



EVOLUTION OF PAYMENTS BANK AND IMPACT FROM M-PESA: A CASE OF MOBILE BANKING SERVICES IN INDIA

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Abstract: A large proportion of the Indian population is excluded from basic banking services. Just one in two Indians has access to a savings bank account and just one in seven Indians has access to bank credit (Business Standard, June 28 2013). There are merely 684 million savings bank accounts in the country with a population of 1.2 billion. Branch per 100,000 adult ratio in India stands at 747 compared to 1,065 for Brazil and 2,063 for Malaysia (World Bank Financial Access Report 2010). As more people, especially the poor, gain access to financial services, they will be able to save better and get access to funding in a more structured manner. This will reduce income inequality, help the poor up the ladder, and contribute to economic development. There is a need for transactions and savings accounts for the under-served in the population. Mobile banking has been evolved in last couple of years with the help of Mobile penetration, which has shown phenomenal growth in rural areas of India. The rural subscription increased from 398.68 million at the end of December 2014 to 404.16 million at the end of January 2015, said in a statement by the Telecom Regulatory Authority of India. Banks in India are already investing in mobile technology and security from last couple of years. They are adding value in services such as developing smartphone apps, mobile wallets and educating consumers about the benefits of using the mobile banking resulting in adoption of mobile banking faster among consumers as compared to internet banking.

Key words: Banking services, Rural Population, PPI Model, M-PESA, Payments Bank, Mobile Banking, Traditional banking, Modern Banking.

Introduction

Despite the significant efforts by RBI, a large part of population in the country is still deprived of the basic banking services and financial inclusion. The Reserve Bank of India and Government of India has taken several initiatives to improve the banking services in the country but despite that, the status of banking services in India is very low compared to china, where there is no bank account for 40% of population in India (Business Standard, February 11, 2015). This has majorly effected the financial inclusion for the deserving people in the country that resulted in non-improvement of their living standards just because the banking services are not in their reach.

Analysis of banking penetration of India compared to China

Banking Services penetration levels	India	China
Number of people with Bank accounts (Per'00)	58	70
Number of bank branches (Per 1 Lac)	11	8
Number of ATMs (Per 1 Lac)	11.4	30.7
PoS Terminals (Per million)	684	5245
Total Cars (Per'000)	283.6	2604

Source: Bank branches: World Bank ATMs: Secondary research PoS, Cards: CPSS – Red Book 2012, Deloitte Analysis

The business case for providing banking services to unbanked Indian and rural population is not appealing to banks. Banks derive little commercial benefit in selling the most profitable banking product to the lower income groups; on the other hand, banks see tremendous potential in the middle class of India, which matches the way banks current operate with their business model. The potential of people at the bottom of pyramid requires traditional banking model to be radically reworked in a manner in which convenience of services can be easily rendered to rural population.

There are various important factors, which push back traditional banks to provide dynamic and fast banking solution to reach the unbanked population of India in cost effective manner.

Factors pushing traditional bank to reach unbanked population

Under usage of Technology	<ul style="list-style-type: none"> • Mobile technology has reached at far flung places in the country. • Low usage of mobile penetration by traditional banks to reach unbanked customer.
High cost due to Brick and Mortar system	<ul style="list-style-type: none"> • Limited coverage due high investment and low return model for rural banking. • Private players have made faster and leaner network in rural areas.
In-experience in payment related products	<ul style="list-style-type: none"> • Pre-paid card players and Telecom companies have developed significant experience in developing payment services. • Mobile banking, mobile wallet, recharge instruments, e-commerce deliveries have made private players more effective.

Rural Opportunity for driving growth

Rural population constitutes almost 69% of the population. It derives almost 50% of the country's GDP from last several years. Rural economy has grown faster than the urban economy, growing more than 6.2% since 2001 as against 4.7% growth in urban areas (Source: How India earns and spends: KPMG in India analysis), signaling higher productivity growth. Growth of mobile phones and internet access has grown tremendously in last 5 years, which has attracted mobile banking in the rural areas. The availability of effective and convenient banking services for rural population remains a distant dream.

Tele density in India as on 31 March 2015

Particulars	Wireless
Urban Telephone Subscribers (In million)	555.71
Rural Telephone Subscribers (In million)	414.18

Source: TRAI report 12 May 2015

Traditional vs. Modern banking solution

Constraints of Traditional Banks	Modern Banking	Benefits
Need to visit the bank for accessing services	All banking services are available on mobile phones	Accessibility from anywhere
Requirement of paper transaction like pass book, cheque book etc.	Online banking payments and deposits with internet accessibility on mobile phones	Paperless and speedy transaction
Time consumption in communication of additional services	Instant notification of additional services through SMS alerts etc.	Fast information sharing
Reach of physical bank branches is low in rural areas	High reach of mobile phones and internet services in rural India	Increased reach for banking services
Driven by manpower	Process and technology driven	Highly transparent
Cash or cheque transaction before spending on utility services	Spend through mobile wallet with various utility websites like IRCTC, etc.	Speedy solution of spending

Objectives of the Study

The objective of this study is:

1. To understand the scope of mobile banking to reach unbanked population in India.
2. To analyze the learning's of M-PESA and Payments Bank Opportunity.
3. To evaluate the upcoming challenges for the payments bank success in India.

Research Methodology

This paper is a conceptual paper. Here data is collected from national and international journals, published government reports, Newspaper and websites.

Impact from M-PESA Model

Evolution of M-PESA in Kenya

Kenya is a first country, which emerged globally as first destination to launch mobile payments with the help of Vodafone, IBM and local telecom provider in March 2007.

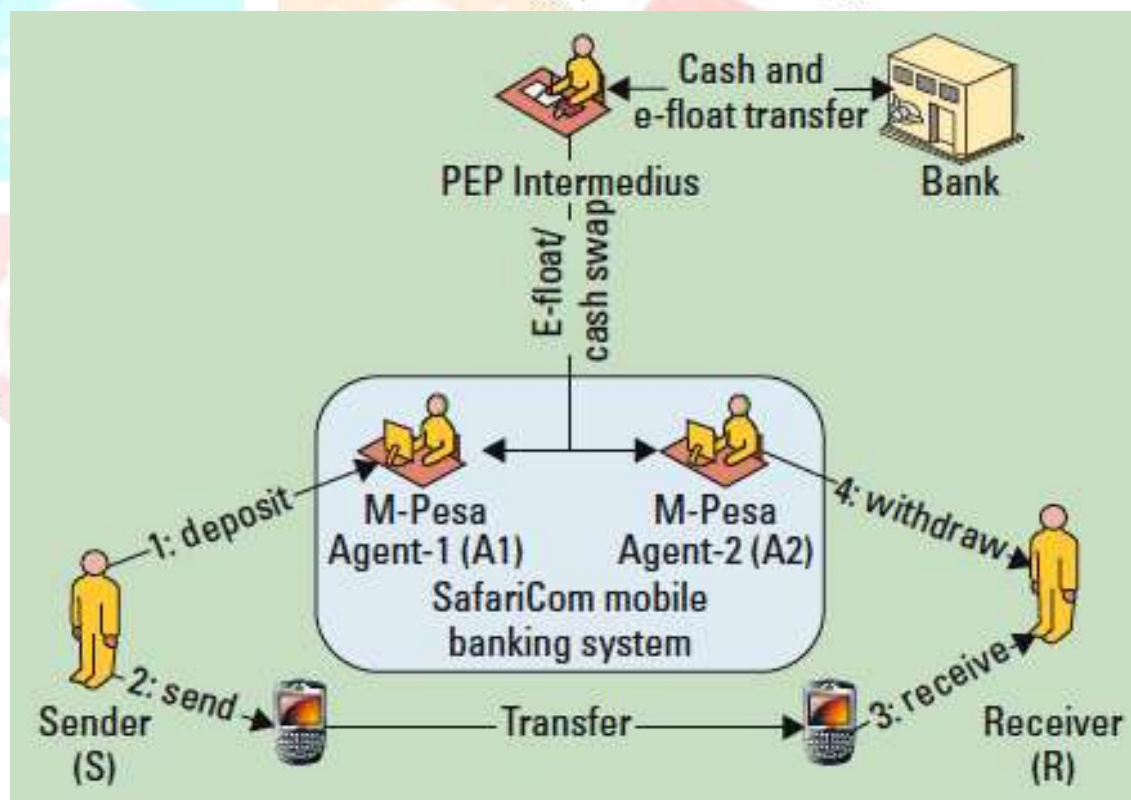
Mobile phone operator Vodafone first conceptualized M-PESA with the help of IBM. It was launched with the help of its commercial partner called Safaricom in March 2007. The meaning of M-PESA is “M” called mobile and “PESA” called money in Swahili.

An electronic payment system is available through mobile phones. In order to access the services of M-PESA, customer need to first register with an authorized M-PESA outlet. They are then assigned an electronic/ digital money account that is linked to their phone number and accessible through a SIM card- resident application on the mobile phone. It has facility for customer to deposit and withdraw cash to/ from their accounts by exchanging cash for electronic value at a network of retail stores or authorized M-PESA outlets. These stores are paid fees by Safaricom each time they exchange there two forms of cash liquidity from the customers. Once customers have money in their accounts, they can use their phones to transfer funds to other M-PESA users and even to non-registered users, pay bills and purchase mobile airtime credit. All transactions are authorized and recorded in real time using secure SMS. Customer registrations and deposits are free. Customers pay a flat fee for person-to-person transfers and bill payments. Certain fees to be paid on withdrawals and balance enquiries. Safaricom issues and manages the M-PESA accounts, but the funds in the accounts are fully backed up by liquid deposits by commercial banks. Customers are not paid interest on the balance in their M-PESA accounts.

How M-PESA Mechanism works

A person can go to an M-PESA outlet, which could be a petrol pump, grocery store, general store etc. Deposit cash with the M-PESA outlet and ask them to add to your M-PESA account. Cash is digitally converted into amount in your M-PESA account, which can be seen, on the mobile phone instantly. Now customer can transfer money to any person or institution. Loan from microfinance institute is also available via M-PESA account, which can be paid later through same account.

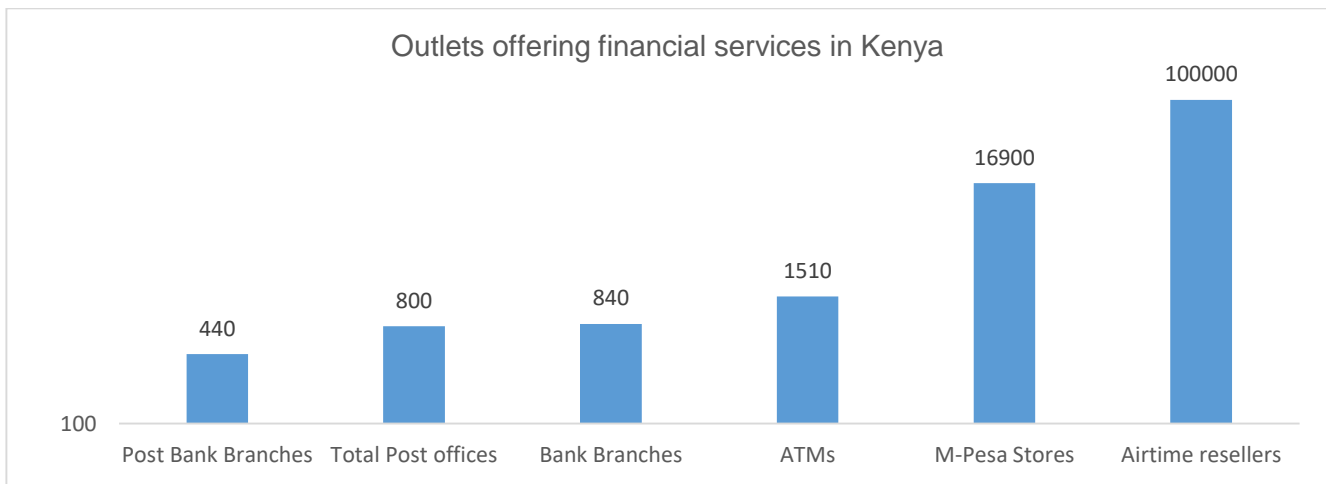
Working Model of M-PESA



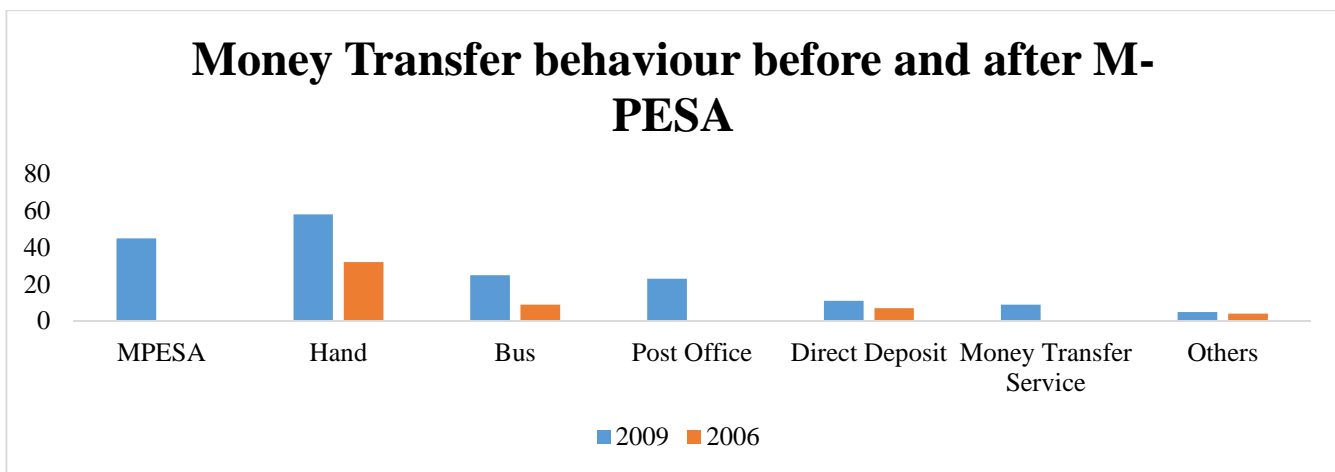
Source: Mobile payments in emerging markets, IEEE, July-August 2012, Vol 14

Success story

Both Vodafone and Safaricom earn around 20% of their revenues from M-PESA. Almost 25% of Kenya's GDP is routed through M-PESA. Monthly value transaction through M-PESA is over \$1 billion. More than 75% of Kenya's population using M-PESA.



Source: Central Bank of Kenya, Kenya Post Office Savings Banks and Safaricom Websites.



Source: Central Bank of Kenya and Safaricom Websites.

Learning's from Kenya's mobile banking

Money deposit and transfer became easy and speedy for unbanked population. Mobile handsets transformed the way banking is done with the help of M-PESA. Linkage of M-PESA outlets (brick & mortar), with customer deposits and withdrawals have further boosted customer confidence in the M-PESA services. Rural population and labor force of Kenya suffering from ineffective banking services came in the ambit of banking and financial services with the help of mobile banking. Private and Public dialogue enhanced for improving overall banking services and Kenya. Synergy of Mobile technology with basic banking services, have transformed living standard of rural Kenya.

PPI Model in India

Pre-paid instruments or mobile banking is like pre-paid SIM card, which can be recharged with the money and can be used to pay utility bills, e-commerce transactions, shopping, booking tickets etc. Money is deposited in the pre-paid instrument by the customer's direct bank transfer.

Drawbacks of PPI, which keeps large population away from this model, are as follows:

- The money available in pre-paid instrument does not yield any interest.
- Funds once deposited cannot be transferred to the bank account, which forces for mandatory consumption of PPI balance.
- Every transaction done under PPI attract certain fees from the bank.
- Maximum deposit in the PPI is to tune of INR 100,000.

Requirement of combination of PPI Model, M-PESA and Financial Inclusion

Sustainable Solution – Payments Bank

Payments bank will be a specialized bank (Owned by either private firm or PPP firms) to provide wide array of payment facilities to users through mobile banking. It would help common person to make payments to various institutions and person to person in a cost effective manner. Payments bank will be used only for transaction purpose and for deposits. Unlike commercial banks, payments bank neither allowed to lend money nor allowed to issue credit cards.

What it means for unbanked Indian

Cash deposits and withdrawals become far easier for lower income groups through mobile banking. Remittance of money from lower income groups to their families back home should be done in a convenient manner through mobile money transfer. It also provides

platform to pay utility bills in an easiest manner and facilitate cashless and paperless transactions. The best part is that it provides interest on deposit like commercial banks. Once successful, Government can consider these to promote financial inclusion.

Objective of Payment banks

- Provide convenience of deposits and withdrawal of money with major focus on unbanked areas of the country.
- Effectively catering to the banking needs of migrant workers.
- Increase scope of financial inclusion to raise standard of living for poorest of the poor.
- Cost effective deposit and payment banking compared to traditional banking system.

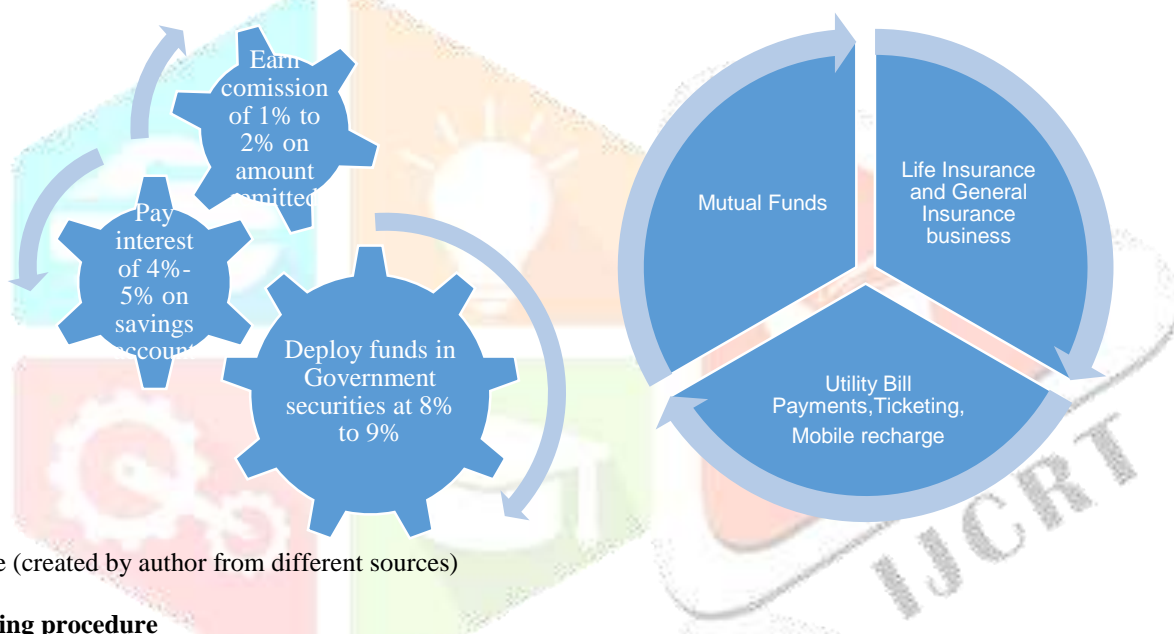
Functions of PPI Model, Traditional Banks and Payment Bank

Banking System	Loan Facility	Deposit Facility	Payment Facility	Interest on deposit
PPI	No	Yes	Yes	No
Traditional Bank	Yes	Yes	Yes	Yes
Payments Bank	No	Yes	Yes	Yes

Source (Created by author from different sources)

Business Model of Payments Bank

Business Model of payments bank and additional earning sources



Source (created by author from different sources)

Working procedure

Payments bank would work like an M-PESA model where amount is deposited and paid via mobile account of the payments bank. Payments bank can appoint their agents for collection and payment of funds from the customers. Interest on payments bank account shall be paid. Debit cards can be issued by the payments bank. Payments to be made to institutions and people through mobile account.

The Big Opportunity for Indian Banking Eco-system

The core purpose of banking services is to reach out to the last person in the pyramid and provide financial inclusion with effective financial services. The current banking model seems to have reached only to 30% - 40% population of the country that is inadequate to achieve targeted financial inclusion. Together with Cooperative banks, commercial banks and regional rural banks, Government is not able to reach masses for transforming standard of living for the masses.

Accessibility of banks

Payments bank would ensure higher reach due to its model of Mobile payments and non-banking outlets for cash transaction. This should start a banking revolution for the masses in India, which should help in growth of the Indian economy at large.

Financial Inclusion

Government schemes and funds will be facilitated in a convenient manner to the deserving population by payments bank since it has a synergy for mobile technology and basic banking services. Communication of Government schemes and subsidies can be done more effectively with mobile alerts, notifications and SMS in the local language.

Harnessing mobile technology

With the increase in wireless tele density in rural areas, accessibility of payments bank will become more and more, which will connect rural population to the rest of the country and contribute towards the growth of the economy in an equal manner.

Creating financial awareness

Financial awareness in the rural population is current low due to low banking penetration over the years and this is depriving them from various important financial aspects like Insurance, Investments, pension plans, government schemes and subsidies etc. Financial awareness would help in raising the standard of living in the rural areas.

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