



HAL
open science

Financial Inclusion via Mobile Banking – A Comparison Between Kenya and India

M. C. Arthi, Kavitha Shanmugam

► **To cite this version:**

M. C. Arthi, Kavitha Shanmugam. Financial Inclusion via Mobile Banking – A Comparison Between Kenya and India. International Working Conference on Transfer and Diffusion of IT (TDIT), Dec 2020, Tiruchirappalli, India. pp.561-569, 10.1007/978-3-030-64849-7_50 . hal-03701823

HAL Id: hal-03701823

<https://inria.hal.science/hal-03701823>

Submitted on 22 Jun 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution 4.0 International License

Financial inclusion via mobile banking – A comparison between Kenya and India

Arthi M C, Research Scholar

SRM Institute of Science and Technology, SRM Nagar, Kattankulathur, 603203, Kanchipuram, Chennai, TN, India

Dr. Kavitha Shanmugam

Associate Professor, Faculty of Management,

SRM Institute of Science and Technology, SRM Nagar, Kattankulathur, 603203, Kanchipuram, Chennai, TN, India

<https://www.srmist.edu.in/>

Abstract

Mobile payments in India and Kenya had grown tremendously in the last decade and this paper intend to analyze the trend, progress and achievements of both the countries in mobile payments especially focusing on socially and economically backward sections of the society. Mobile payment banking system in Kenya exists since 2007, even before digital era began in India. Payments banks in India, as a concept, envisioned in 2014, nevertheless showing lot of promising growth because of the mobile penetration in India. There are lot of similarities in the intention of both the initiatives, as they mainly focus on financial inclusion for economically poor society and rural population. M-Pesa by Safaricom had made an implausible change in Kenya, improving the labor class and rural people access to banking, reducing time spent on transactions and simplifying the process by just making cell phones as their banks. India until first decade of 20th century, was mainly dependent on postal service for rural areas as banking solution, but now rapidly moving to digital era with payment banks as a mobile enabled banking solution. The paper explains the Indian service providers like Paytm, Airtel, Jio, and Indian postal service who had already established in India were able to move to Payment bank services quicker because of the base they had established in the last decade. The paper utilizes the secondary data information extracted from published reports and reports from Reserve Bank of India, Central Bank of Kenya and other independent organizations like FSD Maps, Statista and GSMA to arrive at a comparison between the payments systems in both the countries

Keywords: Financial Inclusion, Digital payments, M-Pesa, Mobile banking, Mobile payments, Payment Banks

1 Introduction

The need for financial inclusion and provision of digital technology to access Government services is increasingly becoming important to address social inclusion and economic uplifting of the poor. The influencers for financial inclusion are; IT & financial literacy (Nanda Kajole, 2018) internet availability (Kieran Mervyn et al, 2014), relatively young population who can learn latest technology fast, smart phones at affordable prices, GDP per capita (Njuguna Ndung'u, 2018) and easy access to the services. In this article, we will address how the banking needs of the rural and economically weaker sections of society are taken up in India & Kenya and how effective are they in the current state of implementation. Innovative financial services enabled with technology, which provides with easy affordable access and hassle free services are adopted by both countries. It is important that customers are well educated on the values of the services offered and satisfied with them. The traditional banking services are inconvenient, more costly and inaccessible for people in the base of the economic pyramid.

In 2012, the World Bank estimated that, one in three mobile money users worldwide were in Kenya although Kenya has less than 1% of the world's population (Jane K. Winn, 2015)

Kenya was able to achieve financial inclusion by providing a simple remittance services that works seamlessly and reliable on even the most basic mobile handsets. M-Pesa bypassed the complexity of modern banking at a time when traditional bricks and mortar banks in advanced market economies are finding it ever more difficult to compete with alternative financial services (Jane K. Winn, 2015).

For M-Pesa in Kenya, the value proposition for users was fast, cheap, reliable remittance services from urban and rural areas, while for agents it was fee income. (Jane K. Winn, 2015). For Payment banks in India, the value proposition for users are zero balance account, convenience, ease of transfer to any part of India, less transaction charges and security (Bhansali Shrey et al, 2018)

Most M-Pesa customers said that they chose the service because of its low cost (Morawczynski & Pickens, 2009) and M-Pesa's pricing structure encourages users to experiment with the service while extracting value from the transactions that customers value the most (Ignacio Mas & Amolo Ng'weno, 2010).

Both the services use branchless banking systems, taking advantage of increasingly universal real-time mobile communications networks to bring banking services into

everyday retail stores, thereby removing the need for banking infrastructure in the communities where poor people live and work (Ahmed Dermish, et al, 2011)

The vision of universal branchless banking services is associated with high-volume, low-value transactions by customers using cash with values like quick, convenient, and most importantly, guaranteed service (Ahmed Dermish, et al, 2011)

2 Financial Inclusion in India - An overview

2.1 Banking for the unbanked

Financial inclusion in Indian subcontinent was one of the focus areas for the Government and it is taken up with more rigor starting 2014, thanks to the effort of the Government. Pradhan Mantri Jan Dhan Yojana (PMJDY) is an initiative taken by Government of India, which is open to all Indian citizen with the focus of affordable banking solution for the poor and needy. It aims to provide a basic bank account, remittances, credit and insurance to the citizens. This scheme was launched on 28 August 2014. A record number of 11.50 crore bank accounts opened under PMJDY as on 17th January 2015 against the original target of 7.5 Crore set by 26th January, 2015 (MK.Soumiya Devi et al, 2015) which show the success of the scheme in India.

Due to the initiative, as of 2017 (data from Business standard), 80% of the Indian people have bank account; about same number of people use mobile phone. The economic revolution of moving away from cash and go to digital transactions have started in India for the past few years and due to COVID-19 situation in India, there is more need to do contactless transactions.

With the limitation of banks not able to open branches in all parts of India, especially rural areas, the need for quick access to bank account for payments, savings and transfer of money is to be fulfilled. With almost all Indian citizens holding mobile phone, the most economic and quicker solution for financial inclusion is to focus on mobile banking solution (Pallab Sikdar, Amresh Kumar, 2017)

2.2 Payment Bank History and Current Scenario

To overcome the challenges faced due to the restrictions to use Scheduled Commercial banks, in September 2013, a “Committee on Comprehensive Financial Services for Small Businesses and Low Income Households”, headed by Nachiket Mor, was formed by the RBI (RBI Press release, 2013). By January 2014, the Nachiket Mor committee submitted its final report with recommendation for a new category of bank called “Payment Banks” with a condition that 25% of its branches must be in the unbanked rural area (Bhansali Shrey et al, 2018). The banks must use the term "Payment Banks" in its books and files in order to differentiate it from other types of bank (RBI report, 2014). Currently there are five active Payments Banks in India namely,

- **Paytm Payment Bank:** Offers cashless payments transaction with QR codes and provide minimal banking needs to the unbanked sections of society
- **Airtel Payment Bank:** Offers 4% interest, online debit, cash deposit via nearest Airtel Banking point.
- **Indian Post Payment Bank:** Safe and secure cash transactions and banking at your doorstep and utility bill payments
- **Fino Payment Bank:** Started its services with 410 branches and 25,000 banking points in India. Fino Payment Bank won the Digital Payments Award 2018-19, ETBFSI Excellence Award and Champion of Rural Market Award for providing outstanding performance in its domain (see Fino banks Awards and Recognition, finobank.com)
- **Jio Payment Bank:** Provides basic banking services along with online utility bill payments. Ease of use via MyJio app

The below figure covers the roadmap and history of payment banks in India from 2013 till 2019:

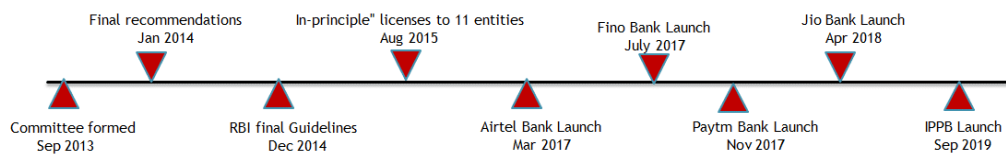


Fig. 1. Roadmap of Payment Banking System establishment in India

Source: Reserve bank of India and Payment banks sites

3 Financial Inclusion in Kenya - An overview

3.1 M-Pesa - Mobile payment solution from Kenya

M-Pesa is a mobile payments system first developed in Kenya, which effectively offers a banking system based on mobile phones. It was started in 2007, by Vodafone Group plc and Safaricom, the largest mobile network operator in Kenya (Elsie Onsongo & Johan Schotm, 2017). Since then, M-Pesa has seen a rise in popularity with over 23 million users as of the year 2019 (Vodafone, press releases, 2020). The Central Bank of Kenya backed M-Pesa development and rollout, as means for financial inclusion and kept other commercial banks' opposition at bay, as financial inclusion is a higher immediate objective over the interests of the banking sector (Elsie Onsongo & Johan Schotm, 2017). It had become the widespread person-to-person transaction channel such that it accounted for 66.56 percent of the throughput volume in Kenya's National Payment System (Brian Muthuora, 2015). It now provides services such as; Deposit and withdrawal of funds, transfer of money to users and non-users, payment of bills, gateway to loans, transfer money between services and bank accounts and purchasing airtime or what we call as mobile talk time and data (see Safaricom).

Registration for M-Pesa is simple for users with mobile phone number become account number with Safaricom. User credits amount to the account from retail outlets or authorized resellers called agents and top up their phone. A pin is used to protect the account, which can be accessed to send or receive funds (Isaac Mbiti & David N. Weil, 2011). To withdraw cash, the user visits the agents' outlet and makes the transaction (see Safaricom). According to the Central Bank of Kenya, the value of all transactions in 2019 is 44 percent of the country's GDP

Benefits

- **. Interest on savings account:** In cooperation with Safaricom M-Pesa offers savings accounts, paying 3% to 6.65% per annum interest (see Safaricom). Many people started earning interest for the first time in their lives
- **Mobile payments:** Utility bill, cable TV rent, online purchases and supermarket shopping, can be done with M-Pesa. Money transfer to M-Pesa is simple and easy using the cell phone.
- **Cell phone becoming virtual banks:** In 2007, several million Kenyans owned a cell phone with a Safaricom number. Then this phone number actually became a virtual bank account number (Anja Bengelstorff, 2015). Rural Kenyans with no banking opportunities leaped from the agricultural age straight into the digital world of tomorrow
- **Financial Benefit:** M-Pesa increased the volume of money flowing in and out of the communities, speeding up money velocity, which boosted local consumption. Therefore, there was an increased volume and variety of food and agricultural inputs in local markets thus bolstering food security.
- **More jobs:** More youth and women found employment (Rob Matheson, 2016) in the rapidly expanding agent network as businessperson became M-Pesa agents in addition to their core business.
- **Security:** In terms of physical security, users reported reduced muggings and thefts, and women reported being able to use M-Pesa to accumulate cash securely (Adrine Muhura, 2019).

3.2 Role of Mobile money Agents for M-Pesa

The M-Pesa agents play a major role in serving the unbanked in Kenya by offering mobile money products and services and helping the country's GDP and increasing the income of households by bringing banks to people's doorstep especially for rural population where the need is higher (refer figure 2). The agents compete with other competitors like commercial banks, Cooperative societies for promoting and sustaining M-Pesa both in rural and urban Kenya (Brian Muthuora, 2015). From figure 3, it is very clear the domination of mobile money agents and making it evident that M-Pesa growth in Kenya largely depend on the strength of the mobile money agents.

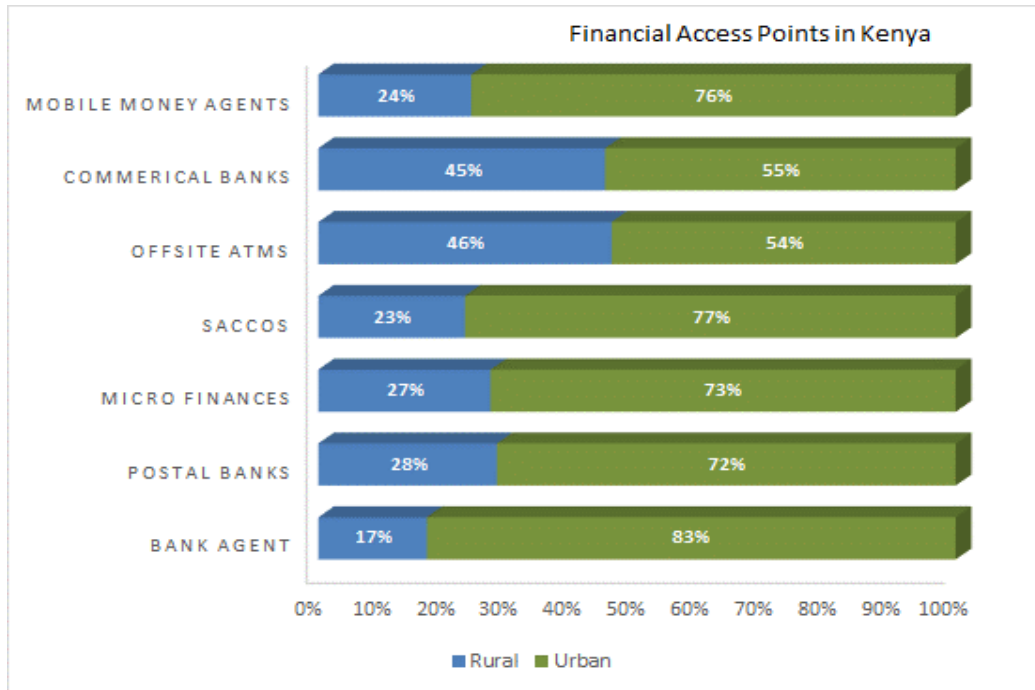


Fig. 2. Financial Access Points by type – Rural vs Urban view

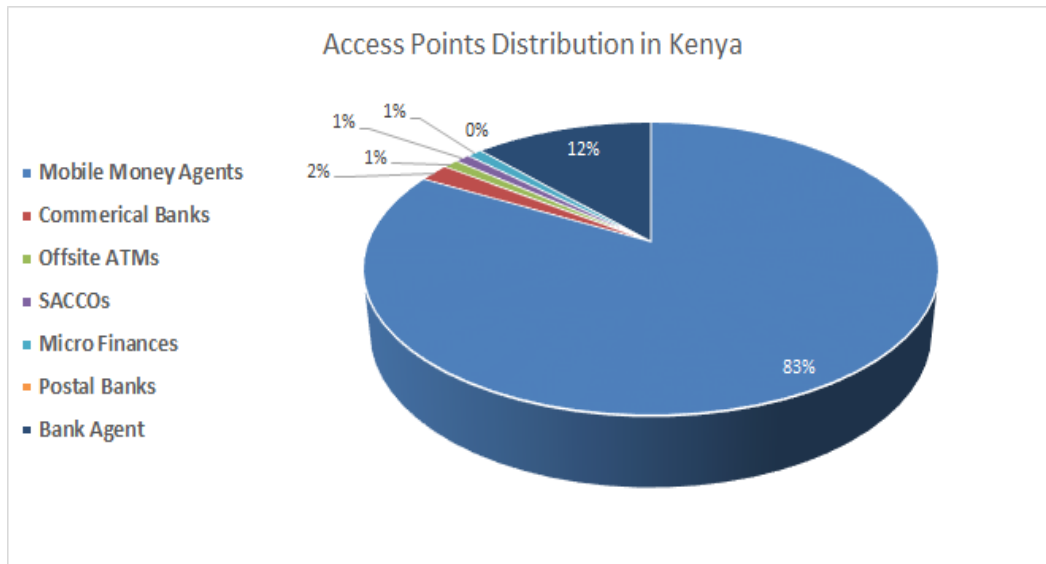


Fig. 3. Mobile Money Agents Domination in Access points in Kenya

*Source: FSD Maps, Kenya, GSMA’s Mobile Money for the Unbanked (MMU)

4 Comparing Kenya's mobile banking model with India payment bank services

Kenya	India
<ul style="list-style-type: none"> • eCitizen program for digitalization by government in 2014 • Inua Jamii benefits program - uses mobile banking platform for direct transfers • M-Pesa agents for servicing customers- currently there are more than 2 lakh+ agents in Kenya* • 135+ million transactions as of May'20 month via mobile payments* • M-Pesa is promoted via women's self help group but penetration is lower due to lower literacy rate and poverty* • Information and communication technology contribution stands at 11% of GDP* 	<ul style="list-style-type: none"> • UMANG, Aadhar card for citizens and complete digitalization in 2017 • Direct money transfers using PYMDY program thereby encouraging financial inclusion • Five payment banks with complete mobile banking solutions with servicing via retail agent shops and service centers • Totally 1.46 billion mobile transactions of which 1.38+ million is via payment banks as of May 2020* • In India, the awareness level is higher on mobile payments but Indian women are more influenced by reference groups • The IT-BPM industry in India constitutes approx. 7.7% of India's GDP as of 2017

Fig. 4 Comparing Kenya and India on Mobile banking and digitization

*Source

1. Statista.com: Contribution of Indian IT Industry to India GDP.
2. FSD Maps, Kenya
3. GSMA Connected Women - Bridging the Gender Gap: Mobile access and usage in low- and middle-income countries (Shireen Santosham et al, 2015)
4. GSMA Person-to-government (P2G) payment digitization: Lessons from Kenya, Case Study (Nic Wasunna et al, 2017)

5 Mobile transaction volumes and value of payments: Comparison between Kenya and India

The payment bank transaction in India is comparable with the volume and value of transactions in Kenya although overall mobile transactions volume and value in India including commercial banks is more than 10 times than Kenya's transactions (refer to figure 5 and figure 6). What we can infer is that, the Kenya's transactions trend and value is more or less had become stable over the last one year, whereas in India, there is a variation still showing and we had still not reached maturity on payment banks. In addition, the current Covid-19 situation creates an uncertainty in the volume and availability of money in the hands of customers to do mobile transactions. However, considering population size of the countries, comparing to Kenya, India has to go a long way in financial inclusion as we see only two of the five payment banks are in top 10 banks in volume and value of transactions as per RBI reports.

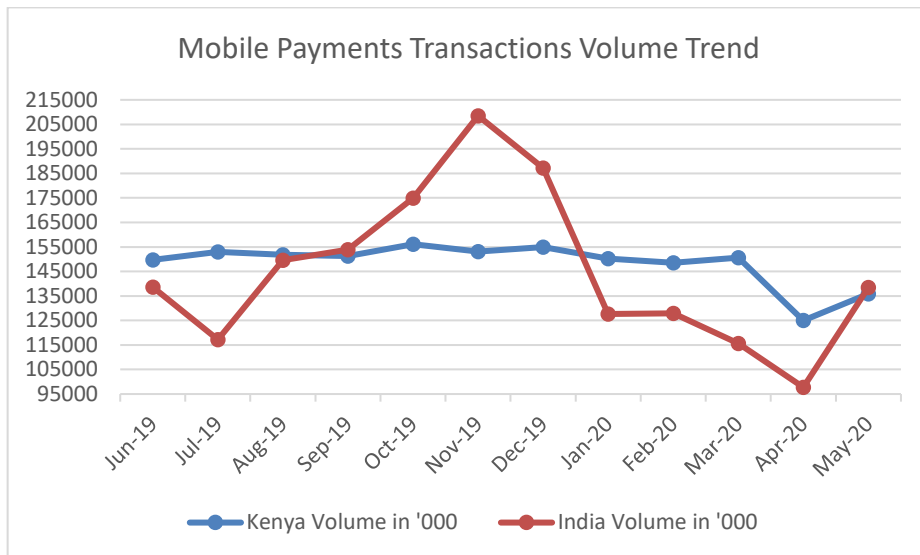


Fig. 5. Comparing the trend of mobile transaction between two countries

*Source: Central Bank of Kenya, Reserve Bank of India

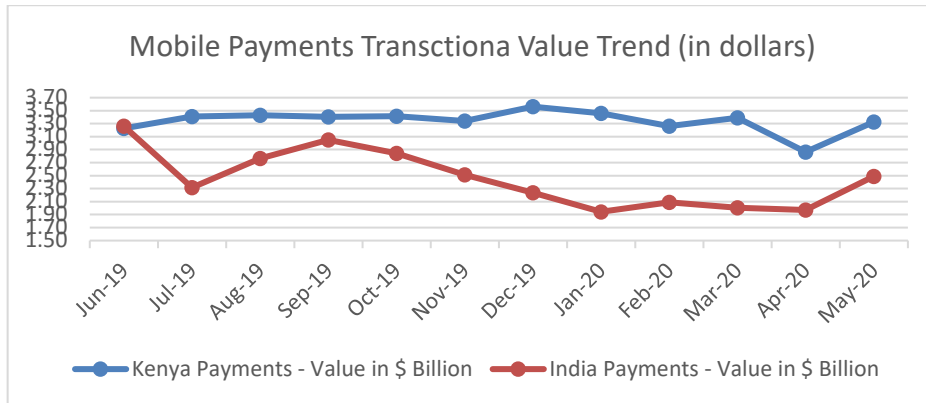


Fig. 6. Comparing mobile payments value of transactions between two countries

*Source: Central Bank of Kenya, Reserve Bank of India

6 Conclusion

We can visualize a common trend between the two countries mobile banking services (M-Pesa from Kenya and Payment banks from India), but payment banks popularity as mobile banking solution in India is still a long journey. Payment banks had to compete with schedule commercial banks whereas in Kenya, Safaricom's M-Pesa is almost a monopoly with 64% market share compared other competitors in Kenya (see Annual report, Communications Authority of Kenya). The road ahead for Payment Banks is challenge not only in terms of value or volume but also from profitability perspective. Systematic pricing structure, cross-selling products like insurance, micro finance/lending via tie-ups, are the opportunities ahead of them

References

1. Adrine Muhura, Accelerating digital inclusion for women in Kenya, GSMA (2019).
2. Ahmed Dermish, Christoph Kneiding, Paul Leishman, and Ignacio Mas, Branchless and Mobile Banking Solutions for the Poor: A Survey of the Literature, Innovations, Vol. 6, SSRN (2011)
3. Anja Bengelstorff, A Global Success from Kenya, Credit Suisse news and articles (2015)
4. Bhansali Shrey, Bhatt Tanmayee, Chhatwani Mohak, Deshpande Animesh, Iyer Geetha: Role of Payment Banks in India: Opportunities and Challenges International Journal of Advances in Management and Economics (2018).
5. Brian Muthuora, Enabling Mobile Money Policies in Kenya, Fostering a Digital Financial Revolution, GSMA (2015).
6. Central Bank of Kenya, Statistics, Mobile Payments.
7. Communications Authority of Kenya, Annual Report for the Financial Year Ended June 30th 2019 (Pg. 41-50)
8. Elsie Khakasa Onsongo, Johan Schot, Inclusive Innovation and Rapid Sociotechnical Transitions: The Case of Mobile Money in Kenya. SSRN (2017)
9. FSD Maps Kenya, Datasets
10. Ignacio Mas, Amolo Ng'weno, Three Keys to M-PESA's Success: Branding, Channel Management and Pricing, Journal of Payments Strategy and Systems, Vol. 4, No. 4 (2010)
11. Isaac Mbiti, David N. Weil, Mobile Banking: The Impact of M-Pesa in Kenya, NBER Working paper series (2011)
12. Jane K. Winn, Mobile Payments and Financial Inclusion: Kenya, Brazil, and India as Case Studies, SSRN - University of Washington School of Law Research Paper (2015)
13. Kieran Mervyn, Anoush Simon, David Allen, Digital inclusion and social inclusion: A tale of two cities, Information Communication and Society (2104)
14. MK Soumiya Devi, Kavitha Shanmugam & Ramya J., Payment Banks A Leap Towards Financial Inclusion, International Journal of Science Technology and Management, 4(1), 2015, pp. 128-136
15. Nanda Kajole, Factors that Matter for Financial Inclusion: Assessment of Empirical Evidences, with Special Reference to India, Abhigyan, vol. 36, no. 1, Gale Academic (2018)
16. Nic Wasunna, Person-to-government (P2G) payment digitization: Lessons from Kenya, Case Study, GSMA (2017)
17. Njuguna Ndung'u, Next steps for the digital revolution in Africa, Inclusive growth and job creation lessons from Kenya, African Growth Initiative, Brookings (2018)

18. Pallab Sikdar, Amresh Kumar: Payment bank: A catalyst for financial inclusion. Institute of Management SAGE Publications, *Asia-Pacific Journal of Management* 12(3–4) 1–6 (2017)
19. RBI report, Committee on Comprehensive Financial Services for Small Businesses and Low Income Households (2014)
20. Rob Matheson, Study: Mobile-money services lift Kenyans out of poverty, MIT News (2016)
21. Safaricom, <https://www.safaricom.co.ke/personal/m-pesa>
22. Shireen Santosham and Dominica Lindsey, Bridging the gender gap: Mobile access and usage in low and middle-income countries, *GSMS Connected Women* (2015)
23. Statista, Information technology/business process management sector in India as a share of India's GDP from FY 2009 to FY 2017

Abbreviations

BPM – Business Process Management

ETBFSI - Economic Times Banking, financial services and insurance (E-Magazine and Newsletter)

GDP - Gross domestic product.

GSMA - Global System for Mobile Communications Association

IPPB – Indian Postal Payment Bank

IT – Information Technology

PMJDY - Pradhan Mantri Jan Dhan Yojana

QR – Quick Response

RBI – Reserve Bank of India

SACCOS - Savings and Credit Cooperative Societies