

Financial Inclusion Via New Generation ATMS

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Abstract

The developing countries' policymakers and central bankers from around the world are focusing on financial inclusion from couple of years. To achieve faster inclusive growth, various steps have been taken in India recently to promote Financial Inclusion. This study seeks to examine the extent of Financial Inclusion through new categories of ATMs such as Brown Label, White Label, Post Office Saving Bank, Biometric ATMs. It is observed from the study that although India has made improvement in Geographic and Demographic ATM penetration in past few years but IMF Financial Survey 2015 shows that India lags behind a compare to other emerging national economies. India is at second position on the basis of ATM per 1000 KM² and at last position on the basis of ATM per 1,00,000 adults among BRICS members. Further, there is a gap between access and usage because RBI focus is more on supply side by deploying large number of such ATMs rather than demand side by promoting financial education. As a result, in financial literacy, India ranks (24%) not only below global average (33%) but also lower than other BRICS countries. So, in order to achieve the objective of financial inclusion in true terms, we need to focus on supply and demand side simultaneously.

Key Words

Financial Inclusion, ATMs, Financial Literacy, White Label ATMs, BRICS, IMF

INTRODUCTION

ATM is not a new word in Indian economy. Automated Teller Machine is an electronic banking outlet, either at bank branch or other location which enables customers to complete basic banking transactions without the aid of a branch

representative or teller. RBI and Government of India are considering ATMs as a source to inject financial inclusion in India.

According to Dr. Rangarajan Committee on Financial Inclusion, Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost.

LITERATURE REVIEW

Sharma (2014) in his research paper studied the potential of Financial Inclusion in Indian context on the basis of various financial inclusion policies adopted by RBI & Government of India to increase expansion of banking service to remote parts of country but still the objects not achieved because of deficiency on the part of government. He has suggested to adopt multi-pronged strategy and to provide such environment to the banks that they can carry out innovations necessary to reach low income consumer and still make profits.

Chapalgaonkar & Joshi (2014) in their research paper studied various financial products offered under financial inclusion drive in India and concluded the financial "access" has not translated into "usage" due to lack of financial literacy and financial education in rural people of India. They made an attempt to suggest measures to strengthen the usage of financial services basic, the bank account in particular.

Gopalan and Rajan (2015) in their research paper carried out an empirical investigation to examine whether the entry of foreign banks have contributed towards financial inclusion or not by using various indicators for a panel of 57 emerging and developing economies (EMDEs) spanning 2004-2009. Their study concluded that entry of foreign banks in EMDEs contributed towards furthering financial inclusion. However, when foreign banks entry was followed by greater banking concentration, then this relationship turns to be negative.

Sharma (2016) in his research paper relied on VAR models and Granger causality test to evaluate the nexus between the enormous dimensions of financial inclusion and economic growth of the emerging Indian economy for the period 2004 to 2013. His study revealed that there was positive relationship between the two. Further, Granger Causality Test disclosed that between economic development and geographic outreach, there was bi-directional causality, however, there was unidirectional causality between GDP and number of deposit or loan accounts.

OBJECTIVE OF THE STUDY

- a. To access the various efforts made by RBI in order to push financial inclusion via ATM evolution and how this is going to enhance the spread of ATMs in semi-urban and rural areas (mainly in Tier III & VI areas), where bank-owned ATM penetration was not growing.
- b. To examine the growth of ATMs in India.
- c. To make comparative analysis of emerging national economies i.e. BRICS countries.

RESEARCH METHODOLOGY

- a. Method of Data Collection:-For the purpose of the study the secondary data has been taken from RBI, World Bank, Visa, IMF & White Label Operator websites, various journals & research papers.
- b. Parameters of Study :
 - i. Innovations in ATMs to promote financial inclusion.
 - ii. Demographic and Geographic ATM penetration in India from 2005 to 2014.
 - iii. Comparison of BRICS nations on the basis of Demographic and Geographic ATM penetration and financial literacy for the year 2014.
- c. Scope of the study is to see the role of ATMs in Financial Inclusion and extent of Financial Literacy in India.

HISTORICAL BACKGROUND AND INNOVATIONS IN ATMs

As experimental Bankograph was installed in New York City in 1961 by City bank of New York. A first cash dispensing device was used in Tokyo in 1966. The Automated Teller Machine (ATM) first came into use in December, 1972 in the UK; the IBM2984 was designed at the request of Lloyds Bank. However, in India the ATM concept was introduced by HSBC (The Hongkong and Shanghai Banking Corporation) way back in 1987.

Although presently there has been nearly 23-25% year-on-year growth in the number of ATMs, their deployment mainly in Tier I & II centres. So, to promote financial inclusion in India by increasing Geographic & Demographic ATM penetration especially in less populated area RBI introduced various new

categories of ATMs which are the following :

(a) Brown Label ATM (BLA)– ATM Operations Outsourced

Due to visible shift in the way banks look at the ATM business, this new concept of ATM came into existence. In these types of ATMs, a sponsor bank whose brand name is used on the ATM will be held responsible for cash management and connectivity to banking networks, however, lease and hardware of the ATM machine is owned by a service provider. This kind of ATM comes up as an alternative between Bank-owned ATMs and White Label ATMs. When this model of ATMs gets fully incorporated in India, the ATM count in the country is expected to rise from 75,000 to 1.5 lakh by 2015. Many banks, big and small both are incorporating this process in their system. Lenders like ICICI Bank, Axis Bank, Dhanlaxmi and RBL Bank Ltd. have adopted this system.

(b) White Label ATM (WLA) - Non-Bank ATM

These are the ATMs owned and operated by non-bank entities i.e. NBFCs, Telecom & Retail companies after seeking authorisation from RBI. The primary objective of setting WLAs is to enhance the spread of ATMs in semi-urban and rural areas (mainly in Tier III to VI areas), where bank-owned ATM penetration was not growing. As on 14th February 2012 RBI releases Draft Guidelines for WLAs and inviting suggestions and as on 20th June 2012 RBI releases final guidelines on WLAs. While initially 19 companies applied for license, only seven of the players got license and became operational.

(c) Post Office Saving Bank ATM

As a part of the UPA Government's IT modernization project to revamp the 150-year-old Department of Posts, the earlier Union Finance Minister, P. Chidambaram on 27th February 2014 inaugurated India's first Post Office Saving Bank ATM in Chennai at the Head Post Office in Thyagarya Nagar. This ATM would be run on a trial basis for six months. Afterwards, it would become interoperable where cards of other banks could be used. The total of Rs. 4909 crore had been allotted for the modernisation of 1.55 lakhs post offices in the country in the interim budget for 2014-15. The Secretary of Department of Posts, Padmini Gopinath has planned to install 1000 ATMs by the end of 2014 and 1,800 ATMs in 2015.

Table 1
Various Players and Their Roles

Players	Details
1. RBI	<ul style="list-style-type: none"> Gives Authorisation (initially valid for 1 year only)to Non-bank Entities under Section 7, Payment and Settlement System Act2007
2. WLA Operator (Non-bank Entity)	<ul style="list-style-type: none"> The conditions to be fulfilled before getting authorisation : <ol style="list-style-type: none"> The Memorandum of Association (MOA) of the applicant entity must cover the proposed activity of operating WLAs. It must have net worth of Rs. 100 crore as per last audited Balance Sheet and have to maintain it all the times. The necessary approval from the competent authority as required under the policy notified by Department of Industrial Policy and Promotion (DIPP), if WLAO has FDI WLAO can have more than one sponsor bank & can receive the cash from any bank other than sponsor bank, give rent of the place, looks after maintenance and servicing of the machine, permitted to display advertisements and offer value-added services, own cash, receive a fee from the banks for the use of ATM resources by the banks' customers. The applicant must mention scheme it has chosen at the time of seeking approval & no switchover of schemes is permissible. WLAOs would need to seek extension of their authorisation, if required, three months' prior to the completion of one year for continued operation of the system.
3. Authorised ATM Network Operators/ Card Payment Network Operator	<ul style="list-style-type: none"> It may offer direct connectivity to any authorised WLAO Visa, MasterCard and National Financial Switch (NFS under National Payment Corporation of India) provide technical connectivity in the system.
4. Sponsor Bank	<ul style="list-style-type: none"> It should be a member of the ATM Network Operators/ Card Payment Network Operators. It is not only authorised by the Central Bank of India, but also also be a member of the RTGS. It should be Responsible for Cash Management, Inter-bank Funds Settlement, Customer Grievance Redressal, Quality and Genuineness of cash loaded

Note : Above mentioned 2nd, 3rd & 4th player shall enter into a Tri-partite Service Level Agreements (SLAs) to address issues relating to inter-bank settlement of the transactions at the WLAs, and settlement of customer complaints relating to failed ATM transactions. The SLAs should clearly mention the role of each party.

Table 2
Various Schemes to set up WLAs

Basis	Scheme A	Scheme B	Scheme C
Minimum Number of ATMs for a Span of Three Years	9000 <ul style="list-style-type: none"> • Year-1 minimum of 1000 WLAs • Year-2 minimum of twice the number of WLAs installed in Year-1 and • Year-3 minimum of three times the number of WLAs installed in Year 2 	15000 <p>A minimum of 5000 WLAs every year for three years.</p>	50000 <p>A minimum of 25,000 WLAs in the first year and at least another 25,000 in the next two years.</p>
Ratio of Installation of WLAs in various centres	Tier III to VI : Tier I to II 3 : 1	Tier III to VI : Tier I to II 2 : 1	Tier III to VI : Tier I to II 1 : 1

Note : 1. Out of the WLAs installed in Tier III to VI centres, a minimum of 10 % should be installed in Tier V & VI centres.
 2. The date for determining the timeline for implementation would commence 30 days after issuance of the authorisation.

(d) Biometric ATMs

The penetration of ATMs into rural or semi-urban areas may not serve the envisaged purpose unless it is put to use by illiterates or semi-literates whose presence is predominant in rural areas. The existing ATMs are not being used optimally by rural folk on account of PIN-related issues. Introduction of Biometric ATMs enables the illiterate and semi-literate customers to avail ATM facilities on par with literate customers. Under this, thumb impression of the cardholder will be scanned and transfer the same to central server as one-time measure. ATM will dispense cash and other services only after verifying the thumb impression of the cardholder with that of finger print available with the bank's server. Bio-metric ATMs are going to play an important role in the remote rural areas in the coming years.

Table 3
White Label ATM Operators in India

Sr. No.	White Label ATM Operator	RBI issue Certificate of Authorisation as on	Name of WLA	Scheme Adopted	Sponsor Bank	1st WLA installed	As per NPCI No. of WLAs of April 2016
1.	Tata Communication Payment Solution Ltd (an arm of Tata Group which enjoys over 60% of market share in the WLAs)	03/05/2013 (valid up to 30-06-2018)	Indicash	B	Federal Bank	As on 27th June 2013 in Chandrapada, a village located in Vasai-Virar, Maharashtra.	7855
2.	Prizm Payment Solution (an arm of Hitachi Payment Services Pvt. Ltd.)	25/11/2013 (valid up to 31-12-2018)	Money Spot	A	Axis Bank	In January 2014 at Chendre village in Alibaug Taluk, Raigad District of Maharashtra. Chendre is categorised as a Tier V locality with a population of around 8,000.	1025
3.	Muthoot Finance Limited	30/01/2014 (valid up to 31-03-2019)	Muthoot ATM	A	Federal Bank	In February 2014 in Kerala. Plan to invest Rs 300 crore in coming three years. It also plans to set up 100 ATMs in the next 3 months i.e.50 in South India and 50 in other parts of the country.	177
4.	Vakrangee Ltd.	23/01/2014 (valid up to 31-03-2019)	V-Mart	B	N.A.	N.A.	282
5.	BTI Payments Pvt. Ltd.	12/02/2014 (valid up to 31-03-2019)	India 1	A	Federal Bank and ANZ	As on 10th April 2014 at Gubbi in Tumkur district of Karnataka. As on 17th June 2014 set up 100 WLAs.	3514
6.	Srei Infrastructure Finance Ltd.	25/03/2014 (valid up to 31-03-2019)	N.A.	A	Axis Bank	Has not opened any WLA yet because still working on low-cost model of ATMs	Not opened any WLA yet
7.	Raha Payment Solutions Pvt. Ltd. (an arm of Riddi Siddhi Bullions Ltd)	15/05/2014 (valid up to 31-05-2019)	STATE ATM	C	N.A.	As on 15th January 2016 in Varanasi	204

Table 4**Classification of Centres in to 6 Tiers, Based on Population by RBI**

Basis	Tier-I	Tier-II	Tier-III	Tier-IV	Tier-V	Tier-VI
	Urban	Semi-Urban		Rural		
Have Population	1,00,000 & Above	Between 50000 to 99,999	Between 20000 to 49,999	Between 10000 to 19,999	Between 5000 to 9,999	Less than 5,000

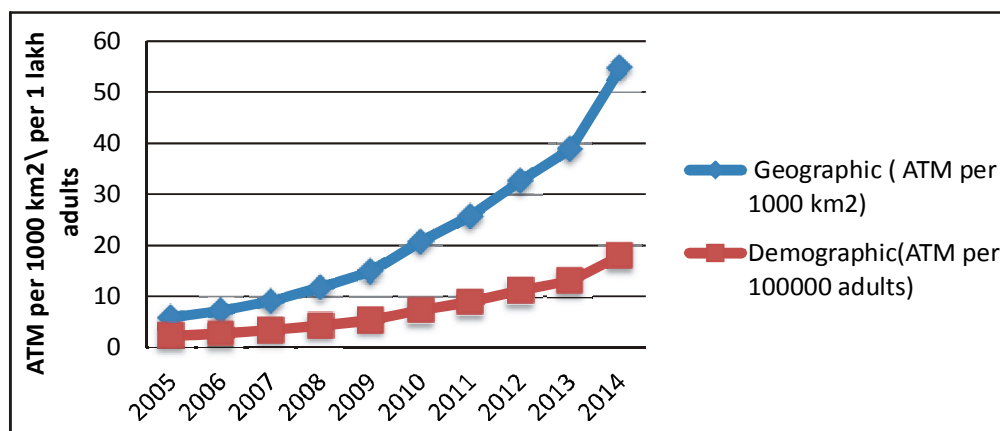
GROWTH OF ATM PENETRATION IN INDIA

During the study period, ATM penetration in India is increasing but at lower pace. Till 2013, ATM geographic penetration was increased just by 1% to 7% approximately. However in year 2014, this penetration was increased by 16 % approximate. This might be due to various efforts carried out by RBI and GOI to push financial inclusion. On other hand, ATM penetration demographically was also increased but at lower rate in contrast to geographic penetration i.e. just 0.40% to 5% approximately.

Table 5**Geographic and Demographic ATM Penetration in India**

ATM Penetration\ Years	Years									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Geographic (ATM per 1000 km ²)	5.93	7.24	9.11	11.8	14.9	20.8	25.81	32.67	38.96	54.90
Demographic (ATM per 100000 adults)	2.31	2.76	3.41	4.33	5.36	7.34	8.94	11.13	13.05	18.07

Source : Financial Access Survey 2015, IMF

Chart-1 : ATM Penetration in India

COMPARISON AMONG BRICS NATIONS

(a) On the basis of ATM Penetration

Among BRICS nations, India is at second position after China, on the basis of ATM per 1000KM² and at last (fifth) position on the basis of ATM per 1,00,000 adults. So, RBI required carrying out various steps to increase number of ATMs not only geographically but demographically also.

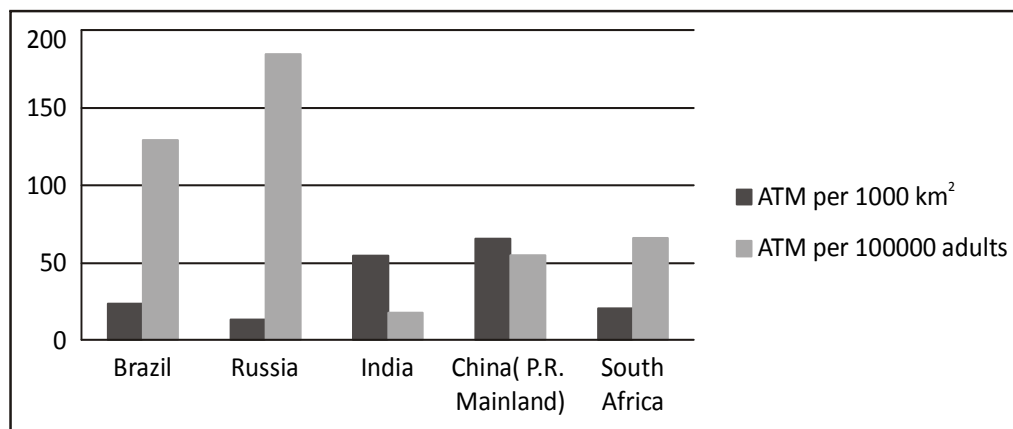
Table 6

ATM Penetration Among BRICS Nations for the year 2014

Country	ATM per 1000 km ²	ATM per 100000 adults
Brazil	23.86	129.25
Russia	13.60	184.70
India	54.90	18.07
China (P.R. Mainland)	65.49	55.03
South Africa	20.81	66.20

Source : Financial Access Survey 2015, IMF

Chart-2 : ATM Penetration Among BRICS Nations



(b) On the Basis of Financial Literacy

As per Standard and poor, "Financial Literacy is the ability to know how money actually works in the world". One can go for financial management only if he or she has knowledge of basic financial terms. As we know, Indian economy and its financial service sector is dynamic and growing but it is lagging behind in comparison to other BRICS nations in terms of financial literacy because around

76 per cent of Indian adults are not having clear understanding regarding basic financial terms. Further, its position was pathetic especially in understanding the concept of risk diversification because just 14% of Indians surveyed answered it correctly.

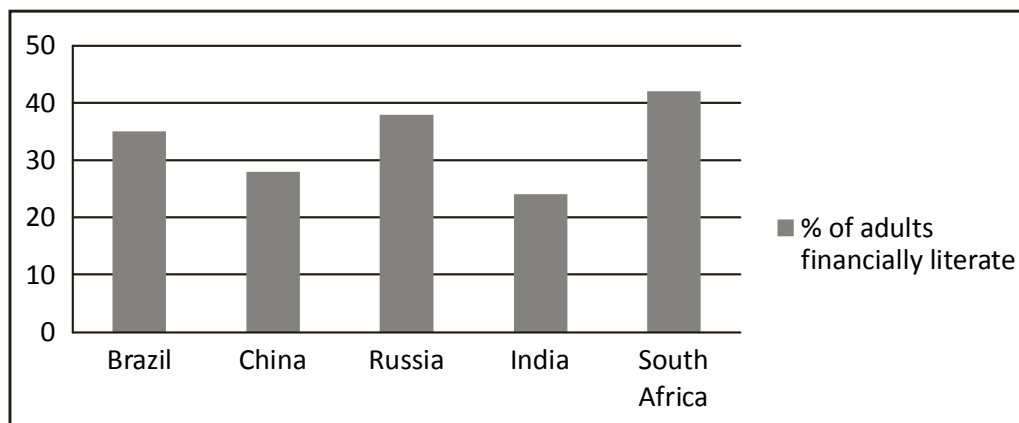
Table 7

Percentage of Adults Financially Literate

Basis	Brazil	China	Russia	India	South Africa
In Totality	35	28	38	26	42
% of Adults Having Knowledge of Four Basic Financial Concepts					
Diversification	33	37	30	14	55
Inflation	53	36	62	56	48
Interest	56	45	61	48	48
Interest Compounding	46	45	40	44	59

Source : S & P Global FinLit Survey 2015

Chart-3 : Financially Literacy Among BRICS Nations



FINDINGS

- ATM penetration in India is increasing over the period of 2005 to 2013 but at very low pace. However in 2014, demographically as well as geographically, ATM penetration increased by 16% and 5% respectively which is high as compared to previous years.
- In spite of various efforts made by RBI and Government of India to inject financial inclusion via new categories of ATMs, the no. of ATMs per 1

lakh adults in India as compared to other BRICS nations is very low, according to IMF-International Monetary Fund, Financial Access Survey, 2015.

- On the basis of financial literacy, India is also lagging behind as compared to other BRICS nations because just 24% of Indian adults are financially literate, however, in South Africa 42% adults financially literate.

SUGGESTIONS

1. ATM penetration per 1 lakh adults in India is low as compared to other BRICS nations might be because of following reasons :-
 - The late arrival (year - 1990) & growth (year - 2000) of ATMs in India
 - High rural population in India i.e. 68%. However in Brazil, Russia, China & South Africa it was 15%, 26%, 47% & 36% respectively according to World Bank. Rural people have lack of regular and substantial income & they also have less access to formal financial services.
 - Banks focus on meeting their financial targets and generating profits.
2. While one can't deny the fact that by adopting scalable technology the outreach and access of formal financial services can certainly be improved in India. But just stressing on supply side of financial inclusion by providing various new kinds of ATMs will not serve the purpose. So, we need to make efforts to improve its demand side also by promoting awareness among the people regarding the needs and benefits of various financial services offered by banks and other institutions. Both these strategies together leads to promote greater financial stability i.e. we need to have Financial Inclusion and Financial Literacy Synced Approach.
3. Although in India, Financial Inclusion is on positive side due to various steps already taken by various regulatory bodies like RBI, SEBI, IRDA, PFRDA and NGO's. The further following steps can be carried out:-
 - All the efforts should reach to root level of Indian population i.e. farmers and other rural people.
 - Financial Literacy to be included in School Curriculum at National Level and Government should play active role in this.

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