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A Study on Growth and Usage of ATM/POS in India: Pre and Post Covid19

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ABSTRACT

In the current scenario, the advancement of information and communication technologies has aided the growth of the banking sector. In the Indian banking business, ATMs are the most popular and commonly utilized E-Banking services (VineshKumar & Bhatt 2018). This research investigates the different types of Automated Teller Machines (ATMs) in India. This report also examines 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 this study, there has been a significant increase in the number of people utilizing ATMs in India before COVID19. However, during the pandemic, it was reduced because of the adoption of online banking and E-Wallets. It is growing again after the pandemic.

Keywords: Automated Teller Machines, ATM -Technology, Growth of ATM, Usage of ATM, COVID-19, POS

Introduction

In today's business world, every individual wants to develop and expand their business. To

The financial services sector is one of the world's fastest expanding sectors. The development of a country's financial sector is crucial for the economy's rapid growth. The development of the financial industry is based on the progress of the country's numerous intermediate banks and non-banking entities. As a result, banking sectors must shift their focus from their current goal of stable profitability to growth-oriented, long-term goals. The banking industry may do this by incorporating technology into its operations, which will result in innovation. One such banking industry invention is the automated teller machine (ATM), which is universally recognized by all banks. Although technology advancements like mobile banking and online banking have helped to fundamentally overhaul the banking sector, ATMs continue to be a significant element in the business.

The Indian financial system is the largest developing sector in the country. The country has preferred innovative technology on a regular base to make changes in its business. ATMs play an important role in India, especially as the country strives to achieve financial inclusion. Evolution and development can only be done successfully when the customer is united and satisfied. Customer satisfaction can only be achieved when a banking facility meets customer expectations through user-friendly solutions and pursues ideas that can be better achieved through technology. not their banker. This article sheds light on the recent development and growth of ATMs in the Indian financial sector.

Automated Teller Machine (ATM).

This machine is known as an automated teller machine (ATM) in some countries and an Automated Banking Machine (ABM) in others. It is also known as a Cash machine, cash point, mini bank, and cash dispenser machine. The function of ATMs is financial transactions, specifically, the general public withdrawing money from an individual account without the involvement of personnel such as clerks or teller. These devices are user-friendly with easy-

to-understand software that anyone can access. ATMs also have electronic displays that guide ignorant customers step by step. It works 24*7 days a week to help customers withdraw funds as needed. The device can also be used for a variety of other features, including Check cash balance, mini accounts statement, transfer from the customer account to another account holder without the manual interface, and payment of additional charges such as credits and insurance premiums. ATM cards look like plastic smart cards with magnetism. With stripes and microchips, each customer contains a unique card number. For security reasons, it also includes other details such as expiration date and CVV (card verification value) code. Each customer is provided with a personal identification number (PIN) for authentication. This ATM card can be used for all financial transactions, including shopping bill payment (a point on sale), cinema ticket booking, mobile recharge, and other purposes.

Review of Literature

Weerasiri et al. (2017) in their study discussed the impact of automated teller machines (ATMs) services on the satisfaction of customers. Here, researchers were analyzing the impact of the quality of ATM services on customer satisfaction in Sri Lanka's banking sector. In this paper researcher also looked at the impact of demographic factors on the relationship between ATM service quality and customer satisfaction. The sample size for this paper was 385. The data was collected using a structured satisfaction survey. Regression, ANOVA, and T-test methods were used to identify key factors and frequency analysis to explain customer satisfaction. The quality of ATM services had a positive impact on customer satisfaction, and demographic factors such as age and academic background ease the relationship between the quality of ATM services and customer satisfaction. This paper identified the key factors that banks can consider to increase the satisfaction of customers.

Raj (2018) reviewed the growth and development of ATMs in India in his article. This paper aims to understand the growth and usage of ATMs in the Indian banking sector. According to this survey, ATM services in India are growing significantly, and the number of people using ATMs was actively increasing every day. The results revealed that ATM usage in India has increased sharply, especially after the demonetization. It was also pointed out that public awareness of cashless transactions had significantly increased in recent years.

Alapati et al (2015) in their study entitled a study on Customer Satisfaction with SBI and ICICI Bank ATMs and the Role of ATMs for a Greener Environment, investigated the degree of customer satisfaction related to various components of ICICI Bank and SBI ATMs. In Manipal, Karnataka, a sample size of 150 respondents was taken & distributed among them a structured questionnaire. According to the findings of the survey, banks should take various steps to educate clients about the use of ATMs. Many people who use the ATMs were unaware of the extra services they offer besides cash withdrawal and balance statements. They should be made aware of services such as fund transfers, biller payments, cell phone recharge, charitable donations, and so on. So that users may make greater use of ATMs by reaping all of their benefits.

Athidass et al. (2020) investigated the customers' perceptions of ATM security and privacy problems in selected Public Sector Banks with Special Reference to Ramanathapuram District. The purpose of this research was to focus on consumer perceptions of ATM security and privacy problems in chosen public sector banks in Ramanathapuram District. A multistage sampling strategy was used to pick the banks, and a convenience sampling method was utilized to select the respondents to gather data from 250 people utilizing a structured interview schedule. According to the study's findings, ATM deduction charges are the most influential element in security difficulties.

Mwastika (2016) investigated the influence of ATM Banking Performance on the Satisfaction of Customers with the Bank in Malawi. The study's goal was to determine the impact of

ATM performance on customer satisfaction with Malawi's banks. SPSS was utilized in the study. The study found that, rather than impacting client loyalty, ATM banking has little potential to entice consumers to transfer banks. As a result of advancements in automated teller machine banking administrations, banks can increase their customer loyalty ratings; nonetheless, if banks want to draw customers away from rivals, alternative advertising techniques should be considered.

Akhtar et al. (2016) examined how the purpose of the study recognized the factors of ATM administration quality that influence client loyalty. In the banking sector, information was acquired using a poll with a five-point liker scale and a sample size of 100 using an accommodation inspection system. SPSS was used as a factual test to examine relationships and relapse. Relapse investigation discovered a beneficial and remarkable outcome relationship between value, consistent quality, responsiveness, accommodation, security, and administration quality on client loyalty. The management of MCB bank should reduce the value, consistency, and administrative character of ATMs. In that evaluation, an accommodation testing technique was used to examine locations since bank directors are unable to divulge their clients' personal information due to security concerns. In this vein, future research would be led by employing an irregular inspection technique to increase the generalizability of conclusions.

Fitrian et al. (2018) discovered that the trust of employing an Automated Teller Machine (ATM) was a difficult task for certain Indonesians, where security difficulties are associated, even though it is frequenting them. The study investigates the community-related concerns related to ATM security, for example, viewed value and usability, and saw security, trust, objective to utilize, and genuine framework utilization, by utilizing a modified specialized acknowledgment model (TAM) for financial reasons. The investigation used client tests from major driving banks in Indonesia to demonstrate the current situation faced by many Indonesians while managing ATM security. As a result, major contributions will be made by bank arrangement makers to set up additional approaches to adjust to included security difficulties associated with ATM use.

Bharathi et al. (2019) explored a conceptual study on usage & issues of the Automated Teller Machine. The paper focuses on the ATM services that consumers desire, as well as the issues that customers have with ATM services. As a result, the researcher came to the firm conclusion that human-to-human relationships are the only method to increase service quality.

Karagama (2017) studied the assessment of the usage of ATM bank customers in Maiduguri Metropolitan council. With a bias against ATM producers, this article focused on the important dimensions of ATM (Automated Teller Machine) service quality and its influence on customer satisfaction. The study is driven by the enormous issues posed by the growth of ATM infrastructure, as well as the resulting financial losses to banks, which are frequently underreported. A convenience sample of 80 respondents was employed to collect data from a population of 30 bank workers and 50 bank clients, respectively. As a consequence, the data acquired through the questionnaire were statistically evaluated using a simple percentage table, and the results show that, despite the benefits, the deployment of ATM terminals has averagely enhanced the performance of Nigerian banks due to the alarming rate of ATM fraud.

Hajare et al. (2018) in their research paper wanted to provide an expanded feature to improve the service of ATM cash withdrawal in less time with a higher level of security in their research paper named efficient cash withdrawal from ATM using Mobile Banking. This study will integrate ATMs and mobile banking to minimize the time it takes to withdraw money from an ATM while boosting security by introducing a new feature to mobile banking. There will be no modifications to the current system, but there will be certain additions that will not influence it. This research, which would nearly triple the speed of cash withdrawal, might have a favorable influence on customer

satisfaction if banks assure good operation. Banks may utilize the findings of the study to improve ATM services, increase customer happiness, and save money on new ATMs.

Vinod (2018) performed comparative research on the performance of brown label ATMs and white label ATMs in the state of Kerala The study's purpose was to analyze the performance of BLA's and WLA's services in the state of Kerala, as well as to compare and contrast the various services of BLA's and MLA's. In nature, empirical and exploratory study designs have been applied. The current study's conclusion is the development of a model for increasing the performance of ATM models. Customer satisfaction results from the successful development of White Label ATMs and Brown Label ATMs. ATM companies are always innovating new services to develop and give more value to every consumer. The current trend among banks is to drastically reduce the cost of ATMs. The current study attempted to assess the performance of BLAs and WLAs services in the state of Kerala. The current study also created a model for increasing the performance of the state's existing models.

Tuli et al. (2012) researched a comparison of consumers' perceptions regarding ATMs from SBI and ICICI Banks was conducted. The study's goal was to evaluate public and private sector bank ATMs, use, and other SBI and ICICI Bank amenities. The results show that public-sector banks disburse obsolete currency while private-sector banks frequently run out of cash. As a result, both banks have limits. The report ignores the viewpoints of bank employees and focused only on clients who used ATMs.

Premalatha et al. (2012) analyzed the satisfaction of customers with reference to ATM services in the Vellore District. This paper's key issue was customer happiness when using ATMs, and it had been discovered that there was a considerable influence on age factor and safety, gender, and tangibility. However, there was no substantial relationship between occupation and level of pleasure. As a result, it was determined that consumers anticipate safety, certainty, and convenience while using ATMs, and it was suggested that bankers give safe and correct information to ATM users to boost reliability.

Renuka et al. (2014) described the Satisfaction of customers with Automated Teller Machine. This study focused on the satisfaction of customers at the point of withdrawal, 24 hours, and on the deposit system. But there is a lack of awareness among the customers while using ATMs. It had been suggested to the bankers that ratifying customers' comments, doubts and suggestions will increase the reputation of the bank among the customers.

Sisat et al. (2014) in their research paper entitled Secured Automatic Teller Machine and Cash Deposit Machine explain the various threats to ATM and Cash Deposit machines. Secondary data had been used in this paper. It has been concluded that there were three types of risks involved while utilizing the ATM, which are currency fraud, logic attacks, and physical damage. And also this paper discussed the security system of ATMs and CDM.

The objective of the Study.

1. To study the recent developments and growth of ATM Onsite and Offsite in the Indian Banking Industry.
2. To study the usage of ATM/POS in the Indian Banking Industry.

- To depict the recent developments of ATMs in India.
- To analyze the growth of ATM usage onsite and offsite in the Indian Banking Industry.

Research Methodology

This research is entirely based on secondary data. The qualitative method is used in it. All of the data came from the Reserve Bank of India's database. The ATM/POS statistics data was gathered from 2017 to 2021, and just the information for March was used for the study. Other sources include articles from well-known journals, periodical articles, monthly publications, and the internet. This report used

percentage analysis to determine the growth of the ATM/POS in India.

Recent Development of ATMs in India

The first Automated Teller Machine was deployed at a Barclays Bank branch in London in 1967. The ATM was invented by John Shepherd Barron, who owes much to the world. This machine is currently widely used in various regions of the world.

The ATM has evolved from bulky, stand-alone equipment to a sleek-faced, multi-networked, IoT-enabled gadget capable of much more than merely dispensing cash. ATMs have grown into multi-function kiosks capable of contactless cash dispensing, cash deposits, account opening, and even the issuing of debit cards.

ATMs were the most desired and awe-inspiring technological wonders of the 1980s when they arrived in India via foreign bank branches. A few Indian banks recognized it in the early 1990s, and by the mid-1990s, with the establishment of new private sector banks, ATMs had become a requirement at all metro and urban branches.

Thanks to the National Financial Switch (NFS) set up in 2004 by IDRBT (Institute for Development and Research in Banking Technology), interoperability between ATMs of various banks became a reality. The NFS network was transferred to NPCI (National Payments Corporation of India) in 2010 and since then, the number of ATMs connected to NFS has grown to more than 251,000 on which 250 million cash withdrawal transactions were performed in May 2021.

The expansion of India's economic system during the last decade has been judged to be fast. To attract clients, the banking business in the financial sector is always offering new concepts. HSBC bank installed the first ATM in India in 1987 at the Mumbai branch for withdrawal (Hota, 2013). The ATM was created to assist consumers in times of emergency when deposits and withdrawals are necessary outside normal banking hours. The next advancement in the ATM industry will be the implementation of an account balance and statement quiz system so that clients do not have to wait inside the bank. Many significant developments, such as account transfers from one person to another, request claims such as the requirement for a checkbook, message notification, and so on, were recognized after 2000. After 2010, technical advancements in non-bank ATM services expanded. Debt payback, ticket booking, mobile phone recharging, and other similar services are examples of such services. Despite considerable advancements in the sector, much more has to be done to improve the quality of ATM services in India.

ATM is an agent of social change

ATMs in India have evolved from being an exclusive gadgets for premium consumers in metropolitan areas to being agents of social change, boosting financial inclusion in cities and distant villages across the country during the last 20 years. Without ATMs providing much-needed cash dispensing terminals for millions of clients, mass banking would not have been conceivable in this country.

Today, ATMs in India dispense an average of 2,600 billion rupees each month, accounting for more than 10% of the money in circulation. Banks have successfully employed ATMs to deliver basic financial services to consumers at any time of day and a low cost. ATMs aboard mobile vans have delivered wages to workers in isolated plant locations; these vans have also traveled to areas ravaged by natural disasters, delivering desperately needed cash to the inhabitants.

During the shutdown last year, ATMs on wheels were pushed down to major societies to allow inhabitants to withdraw cash. ATMs are used to pay plantation workers in Assam's distant tea fields. One can never forget the lengthy, serpentine lines at ATMs in the aftermath of the government of India's demonetization announcement on November 8, 2016.

Demonetization was a watershed moment for ATM expansion in India. Before 2016, the number of ATMs increased by more than 8-10% year on year, but growth has reduced to 2-3% every year. During pandemic onsite and offsite, ATM has decreased but post-pandemic again, it's increased.

Skewed distribution

The distribution of ATMs within India is likewise lopsided, with metropolitan cities having 53 ATMs per lakh population, urban regions having 69 ATMs per lakh population, semi-urban areas having 53 ATMs per lakh population, and rural areas having a measly nine ATMs per lakh population. However, the rising costs of ATM logistics and regulatory compliance, as well as the emergence of digital payment solutions such as UPI, have caused banks to reconsider their ATM rollout strategy in recent years.

Banks and independent ATM deployers (IADs) have realized that ATMs or their advanced form, the ACR (Automated Cash Recycler), are desperately needed in India to fulfill the population's cash needs. Although digital payments, particularly UPI, have multiplied throughout this time, cash remains the engine oil of the economy.

ATMs will retake their due place as economic and inclusive development boosters in the coming days. They will undoubtedly compete for space with other dispensation models such as UPI, micro-ATMs, e-wallets, and so on, but the country's demand is sufficient that there will be ample room for all types of endpoint dispensation.

Types of ATMs are:

1. White Label ATM

White Label ATMs can be set up and worked by private, non-banking elements. According to RBI rules, the bank which works with ATMs should have the least total assets measure of 1 Crore. This sort of ATM administrator is allowed to utilize all sorts of bank ATM cards and is likewise permitted to show their ad on the ATM counter. The administrator should have a support bank that will give cash to their ATMs. According to RBI managers, the organization isn't allowed to utilize any logo or name of the support bank in the ATM place. They can likewise offer a lot of benefits added administrations like bill installment, re-energize, and so on with a most extreme removed limit Rs. 10,000. These ATMs function 24*7. According to RBI rules, at least two ATM centers are obligatory in 3 to 6 tiers and assuming the bank wants, one ATM can be introduced in the 1 and 2 tiers in urban areas.

2. Brown Label ATM

Brown label name ATMs can be taken on rent under the ownership of the service provider. . They are answerable for looking for a spot for ATM focus and haggling with the property manager. They should likewise set up for the electrical power supply, network framework, inside enrichment, and ATM focus support specialist. They can utilize the logo and name of the support bank that keeps up with the money the board and availability. This ATM follows the rethinking idea where every one of the exercises is finished by the third individual. The specialist organizations gather their charges and structure the bank. The primary benefit of this ATM was that the financiers need not stress over outside factors and enormous investment in the ATM center.

3. Online ATM

Online ATM relates to a bank database where all the details like amount withdrawal limit, balances, etc. are monitored by the bank.

4. Offline ATM

This offline ATM is not connected with the bank database, but the bank fixes this type of transaction predefined withdrawal limit, we can withdraw the money more than our balance amount later we must pay the penalty for over withdrawal to the bank

5. Onsite ATM
The onsite ATM is which is on branch premises or very close to a branch.

6. Offsite ATM
The offsite ATM is located far away from the branch premises usually in public places like a shopping complex, bus stand, airport, and other major places.

7. Mobile ATM
Mobile ATM refers to the ATM which can be easily transferred from one place to another place for the benefit of customers during festival times, religious functions, etc. They are highly operated only during the required days.

8. Green Label ATM
This type of ATM can be utilized only for agricultural transactions.

9. Pink Label ATM
Pink Label ATM can be utilized by women for their transactions.

10. Other ATMs
The orange and yellow labels can be utilized for share trading and other E-commerce purposes.

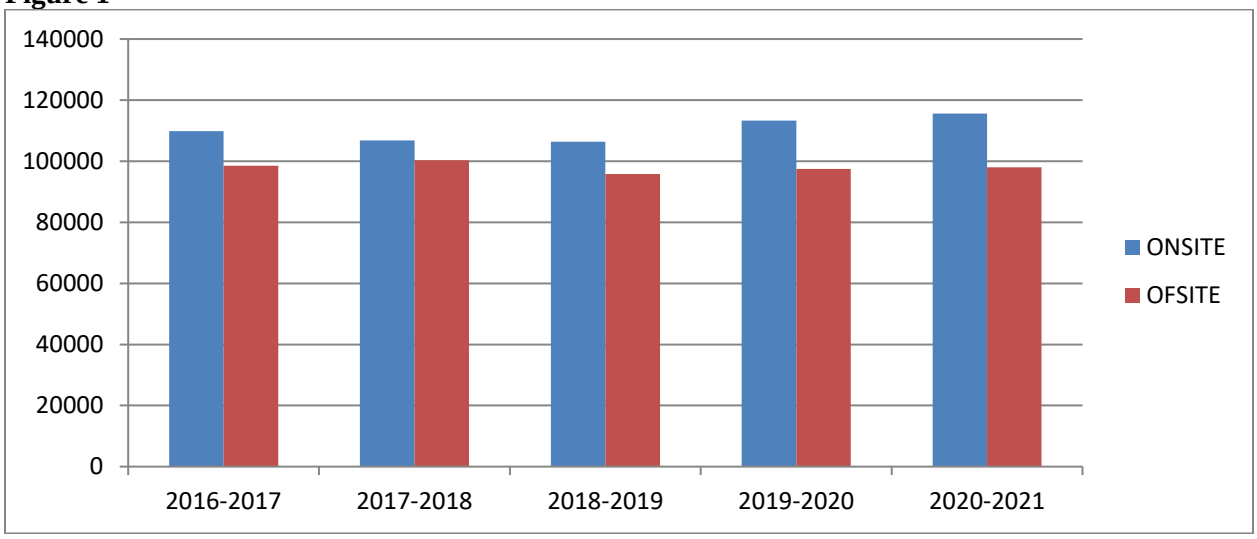
Growth of ATMs in India
The RBI database regarding ATM installation for the past five years for March is given below in Table 1

Table 1
Number of ATM

YEAR	ONSITE	OFFSITE
2016-2017	109809	98545
2017-2018	106776	100276
2018-2019	106380	95816
2019-2020	113271	97489
2020-2021	115605	97970

Source: https://www.rbi.org.in
The above table gives details about the number of ATMs available in India. As per the table during 2017 (March) 109809 onsite ATMs and 98545 offsite ATMs were present. But according to the latest report of March 2021, there are nearly 115605 onsite ATMs and 97970 offsite ATMs in India depicting a high increase in the number of ATMs within a short span of 5 years. The graph for the above data is as follows:

Figure 1



Source: https://www.rbi.org.in

It is analyzed from the above figure that the on-site ATM is more than the offsite ATM every year.

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Usage of ATMs in India

The following details were extracted from the RBI database for the past 5 years. The ATM card & POS usage details are taken are depicting in the table below:

Table 2
Number of Transactions in India

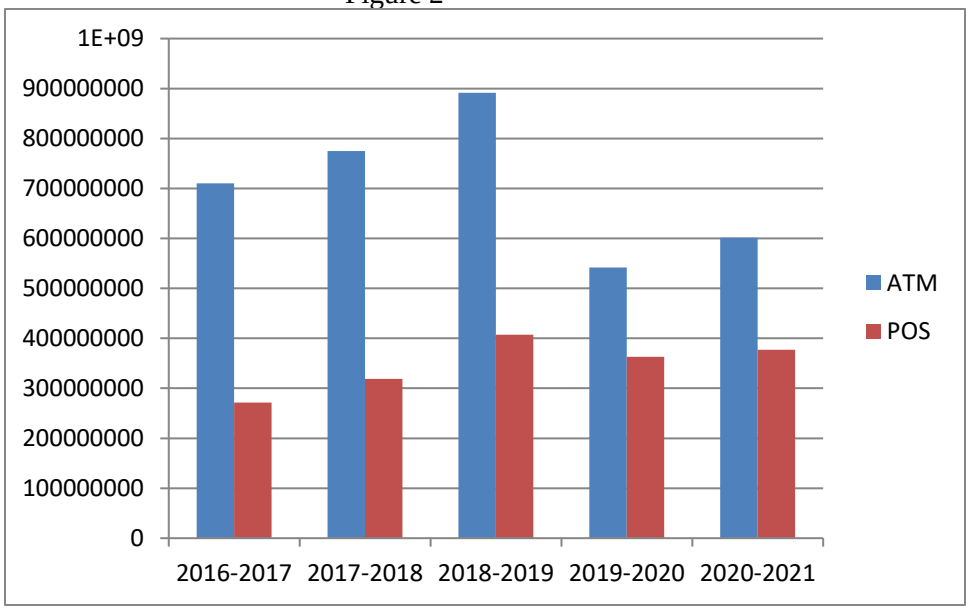
Year	ATM	POS
2016-2017	710108656	271172292
2017-2018	774943830	318899139
2018-2019	891423739	407565680
2019-2020	542038566	363203523
2020-2021	601611788	377433789

Source: https://www.rbi.org.in

The above Table 2 expresses the number of ATM & POS transactions in India. ATM depicts the cash withdrawal directly from the ATM center while POS depicts the swiping of the card at the place of sale. POS helps the customers to carry less amount and with high safety. There is a considerable increase in POS transactions in 2019 as compared to 2017 but in 2020 and 2021, it's decreased because of a pandemic.

The following Figure 2 explains the number of transactions in India.

Figure 2



Source: https://www.rbi.org.in

In the above figure, the number of ATM card transactions in ATM centers and Point on sale (POS) machines expressed that before COVID 19, usage was increased but after the pandemic, the number of transactions through ATM usage was decreased, and after the pandemic again, it's increasing up.

Conclusion

This study is directed towards utilizing descriptive analysis with attention to the sorts, rate, and development of ATM utilization among bank clients in India. The outcomes acquired revealed that there is a high development in the utilization of Indian ATMs, particularly after the demonetization conspire. It has been found that the awareness level about cashless transactions among the public was significantly growing high in the past few years but during the pandemic, it has been decreased because people were using internet banking as well as digital payments for transferring funds. Presently, post Covid19 again is expanding up. As per the researcher's suggestion, sufficient measures should be taken by the government to annul the degree of obliviousness existing among the clients, which will help in expanding the mindfulness and premium to acknowledge and embrace mechanical advancements in Indian financial areas among people in general. It is the joint liability of the government and public to float the country on the path of a cashless economy.

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