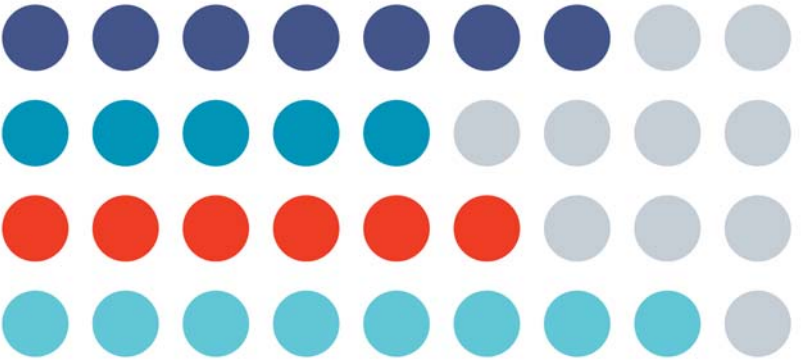
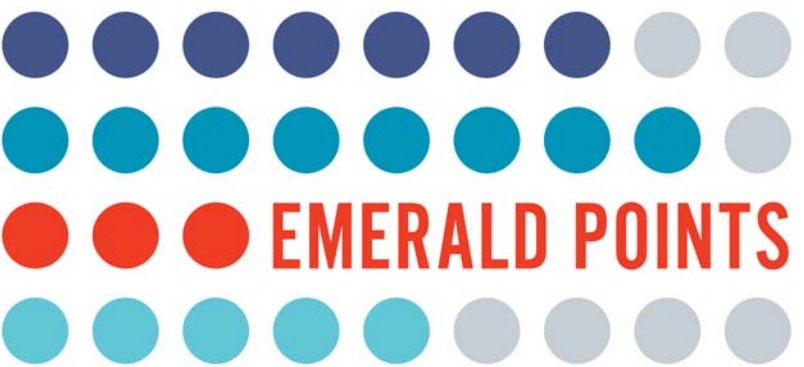


GENDER BIAS AND DIGITAL FINANCIAL SERVICES IN SOUTH ASIA

Obstacles and Opportunities on the Road to Equal Access

Rashmi U. Arora



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Obstacles and Opportunities on the Road to Equal Access

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INVESTOR IN PEOPLE

Dedicated to my parents

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CONTENTS

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LIST OF FIGURES

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LIST OF TABLES

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1

INTRODUCTION

Theoretically, the relationship between finance and economic growth has been acknowledged as positive (Bagehot, 1873; Goldsmith, 1969; King & Levine, 1993; Levine, 1997; Schumpeter, 1912). This literature argues that increased financial development allows efficient allocation of credit through better scrutiny and monitoring of borrowers both prior and during the project; allows new investment to take place contributing to entrepreneurial activities; enables accumulation of physical and human capital; lowers transaction costs and promotes economic growth (Aghion, Howitt, & Levine, 2018; Buera, Kaboski, & Shin, 2016; Popov, 2018; Townsend & Ueda, 2006). Financial intermediaries enable economic growth through generation of savings and foster innovative activities by easing credit constraints (Aghion et al., 2018). The recent literature has, however, acknowledged that this relationship could be nonlinear, and the positive link between finance and growth disappears once financial depth reaches a certain threshold (Arcand, Berkes, & Panizza, 2015; Demetriades & Rousseau, 2016; Manganelli & Popov, 2013).

This theoretical framework on financial development is, however, focused on the depth of financial system and does not consider its distributional implications. Implicitly, it assumes that financial services are available to all. However, in the real world the problems of transaction costs, asymmetric information and uncertainty on project outcomes limit access to financial services (Beck & de la Torre, 2006). Emphasis on access to financial services and financial inclusion has gained considerable significance in the recent years.[1] Several studies have noted that financial access and an inclusive financial system can reduce poverty and inequality, provide opportunities for investment in new or existing businesses, allow households to build savings, increase consumption and overall wellbeing (Aghion & Bolton, 1997; Banerjee & Newman, 1993; Claessens & Perotti, 2005, 2007; Demirguc-Kunt & Levine, 2009; Galor & Ziera, 1993; Gine & Townsend, 2004; Khera, 2018; Mookerjee & Kalipioni, 2010; Piketty, 1997; Townsend & Ueda, 2006). Kinnan and Townsend (2012) show that kinship networks to formal financial institutions allow households better consumption smoothing through access to financial services. Related to the above finding, Burgess, Deschenes, Donaldson, and Greenstone (2017) find that in India access to finance allows rural households to smoothen their consumption and is associated with lower mortality rates especially under hot climatic conditions.

Latest figures from World Bank's global findex database reveal that globally the number of adults with account at a financial institution (including mobile money providers) was

1 Although some studies critique the zeal behind financial inclusion and the motivation for including vulnerable unbanked population (Bateman, 2017; Bateman, Duvendack, & Loubere, Häring, 2019; Mader, 2015), yet it is realistic enough to assume that the only alternative to formal financial services is the informal sector.

51% in 2001 increasing to 69% in 2017. In developed countries, account ownership was almost universal with 94% of adults having an account, while in developing countries these figures stand at 63%. However, globally about 1.7 million adults still remain unbanked with around half of the unbanked population residing in just three South Asian economies – Bangladesh, India and Pakistan (forming altogether 20% of a global unbanked population) and others such as China, Indonesia, Mexico and Nigeria. Overall in 2017, 72% of men and 65% of women had account at financial institution and globally about 980 million women are unbanked. In developed countries, the gap between men and women's ownership of accounts is marginal; however, in developing countries about 41% of women still do not have access to accounts (Demirgüç-Kunt, Klapper, Singer, Ansar, & Hess, 2018).

1.1 WOMEN, MACROECONOMY AND FINANCE

The role of women in macroeconomy and economic growth is well acknowledged (Dollar & Gatti, 1999; Kochhar, Jain-Chandra, & Newiak, 2016; Nallari & Griffith, 2011; Stotsky, 2006). Failure to consider women's role in the formation of macroeconomic policies can have severe implications on women's participation in paid workforce, resource allocation and their productivity, for instance the negative impact of structural adjustment policies of 1980s which were gender neutral (Çagatay, 1998).

Poor access to women in education, wages, employment and finance not only impacts labour productivity but also has implications on savings and investment made by women and lowers their consumption, exports and overall economic growth (Seguino & Floro, 2003). Increased economic growth

reduces gender inequality by allowing women to participate in paid workforce, thus further breaking down the barriers of inequality and enhancing growth. Gender inequality in opportunities such as human capital and labour market has a negative relationship with output and export diversification in low-income countries (Kazandjian, Kolovich, Kochhar, & Newiak, 2019). As Dollar and Gatti (1999) found that 1% increase in the share of women with secondary education leads to an increase in per capita income by 0.3%. Limited access of resources to women including accumulation of human capital, assets, public services and productive activities reduces an economy's growth and living standards (World Bank, 2011).

Furthermore, inequality in gender matters as it impacts on various development outcomes such as health, education, employment and wages (Seguino, 2019). Women tend to spend their incomes more on child health and education, leading to improvement in household welfare (see Duflo, 2012; Quisumbing & Maluccio, 2003; see also Swamy, 2014).

Access to finance can also help in reducing such gender inequalities and increase participation of women in paid workforce (Popov & Zaharia, 2016). Further, as women investors are considered more risk averse (Byder, Agudelo, & Arango, 2019), they can play a greater role in building resilience and financial stability (Sahay, Čihák, & other IMF Staff, 2018; see also Maltby & Rutterford, 2012 for an interesting account of the historical role of women in finance).[2]

2 There is, however, unclear evidence on the risk averseness of women as Badunenko, Barasinska, and Schäfer (2009) in their study on financial behavior conclude 'the hypothesis that females take more conservative investment decisions because they are by nature more risk averse than males cannot be confirmed by the data. Other factors which cannot be taken into account in our model may play a role, such [sic] differences in human capital, duration of work life, knowledge of financial markets, or even trust in financial institutions' (Badunenko et al., 2009: 22).

Dupas and Robinson (2013) found that women with a savings account invested 45% more in their businesses and are less likely to sell off their assets in case of emergencies. According to Global Banking Alliance, the proportion of non-performing loans was 54%, much higher for men compared to women (World Bank, 2018a). Evidence from various micro-finance evaluation studies also shows higher repayments from women than men. Beck, Behr, and Guettler (2013) argued that even the composition of a bank's workforce matters as they showed that allocation of credit among male and female loan applicants is influenced by the gender of a bank's loan officer.

1.2 TECHNOLOGY AND FINANCE

In recent years, considerable focus is being placed on harnessing technology to increase financial inclusion of women. Various benefits of financial services through technology (digital finance) in developing countries include increased empowerment of women within households as it improves their access to financial services (Demirgüç-Kunt, Klapper, Singer, Ansar, & Hess, 2018; Docquier, Lowell, & Marfouk, 2009; Haider, 2018; Kusimba, 2018); increased role of women in household decision making and improves occupational choices. For instance, Suri and Jack (2016) noted that M-Pesa in Kenya allowed 185,000 women to move from the agricultural sector to non-agricultural enterprises. Digital payments such as cash transfers in contrast to payments made in cash allow increased privacy to women and greater control over funds from the rest of the household (Aker, Boumnijel, McClelland, & Tierney, 2013; Ghosh & Vinod, 2017). In Kenya mobile money transfers allowed women to access remittances from their husbands who had migrated to urban

areas (Morawczynski & Pickens, 2009). Adoption of a smartphone financial app has also been found to be welfare enhancing as it increases availability of financial information to women and improves their financial management skills (Carlin, Olafsson, & Pagel, 2017).

Digitization of financial services has a twofold effect. It strengthens financial inclusion and their joint interaction promotes economic growth (Chatterjee & Anand, 2017). Further, it increases financial development as the use of ICT enables easy dissemination of information reducing entry barriers and increasing competition in the financial sector, as well as reducing interest rates due to better information availability (Hauswald & Marquez, 2006; Sassi & Goaied, 2013; see also Goldfarb & Tucker, 2019). Adoption of technology could lead to a 'cycle where initial improvements and early adoption may translate into significant IT improvements through higher profitability as intermediaries allocate more resources toward research and development' (Hauswald & Marquez, 2006). Rapid diffusion of ICT through the channel of technological innovation and better telecommunication infrastructure strengthens the financial sector and contributes to economic growth, and countries with low level of Internet use benefit less from financial development than otherwise (Claessens, Djankov, Fan, & Lang, 2002; Sassi & Goaied, 2006; Shamim, 2007). Increase in the number of mobile phone users and Internet connectivity adds to the depth of the financial sector and contributes to economic growth (Shamim, 2007). Information and technology infrastructure eases financial sector functions of monitoring and corporate control (functions as identified by Levine, 1997) and reduces information and transaction costs in the financial sector and enables increased financial access to SMEs (Ketterer, 2017).

The use of IT leads to increase in the physical distance between the banks and the borrowers, though it enables

improved networks for transmission of information allowing banks to connect with the borrowers located far away (Petersen & Rajan, 2000). However, education, awareness about technology and technical assistance and developing trust in mobile banking are essential to spread financial inclusion through ICT (McHenry, Goldberg, Carlson, Lewis, & Mehta, 2017). Financial inclusion supported with ICT diffusion contributes positively to growth, and the joint interaction between mobile penetration and financial inclusion contributes positively to growth (Andrianaivo & Kpodar, 2012).

Several studies have also noted enhanced effects of digitization on financial inclusion (Ozili, 2018). Agyekum, Locke, and Hewa-Wellalage (2016) showed that mobile banking leads to increase in financial inclusion. Their results show that 1% increase in mobile subscription leads to 1.19% increase in credit to the private sector. Mobile phones have been able to reach the underbanked and unbanked as has been documented by several studies. In fact, spread of mobile phones is taken as one of the key parameters for financial inclusion by some researchers. (Villasenor, West, & Lewis, 2016). Klapper (2017) argued that digital payment systems can benefit entrepreneurs in a number of ways such as improving connectivity with different stakeholders like banks, employees, suppliers of goods & services; increased access to financial services-savings and credit; increase in efficiency and security in paying wages to the employees electronically (see also Fuster, Plosser, Schnabl, & Vickery, 2018). Remittances to home countries by migrant workers are also facilitated by digital channels (Rillo & Levine, 2018). Suri and Jack (2016) claim that around 2% of Kenyans were able to escape extreme poverty due to MPesa. Digital financial services (hereafter DFS) allow the poor to undertake financial transactions without the need to visit physical bank branches reducing transaction costs such as cost of travel (Demirgüç-Kunt et al., 2018; Islam, Muzi, & Meza, 2016;

Ozili, 2018). Some constraints which could hamper digitization and achieving the above benefits include lack of adequate financial infrastructure, poor regulation and low financial literacy (Klapper, 2017).

Although work is developing on access to financial services in general, not much academic research is available on digital access to financial services for women. Furthermore, not much research exists on the financial inclusion of women in South Asia and more so, their access to digital financial services. We searched the literature for studies on digital financial services to women in South Asia and other countries as well. Most studies published on DFS are for African countries. In our research we hardly encountered any study related to South Asia. This study fills in an important gap in the literature and specifically raises the question: What is the spread of digital financial services to women in South Asia? What are the barriers influencing their access to digital financial services?

1.3 WHY SOUTH ASIA?

This region was chosen as it is fast growing, yet has a high level of poverty and low human capital development. Further, a huge demand for finance in South Asia and its lack of accessibility has been noted by several studies. For instance, Fernando (2007) emphasized that:

> *closing the huge gap between the demand for financial services from low-income households and its supply from the formal and semiformal sources in both quantitative and qualitative terms may be considered one of the biggest development challenges facing most developing countries in Asia and other regions.*