POLICY BRIEF

Financial Access Expansion and Rural-urban Welfare Disparities: Evidence from Zambia

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Abstract

This paper investigates the welfare gains following changes in aggregate financial access. Using individual-level data collected in Zambia between 2009 and 2015, results show that increasing the number of financial access points improved the quality of life by moving users of financial services by 1.2 percentage points, especially in rural areas. A monetary measure of welfare shows an overall increase in incomes by ten percentage points over the seven-year period for urban dwellers, moving the urban poor above the income-poverty line in Zambia. Financial resources, exchanged through financial services providers located closer to users, were used to acquire and/or improve the quality of

homes including the use of better cooking technologies. This choice of investment in dwellings, points to a long-term outlook in the financial decisions taken by the financially included, with prospects for sustainable development. These results highlight the need to intensify financial expansion policies that target the rural areas in the fight against poverty.

Introduction

The relationship between finance and welfare is an old debate. There is substantial theoretical and empirical evidence that access to finance matters for household welfare, and the mechanisms through which finance contributes to poverty reduction, improves enterprise performance and overall growth (Fafchamps & Schündeln, 2013; Beck et al., 2007; Hulme & Mosley, 1996; King & Levine, 1993).

Proponents of the Sustainable Development Goals have advocated for broad based financial access as a long-term solution to poverty. But barriers to financial access continue to compromise the realization of the benefits of financial access (Demirgüç-Kunt et al., 2015). Such barriers include, for example, not only the cost of operating the bank accounts, but costs associated with getting to financial services providers or agents. There is indeed evidence that proximity of financial services improves people's livelihood, such as the use of mobile phone platforms like the M-PESA innovation, which is used to transfer money across regions in a country, to pay bills and to even save (Takahashi, 2016; Morawczynski, 2009).

Evidence is, however, mixed on the welfare distribution following access to financial services in terms of where the marginal benefits lie, i.e., rural versus urban dwellers, or men versus women (Ashraf et al., 2010; Burgess & Pande, 2005), or whether the benefits are persistent or transitory (Khandker & Samad, 2013), and whether beneficiaries indeed record improved welfare (Diagne & Zeller, 2001). These problems are exacerbated by lack of longitudinal panel data in many developing countries for making causal inferences. Attempts have been made to use cross-country data which masks country-specific difference (Honohan, 2008; Beck et al., 2007) or randomized control experiments like Ashraf et al. (2010) or Karlan and Zinman (2010) which lack external validity.

To contribute to the growing literature in this area, this paper investigates rural-urban disparities in welfare following a financial inclusion policy in Zambia between 2011 and 2015. The policy had the objective of increasing access to financial services, with a focus to under-served regions like the rural areas, which is a version of India's social banking programme of 1969. We make use of the FinScope cross-sectional data collected from Zambia between 2009 and 2015 to construct a synthetic panel using age cohorts. The exogenous variation in financial access points between these

two data points is then incorporated as an instrument of financial inclusion and panel data techniques used to investigate changes in welfare outcomes because of changes in financial access.

We argue that such access could affect welfare directly, by increasing the probability of individuals using financial services brought closer to them (some form of unmet demand). The indirect channel is through spillovers from increased economic activity, resulting in increased probability of employment, thereby increasing an individual's income. An individual-level index of financial inclusion is constructed from three dimensions following Sarma (2015): formal products holding, frequency of use and availability of financial services. Welfare is measured by a non-monetary wealth index constructed from possession of valuable assets plus household characteristics following the approach used in the Demographic and Health Surveys (DHS). The index is then used to construct a measure of relative poverty. In the absence of consumption data, an alternative monetary measure of welfare is constructed from personal income.

The analysis shows that between 2009 and 2015, the expansion of the financial sector improved welfare by 1.2 percentage points, moving individuals from a lower to a higher wealth quintile. While there were relatively more financial access points opened in urban than in rural areas, welfare gains were statistically significant in rural areas. Using the income measure however, results show an increase in incomes of up to ten-fold in 2009 prices, moving the financially included poor above the income poverty line. This effect is statistically significant in urban areas. While rural areas also recorded positive incomes, these incomes were not statistically significant. In terms of the transmission mechanism, individuals used the financial services as a conduit to receive/send or save financial resources, and later use these funds to improve or increase physical asset ownership. This is evident from an increase in the probability of acquiring a dwelling, using better quality construction materials (for roofing and flooring), using more modern cooking technology, and acquiring electronic items. This intuition is consistent with an evaluation of the cash transfer programme in the country where recipients used the grants to improve the quality of housing than increasing consumption (American Institutes for Research [AIR], 2015). These results are robust after controlling for previous welfare status over a period of six years, which provides some evidence of persistence of the benefits of financial access (Khandker & Samad, 2013; Burgess & Pande, 2005).

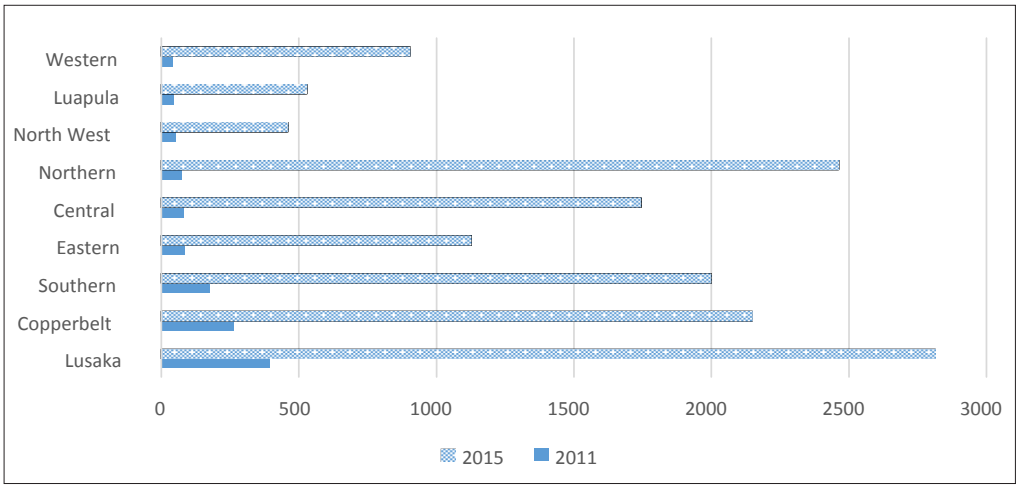
Financial inclusion and poverty trends in Zambia

Zambia's financial sector development plan started in the early 1990s when the country undertook its first attempt at financial sector deepening. By 2005 however, the banking sector was still small and underdeveloped, and only eight percent (8%) of the population was banked (Martínez, 2006). The Bank of Zambia then embarked

on a financial sector development strategy, the Financial Sector Development Plan (FSDP) in recognition of the lack of financial services especially in rural/peri-urban areas; high bank charges and account requirements; poor credit culture and; low levels of financial literacy and education. The FSDP was implemented in two phases, with FSDP I running from 2004 to 2009 and FSDP II from 2010 to 2015. This intervention led to an increase in financial access to 37% (2009) and 59% (2015). This was evidence of the enhanced access to financial services in most of the districts of Zambia, through new bank and microfinance institution branches as well as mobile banking.[1]

The number of bank branches and agencies increased from 277 in 2011 to 1,464 in 2015, while the number of Automatic Teller Machines (ATMs) per 100,000 persons increased to 9.92 in 2014 up from 0.9 in 2004, averaging 5.7.[2] The country's mobile network operators and commercial banks started offering mobile services for bill payments and money transfers. Technological innovations were also adopted to facilitate agency banking. Figure 1 shows the aggregate number of financial service providers by province. The distribution is skewed to regions with high economic activity such as Lusaka and the Copperbelt provinces, which accounted for over 50% of the total financial access points by 2015. According to the geospatial exercise conducted in 2015 by the Bank of Zambia, these provinces also have a high concentration of mobile money agents, a key feature of the financial sector expansion programme.

Figure 1: Financial access points by province



Source: United Nations Capital Development Fund (UNCDF) (2016). http://access.i2ifacility.org/Publications/GIS4FIZambia.pdf

1 See http://www.boz.zm/Financial-Sector-Development-Plan-II-Brochure.pdf

2 http://www.theglobaleconomy.com/Zambia/Bank_credit_to_the_private_sector/

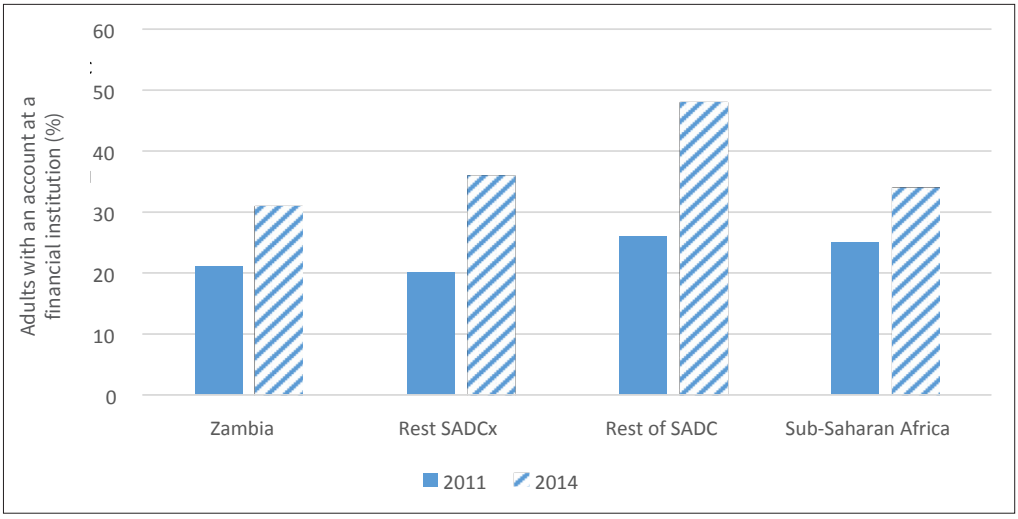
At an individual level, Table 1 shows that by 2015, up to 59.3% of Zambians were either formally or informally included compared to just 37.3% in 2009. However, formal accounts holding in Zambia is below the average for sub-Saharan Africa as shown in Figure 2. By 2014, only 6% Zambians reported borrowing from a bank, a credit union or a microfinance institution, even though there is evidence of growth in the private sector credit to Gross Domestic Product (GDP) in the past decade (Zambia Economic Brief, 2014). To date, over 60% of the population remains financially excluded from the banking sector, which includes SACCOs.

Table 1: Account holding and inequality in Zambia

	2005	2009	2015
Banked (formally served)	14.6	13.9	24.8
Semi-formally served (non-bank)	7.8	9.3	28.5*
Informally served	11.3	14.1	21.1
Not served or excluded	66.3	62.7	40.7
Total number of financial services points	--	1,211**	14,193

Source: FinScope Zambia Report (2015) *Uptake boosted by use of mobile money. Up to 1.1 million adults use mobile money. **figures extrapolated from 2011.

Figure 2: Overview of account holding in Africa



Note: SADCx refers to SADC countries excluding South Africa.
Source: Author's compilation from Demirgüç-Kunt et al. (2015).

According to development literature, a deep and inclusive financial sector is a catalyst for improving the welfare of a country's citizens. As financial services become affordable and brought closer to potential users, it enables them to plan for the future or to engage in economic activities with prospects of transitioning out of poverty (Beck et al., 2007; Burgess & Pande, 2005; Fafchamps & Schüdeln, 2013). However, the extent to which the poor are positioned to take advantage of

economic opportunities or navigate a negative shock and avoid slipping back into poverty, provides two states of nature - transitory or persistent poverty (Carter & Barrett, 2006; Dercon, 1998). Financial access thus provides the financial resources to either engage in economic activities or to use asset wealth as collateral in exchange for funds, to allow the poor to mitigate negative shocks. In Zambia however, the extent to which financial sector deepening has contributed to transitions out of poverty is an empirical question. The Gini coefficient has averaged 55.6% over the past decade and by 2015, 7.2 million out of 16.2 million Zambians were below the poverty line. This is against a backdrop of direct poverty reduction initiatives such as the cash transfer programme that aims to reach up 500,000 Zambians.[3] The poverty outlook can be partly attributed to the years drought affected the agricultural sector and subsequently food prices, a combination of which would negatively impact the welfare of those who depend on agriculture for their livelihoods. Paradoxically though, rural poverty remained constant at 0.60 between the two periods, but urban poverty increased from 0.60 to 0.61 between 2009 and 2015, leading to an overall poverty trend of 0.65 to 0.69 over a seven-year period. Notwithstanding this negative outlook, this paper attempts to establish whether the financial access drive in Zambia had any welfare benefits either nationally or by location for those who participated.

Methodology and data

In a simple framework, we can compare the welfare outcomes of those individuals that are financially included to those of the financially excluded. However, this approach presents a problem of selection bias since the financially included may possess characteristics that increase their inclusion probability. For example, one's initial wealth is related to the affordability of user fees and charges associated with financial services - a major barrier to financial inclusion. This bias, however, can be attenuated if we can track the individual's welfare before and after the financial inclusion intervention.

Conclusion and policy implications

The objective of this study was to investigate the nature of welfare gains following a financial access policy. Using individual level cross-section survey data from Zambia, we construct a pseudo-panel to allow for inference in a panel setting. This makes the results of this study both relevant and novel for this country and for similar parts of Africa where panel data is scarce and financial inclusion initiatives are being tested. The analysis reveals differences in welfare outcomes based on the measure of welfare and on the location of the individual. Using an asset-based wealth index, our results

3 http://www.worldbank.org/en/country/zambia/overview

show that there were relatively higher welfare gains in rural areas. On the other hand, a monetary measure such as personal income shows that financial inclusion was accompanied by an increase in incomes, but the effect is significant in urban areas. Irrespective of the measure used however, the effect of financial access changes was to move individuals from lower wealth quintiles, but not above the income poverty line. These results are robust when we account for location-specific characteristics as well as personal initial welfare.

There is evidence of investment of items with a long-term outlook, and which improve the quality of life (such as acquiring homes, improving the quality of homes, using better cooking technologies). Disaggregating the composite index of financial inclusion shows that proximity to financial services points of below 60 minutes had a positive and significant effect on welfare. This emphasizes the point on getting financial services closer to households. A key observation from the study is that the intensity of products holding is only secondary after financial access has been guaranteed. Thus, studies which use the extent of product holding as a proxy for financial inclusion (Demirgüç-Kunt et al., 2015), assume that proximity/access is guaranteed in the first instance, which is not often the case.

There are a few limitations. Given that there were other poverty reduction initiatives pursued during the period of this study (such as social support grants and agricultural subsidies), there is not enough information in the data to tease out their effect. However, it appears that these initiatives were complemented by the changes in financial access, the combined effect of which was the positive welfare outcomes we observe. The second limitation relates to information on rural-urban migration over the period of the study, which makes the results of our subsample analysis ad hoc and not conclusive. Relatedly, we are not able to confirm that rural and urban locations remained as such over the period of our study. An example is the creation of the 10th province. This change in boundary lines has implications for the domicile affiliation of individuals over the years. Finally, over a seven-year period, there were negative macro-economic shocks that could not be thoroughly accounted for. However, these would only make our results under-estimates of the true effect of the financial inclusion drive. In considering these shortcomings, our results can be interpreted as average treatment effects.

The main policy implication from these results is to reinforce the expansion of financial services to rural areas and to make credit more attractive since there was least use of credit services. Credit services could also improve rural incomes. The evident investment in long-term assets suggests that indeed financial access policies have the potential of reducing rural poverty.

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