small businesses with employees, underscoring a greater financial burden faced by these micro-businesses. These findings seem to explain, at least partly, why a significant fraction of the population still does not have access to banking services.

[36] From UNCDF's livelihoods research, we know that most MSMEs—especially those that are micro or informal—typically the vast majority, mix their personal and businesses income to a large extent, and personal income therefore serves as a good proxy for business income. See UNCDF MAP Global Insight Series, Volume 1, Note 1; UNCDF MAP Global Insight Series Volume 3, Note 3, and UNCDF MAP Investor Series, Note 1.

4.5. Considerations for policymakers and regulators

Botswana has a National Financial Inclusion Strategy (NFIS) and roadmap spanning from 2015 to 2021 and is currently in the process of updating the NFIS for a new period.[37] The existing roadmap has six priority areas, two of which are relevant when looking at bank pricing: Priority 1 is about the payment ecosystem development, and Priority 2 is about development of low-cost accessible saving products. For the latter, the analysis above showcases how banks can contribute, including by having zero monthly fees for savings accounts as well as a zero rate for the first withdrawal. For Priority 1, the bank pricing analysis can provide further insight and potential policy directions as follows:

- **ATMs:** The roadmap calls for partnerships to develop infrastructure for distribution (which includes ATMs), but the bank pricing analysis suggests that the pricing aspect also plays an important role. The total cost of accessing an ATM—including annual card fees—need to be considered in order to catalyze the usage of ATM infrastructure. In this regard, the roadmap does call for revisiting bank charges for sustainable rural provision to reduce overall bank access costs, and the ATM related costs would be key to achieving this (in addition to utilizing digital channels and partnering to leverage agent networks).

- **Interoperability:** Charges for payments or transfers to other banks, as well as transactions that are conducted through ATMs of other banks are still much more expensive than those conducted within the same bank (or to accounts within the same bank). Relating to this, the roadmap does call for improved interoperability, not only between banks but also between banks and MNOs—greater interoperability could contribute to further lowering the cost of financial services.

- **Bank card fees:** While the bank pricing database does not encompass the fees merchants incur for transactions through points of sale (POS), the NFIS suggests a strategy for banks to collaborate with retailers. This partnership aims to enhance the card's value proposition for merchants, thereby boosting financial access for their customers. Concurrently, our analysis reveals that the annual fees charged to consumers for card use—excluding the merchant fees for POS transactions—could discourage the use of ATMs. This, in turn, poses a challenge to broadening financial inclusion, particularly in rural areas where such barriers can significantly impede access to banking services.

5. Conclusions

This paper analyzes a novel dataset on pricing of bank products and services to better understand the affordability aspect of financial inclusion. Specifically, the paper presents a cross-country comparison of commercial banks' fees and charges, mainly focusing on costs associated with maintaining bank accounts, mobile money accounts (provided by banks), and related services and transactions through bank branches, ATMs, and mobile banking platforms for low-income households and SMEs. By doing so, this paper attempts to fill an important data gap on barriers to financial inclusion by offering insights into the affordability aspect of financial services specifically relevant to underserved groups of populations, an aspect where detailed data are often absent in the existing supply-side and demand-side financial access databases.

[37] See: https://www.uncdf.org/article/7320/botswana-financial-inclusion-refresh.

The main findings bring into focus the challenge of affordability as a major barrier to financial inclusion. The paper develops an affordability index to highlight the extent of the costs associated with the usage of a bundle of basic financial products and services including monthly fees of maintaining a checking account and carrying out a transaction using an ATM. Overall, the results show that the costs of this basic bundle of services can exceed 2 percent of monthly GNI per capita in about one-fourth of the countries and 5 percent of GNI per capita in more than 10 percent of the selected countries covered in this paper. These results also show that commercial banks in WAEMU and SADC regions impose high costs on some basic items such as opening and maintaining checking bank accounts. These high costs can be a deterrent to opening and maintaining bank accounts for low-income consumers, hindering financial inclusion, particularly in countries where this cost represents a relatively large proportion of their monthly income.

Similarly, using bank debit cards, conducting in-branch or ATM transactions, and sending money via mobile money channels can also be quite expensive in several countries, particularly in SADC. The advanced affordability index constructed in this paper takes into account a relatively more advanced bundle of financial products and services. The results show that consumers in about one-third of the countries in the sample are charged more than 5 percent of their respective gross monthly incomes, on average, for using a more advanced bundle of products and services.

In order to demonstrate the use of bank pricing data at a more granular level, this paper took into account income distribution and actual reported product usage within a country in a case study for Botswana. Although bank fees in Botswana are generally lower or on par with those of other countries in the SADC region, the more granular affordability analysis shows that more than a quarter of income-earning adults in Botswana would need to pay in excess of 5 percent of their monthly income to access and use a basic bank account package. These findings suggest that making the costs of basic financial products and services more affordable can help promote greater financial inclusion in the country. The paper provides examples of policy considerations that countries can adopt to lower costs, including recommendations related to ATM/card fees, improving digital financial access, tax incentives, and subsidies. However, a more detailed discussion on policy considerations is a topic for another paper based on this analysis.

While this paper focused on costs associated with products offered by commercial banks, there are other financial sector players, such as microfinance institutions, independent mobile money providers, and state-owned rural banks, whose costing information is not covered in the UNCDF's dataset and therefore in this paper. Given the advances in technology, especially the potential for digital finance, other players in the financial sector are becoming important facilitators in enhancing financial inclusion, in the spaces where the commercial banks are unable to do so. To further enhance evidence-based policymaking and more fully understand the drivers of market growth in financial services, more granular data on prices are needed, including encompassing a broader set of financial services beyond traditional banking.

Economic benefits of financial inclusion have been well documented, and financial inclusion has been incorporated in the large majority of developing countries' national policy frameworks. However, this paper highlights that without addressing the fundamental issues of affordability, these benefits may remain unrealized, limiting the gains from financial inclusion policies. It is thus crucial for countries to prioritize measuring and tackling these affordability concerns in order to extend financial access to a broader range of people, particularly low-income households. With the conclusion of the MAP program in 2023, this paper underscores the criticality of gathering this cost-related information. A potential way forward could be the integration of cost-related insights into administrative supply-side data by central banks, an approach which will require the adoption of a standardized methodology to enable effective cross-country comparisons.

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7. Annex

Annex I. Key Definitions

BANK PRODUCTS / SERVICES	DEFINITIONS
Checking/ Personal Account	Also known as a "transmission" or a "cheque" account. These accounts typically allow the bank client to perform a range of day-to-day financial transactions. They serve the purpose of providing access to funds required for covering ongoing expenses, as opposed to a savings account which serves the purpose of saving funds on a short or long-term basis. A personal account may or may not have interest paid by the bank on the money deposited in the account. This depends on the specific type of account and the bank.
Monthly account fee	A monthly account fee or an account maintenance fee charged by the bank to an account holder. This amount is sometimes waived on low-income earner facilities offered by the banks.
Thirty-days bank statement (in branch)	A fee charged by the bank for a printed paper statement (charged per 30-day period) requested at a bank branch.
Posted statement - paper format (in branch)	A fee charged by the bank for posting a monthly statement in paper format to a client.
Cash withdrawal (in branch)	A fee charged by the bank for cash withdrawal at a bank branch.
Posted statement - electronic format (in branch)	A fee charged by the bank for posting a monthly statement in electronic format to a client.
Cheque encashment (in branch)	A fee charged by the bank for cashing a cheque.
PIN (Personal Identification Number) reset (in branch)	A fee charged by the bank for resetting a personal identification number (PIN) at a bank branch.
Balance enquiry (in branch)	A fee charged by the bank when a client makes a balance enquiry at a bank branch.
Savings Accounts	**A savings account serves the purpose of saving funds (storing value) on a short or long-term basis. This account typically attracts interest paid by the bank on the money deposited in the account, usually accruing to the account on a monthly basis. The level of interest payable depends on the specific type of account and the bank.**
Monthly maintenance fee	A monthly account maintenance fee charged by the bank to a savings account holder. This fee may be either: 1) a standard monthly fee payable irrespective of the amount of funds in the account and transactions associated with this account; or 2) a fee payable only if the client fails to maintain the minimum account balance specified by the bank.
First withdrawal (within a month)	A fee charged by the bank when a first withdrawal is made in a month from a savings account.
Mobile Money Accounts	Definitions have been integrated in the excel database. A mobile money account offers a pay-as-you-go digital medium of exchange and store of value, facilitated by a network of mobile money agents. A mobile money account offers a range of basic financial services, alleviating the need to make transactions using only cash. i. Banking clients with online/cellphone banking platform can automatically process mobile money transactions, they do not have to sign up for this service, or to have this service linked their accounts. ii. Banks also do have separate mobile money accounts they offer, which are far easy to set-up. iii. Moreover, there are also mobile money facilities that are used predominantly in less developed markets where banking infrastructure is usually not that good. This is where agents are mostly used.

BANK PRODUCTS / SERVICES	DEFINITIONS
	In the database, we track transactions related to the first two points.
Monthly account fee	A monthly account fee or an account maintenance fee charged by the bank for a mobile money account.
Send money to Mobile Money account (within own bank)	A transaction fee charged by the bank when money is sent from one mobile money account to another mobile money within the same bank.
ATM Charges	Automated Teller Machine (AMT) charges relate to a range of financial transactions which can be executed using an ATM and a bank / debit card.
Withdrawal (own bank ATM)	ATM operator fee charged by the bank for withdrawal at an ATM affiliated with a client's bank.
Card Fees	These fees relate to the possession of and use of a debit card, issued by the bank. A debit card is also known as an ATM card or a bank card. A debit card is linked to a personal (transmission / cheque) or similar account.
Annual debit card fees	An annual maintenance fee charged by the bank for a debit card issued by the bank to an individual client.
Other Electronic Services	This category of services includes mobile phone banking & internet banking transactions. Cellphone and internet banking refer to an online banking platform that allows users to access the functionalities of the bank services that they are using, like transacting etc. These are services that can typically also be done at a branch or ATM, but instead are done on an online platform through a computer (internet banking) or a cellphone (cellphone banking). This does not include mobile money, which is a specific product line banks offer, although this product can in some cases be accessed through cellphone or internet banking.
Mobile phone banking: Funds transfer (within own bank)	A fee charged by the bank for transferring funds via a mobile phone banking transaction to an account held in the same bank that the bank client uses. Mobile phone banking transactions can be completed using either a mobile phone app (typically requiring a smartphone) or via SMS (USSD-based). "Mobile phone banking" is also known as "cellphone banking" in some countries.
Internet banking: Funds transfer (within own bank)	A fee charged by the bank for transferring funds using an internet / online banking facility to another account held in the same bank that the bank client uses. "Internet banking" is also known as "online banking" in some countries.
SME related products and services	
General Business Account	Also known as a "transmission" or a "cheque" account. These accounts typically allow the bank client to perform a range of day-to-day financial transactions. They serve the purpose of providing access to funds required for covering ongoing business expenses, as opposed to a savings account which serves the purpose of saving funds on a short or long-term basis. A general business account may or may not have interest paid by the bank on the money deposited in the account. This depends on the specific type of account and the bank.
Monthly maintenance fee	A monthly account maintenance fee charged by the bank to an account holder.
Cash withdrawal (over the counter - OTC)	A fee charged by the bank for an over-the-counter cash withdrawal in a bank branch.
Payment and Clearing Charges	This category includes a variety of fees associated with day-to-day business banking transactions using a general business (cheque / transmission) bank account.
Inter-account transfer at a branch (within own bank)	A fee charged by the bank to process a transfer of funds between accounts within the same bank.

Note: General business accounts also incur fees for mobile money accounts, ATM charges, card fees and other electronic services. Not shown here as the definition is the same for checking/personal and general business accounts.

Annex II. Banks Coverage by Country

Countries	Number of Banks
Angola	6
Botswana	6
Comoros	4
DRC	6
Eswatini	5
Lesotho	4
Madagascar	5
Malawi	4
Mauritius	5
Mozambique	6
Namibia	6
Seychelles	6
South Africa	6
Tanzania	6
Zambia	6
Zimbabwe	6
Benin	6
Burkina Faso	6
Côte D'Ivoire	6
Guinea-Bissau	4
Mali	6
Niger	6
Senegal	6
Togo	6
Brunei Darussalam	6
Cambodia	6
Indonesia	6
Laos	6
Malaysia	6
Myanmar	6
Singapore	6
Thailand	6
The Philippines	6
Vietnam	6
Nepal	4

Annex III. Econometric Analysis

To better understand the relationship between costs of financial services and financial inclusion, we do an OLS regression using a cross-country analysis. We estimate the following equation using data for year 2022:

$$\boldsymbol{FI_i = \alpha + B_1(Afford)_i + B_2(Z)_i + \mu_r + \varepsilon_t}$$

FI_i denotes the level of financial inclusion in country i. We use two different variables to measure financial inclusion: i) outstanding deposits with commercial banks as a percentage of GDP), and ii) the percentage of adult population with a bank account at a formal financial institution. $Afford_i$ denotes the basic affordability index which describes the monthly cost of using basic financial services as a percent of monthly GNI per capita in country *i*. Z represents the vector of control variables which includes controls for income level, institutional quality, labor market dynamics, human development, legal rights, and digitalization, in line with the existing literature (IMF 2023). μ_r represents regional fixed effects to control for region-specific heterogeneity and ϵ_t represents the error term.

We find a statistically significant and negative association between costs of financial services and financial inclusion, highlighting affordability as a crucial barrier to financial inclusion. This correlation holds across various specifications – including different control variables and proxies to measure financial inclusion. However, given limited observations and cross-sectional nature of the data, we are unable to make any causal inferences based on these results.

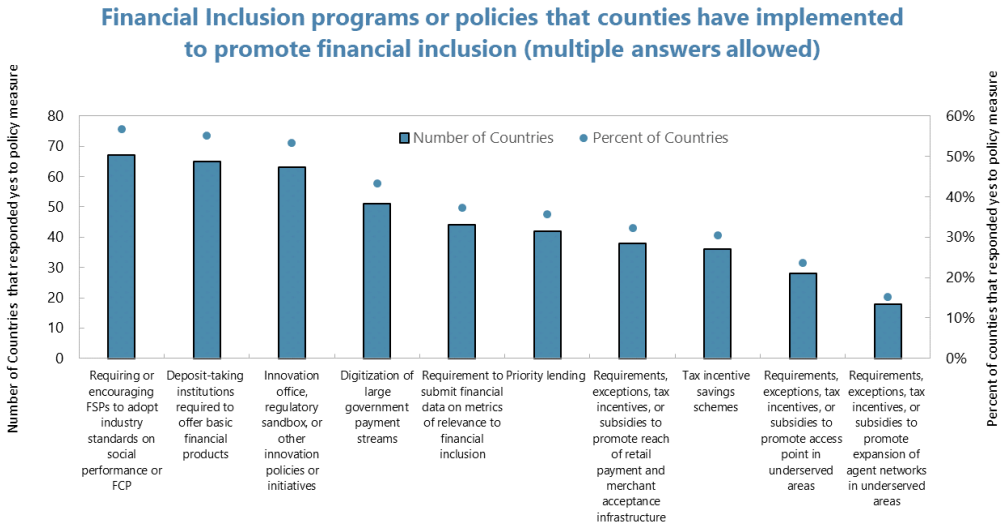
Regressions Results

Variables	**(1)** **Outstanding deposits with commercial banks (% of GDP)**	**(2)** **Adults with a formal bank account (%)**
Affordability Index (Basic)	**-8.103*** **(4.416)**	**-2.261**** **(0.971)**
Labor force participation rate (% of total population ages 15+)	Yes	Yes
Women Business and the Law Index Score	Yes	Yes
GDP per capita	Yes	Yes
Inflation (annual %)	Yes	Yes
Human Development Index (HDI)	No	Yes
Enhanced Digital Access Index	No	Yes
Regional Fixed Effects	No	Yes
Observations	22	27
R-squared	0.160	0.782

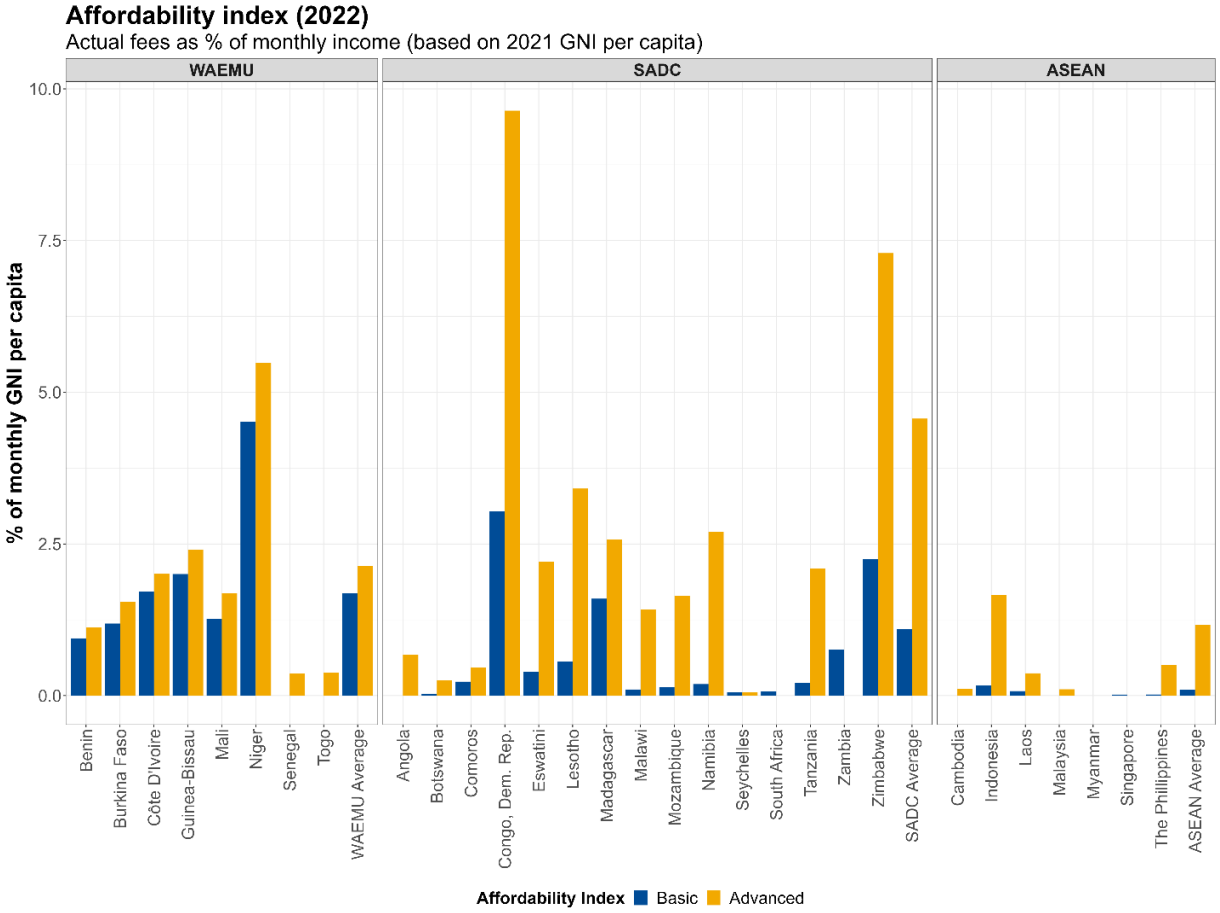
Note: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Annex IV. Financial Inclusion Programs and Policies from the World bank's Financial Inclusion and Consumer Protection Survey

World Bank conducted a survey from about 118 jurisdictions globally and asked a question "Which of the following programs or policies has your country implemented to promote financial inclusion? Please mark all that apply". The responses for that question are summarized below. The data and report are publicly available here.



Annex V. Affordability Index using GNI per Capita in PPP Terms (current international $)



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