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Growth Of Atms In India: A Comparative Study Of Onsite And Offsite Atms

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Abstract

Indian banking system forms an important part of the country's financial infrastructure, playing a pivotal role in the economic growth and development. Banks actively involve in expanding financial access to the customers. They provide various payment and withdrawal services, including ATMs, online banking and mobile banking. The main aim of the study is to highlight different types of ATMs in India and to analyse the growth of Onsite and Offsite ATMs of last five years. The study is based on secondary data.

Keywords: Financial infrastructure, ATM, Onsite ATM, Offsite ATM

Introduction

ATM is an electronic device introduced by the banks to enable the customers to access to some of the banking services without visiting the bank branches in person. It enables customers of financial institutions to comfortably perform financial transactions like cash withdrawal, deposits, transfer funds, balance enquiry, etc., at round the clock without direct interaction with bank staff.

Initially, ATM machines were used as cash dispensers through which customers could only withdraw cash and receive their bank account details. On most modern ATMs, customers are recognized by inserting an ATM card or other acceptable cards like Debit card or Credit Card into the ATM, with verification by the customer on entering a Personal Identification Number (PIN), must match the PIN stored in the chip on the card, if the card is so prepared, or in the delivering financial institution's database.

The first ATM was developed in the year 1965 and was introduced by Barclays Bank, London. In India, the "Hongkong and Shanghai Banking Corporation (HSBC)" introduced the concept of ATM in the year 1987. The first ATM was set up in Andheri East, Mumbai. Now, most of the banks have their ATM outlets in India.

Purpose of ATMs

To use an ATM, customers should have either an ATM Card, a Debit Card or a Credit Card and also PIN. ATM helps the customers to access their bank deposit or withdrawal and also to make a variety of financial transactions such as check balances or credit mobile phones etc., ATMs also allow withdrawing cash in a foreign country. If the currency withdrawn from the ATM is different from that of the bank account is denominated then the money will be converted at the Financial Institution's exchange rate. ATMs are helpful to both the bankers and the customers. With the introduction of ATMs, the banking services such as cash withdrawals are accessible 24x7. As ATMs are working 24x7, the heavy crowd of customers in the banks waiting for their turn to collect cash is disappearing.

Scope of the Study

The study is focusing on ATM services provided by all the Scheduled Commercial Banks in India.

Review of Literature

- **Shruti Jha (2019)** concluded that ATM has the great capacity to increase the participation of rural residents in banking sector and connecting them to main stream. The results of the study revealed that one third of the rural respondents are not using at all and there is a need to increase the usage of ATM among non-users. Also revealed that there is a need for installation of ATM infrastructure in rural areas.
- **Dr. Jasdeep Kaur & Dr. Anupreet Kaur Mokha (2022)** made an empirical study on ATMs and tried to determine the growth and importance of ATMs in India. It also investigated the impact of ATMs and debit card transactions on banks' net interest income. The target population for the study was all scheduled commercial banks in India from the year 2009–2010 to 2020–21. Their study highlighted that ATM banking is one of the first e-banking tools, continues to be one of the most popular modes in the country. Their paper found out the growth and importance of ATMs in India. Their study recommended continued usage of ATMs in India based on its analysis of the impact of ATMs and debit card transactions on banks' net interest income using the log-log regression technique.
- **Dr. Ruchi Gupta (2022)** Investigated different types of Automated Teller Machines (ATMs) in India. They also examined the rise and use of ATMs in the Indian banking industry. Secondary data was employed, which was obtained from RBI publications, websites, periodicals, and journals. According to the findings of the study, there has been a significant increase in the number of people utilizing ATMs in India before COVID19 and concluded that during the pandemic, ATM usage was reduced because of the adoption of online banking and E-Wallets. It is growing again after the pandemic.
- **Ram Pal, Dr Suresh Kumar and Prof. Kulbhushan Chandel (2023)** highlighted that The Automated Teller Machine and Point of Sale Machine are the main e-banking services. They studied the growth and trend of ATM and POS machines in public and private sector banks in India during the last 10 years from 2013 to 2022. SBI & PNB banks from public sector as top leading banks have been selected. And from private sector banks HDFC & ICICI banks has been included. The secondary data has been used from the website of Reserve Bank of India. The study reflects that there is a significant difference between

growth of ATM services in public and private sector banks. As far as Point of Sale Machines are concerned it has been found that there is no significant difference between growth of POS services in Public and Private sector bank. The study suggested that the growth of these e-banking services banks should also focus on the spreading awareness for using these e-banking services.

- **Miss. Rupali Kadam & Dr. Nilima Jajoo (2024)** explored contemporary challenges and advancements in ATM security, fastening on vulnerabilities that hang banking systems and strategies to alleviate these pitfalls. They examined colorful attack vectors, including physical tampering, cyber-attacks, and social engineering tactics, and their counteraccusations for fiscal institutions and consumers. Their paper also reviewed current security measures, similar as encryption, biometrics, and machine literacy- grounded fraud discovery, assessing their effectiveness in precluding unauthorized access and icing sale integrity. By assaying recent case studies and security breaches, they gave perceptivity into arising trends and recommended stylish practices for enhancing ATM security. Their findings emphasized the need for multi-layered approach to securing ATMs, integrating technological inventions with robust functional protocols to cover against evolving pitfalls.
- **Marcin Suder, Henryk Gurgul ,Belem Barbosa, Artur Machno, Łukasz Lach (2024)** aimed to test the forecasting accuracy of recently implemented econometric tools as compared to the forecasting accuracy of widely used traditional models when predicting cash demand at ATMs. It also aims to verify whether the pandemic-driven change in market conditions impacted the predictive power of the tested models. Our conclusions were derived based on a data set that consisted of daily withdrawals from 61 ATMs of one of the largest European ATM networks operating in Krakow, Poland, and covered the period between January 2017 and April 2021.

Research Gap

Review of Literature reveals that various studies have been made on ATMS over a period of time focusing on the usage of ATMs for banking in urban and rural area, growth of ATMs in pre-& post covid19 period, ATM security, effectiveness of ATM withdrawal forecasting methods, digitalization banking through ATM and POS, etc. However, they have not addressed the growth of Onsite and Offsite ATMs of all the Scheduled Commercial Banks in India. The present study focuses on growth of Onsite and Offsite ATMs of last five years.

Objectives of the Study

- To examine ATM services in India
- To Analyze the Growth of Onsite and Offsite ATMs

Research Methodology

- **Source of Data:** The study is based on Secondary Data. The secondary data pertaining to Onsite and Offsite ATMs and ATMs services by all the Scheduled Commercial Banks is collected from the RBI website, National and International Journals, Magazines and Published Books.
- **Period of the Study:** The period of the study for analyzing the growth of Onsite and Offsite ATMs is from 2020-21 to 2024-25.
- **Tools for Analysis:** The data on the ATMs of Scheduled Commercial Banks collected from different sources have been analyzed by using well established statistical tools and techniques. The following tool is used for analysis:

Compound Annual Growth Rate (CAGR) It works out change for a given period on the basis of the base year and the end year value i.e.

$$g = \left(\left(\frac{K_i}{K_o} \right)^{\frac{1}{n}} - 1 \right) \times 100$$

Where K_i and K_o represents the values of variables at the end and basic year respectively.

Analysis of ATM Services

The following table shows different types of ATMs available for different purposes

Table-1: Types of ATMs & its purposes

Type of ATM	Purpose
On Site ATM	ATM located in the Bank
Offsite ATM	ATM located at places outside the bank premises such as shopping malls, airports, railway stations, etc.,
White Label ATM	ATM Provided by Non-Banking Financial Company (NBFC)
Green Label ATM	ATM issued for Agricultural Transaction
Orange Label ATM	ATM issued for Share Transactions
Yellow Label ATM	ATM issued for E-commerce
Pink Label ATM	ATM issued for women banking
Brown Label ATM	ATM is owned by a service provider and its management and connectivity to banking networks is provided by another sponsor bank.

(Source: compiled from www.rbi.org.in)

Out of the above, the first two ATMs are popular and information is available and therefore the study covers Onsite ATMs and Offsite ATMs.

Based on location, ATMs are divided into 2 types. They are:

- a) On-Site ATMs
- b) Off- Site ATMs

a) On-Site ATMs

If ATMs are made available by the banks in the bank premises so that both the physical branch and the ATM can be used by people for several purposes like to avoid the lines or queues and save time required to complete their transactions, it is On-site ATMs.

b) Off- Site ATMs

If ATMs are made available by banks at convenient locations of public places like bus stations, railway stations, air ports, supermarkets, petrol bunks, etc. Depending upon the volume of business, banks install required number of ATMs for their customers at convenient places. This is to facilitate the people to use the bank services even when there is no bank branch in the area.

The following table shows the Cumulative values of number of On-Site ATMs of Scheduled Banks as on 31st March for the years 2020-2021 to 2024-2025.

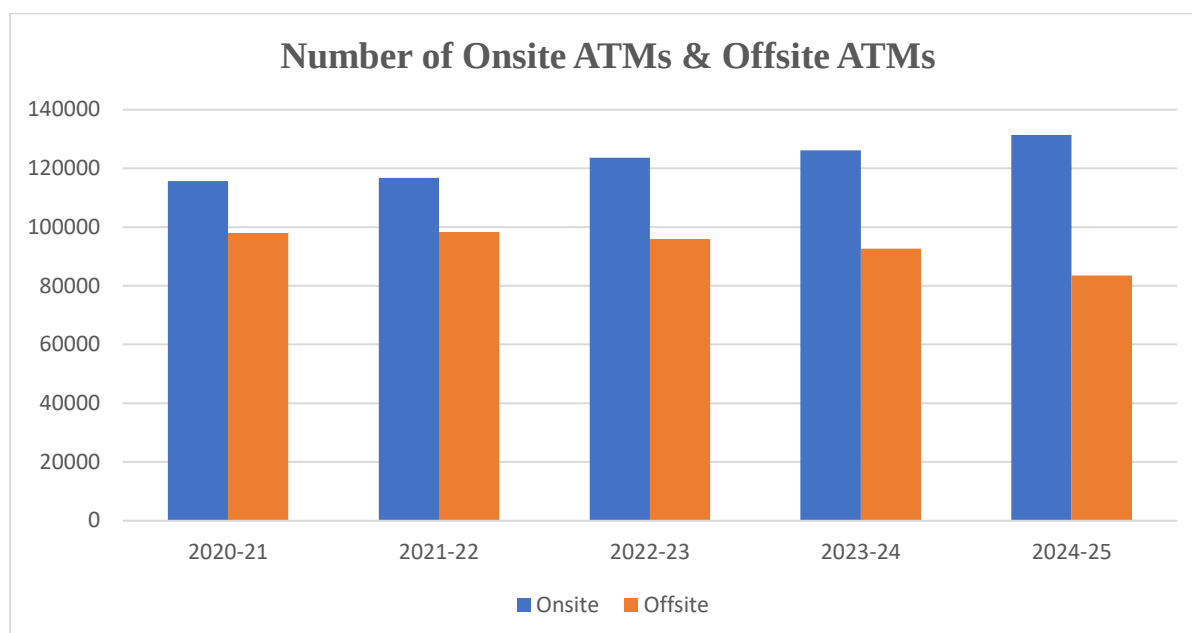
Table 2: Number of ATMs as on 31st March

Year	Onsite	Offsite
2020-21	115605	97970
2021-22	116794	98267
2022-23	123613	95893
2023-24	126116	92699
2024-25	131323	83518
CAGR	2.58%	-3.14%

(Source: Compiled from www.rbi.org.in)

The above table-2 depicts the growth in the number of ATMs installed onsite by Scheduled Commercial Banks in India during 2020-21 to 2024-25. In the year 2020-21 the total number of Onsite ATMs installed by the banks were 115605 and it gradually increased year by year and reached to 131323 in the year 2024-25. The growth rate in terms of number of Onsite ATMs is 2.58%. The reasons for the growth in on-site ATMs in India are due to several factors like financial inclusion, increasing awareness of ATM usage and the ongoing need for cash transactions, especially in rural and semi-urban areas. Banks also invest in on-site ATMs as it helps in reducing service costs and provide convenient access to customers.

The above table also show the number of offsite ATMs of Scheduled Commercial Banks in India during 2020-21 to 2024-25. In the year 2020-21 the total number of Offsite ATMs installed by the banks were 97970 and decreased to 83518 in the year 2024-25. The growth rate in terms of number of Offsite ATMs is -3.14%. The reasons for the decrease in off-site ATMs are mainly due to increased adoption of digital payment and a shift towards digital banking, focus on streamlining banking infrastructure, ect., When compared, the number of offsite ATMs is less and its growth rate is also in negative due to higher operational costs associated with offsite locations that include rental, maintenance, security and compliance mandates that are lower for onsite ATMs located within bank premises.



Conclusion

In India the Scheduled Commercial Banks provide both the Onsite ATMs and Offsite ATMs. Onsite ATMs are considered as more secured and Offsite ATMs provides greater convenience and reach to the customer. The growth rate in Onsite ATMs is very nominal i.e., 2.58% and Offsite ATMs growth rate is -3.14% due to the increasing use of digital payment. Despite of increasing use of digital payment, a segment of the population continues to rely on cash. Making ATMs essential for transactions.

This paper concludes that ATM growth may slow due to changing regulations and user behavior, but it also acknowledges the ongoing need for cash access for certain segments of the population.

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