

USE OF MOBILE BANKING - A STUDY OF CONSUMER'S PERCEPTION ANALYSIS

¹Meghna Saikia

¹M.Phil. Scholar, Department of Economics, Dibrugarh University, Dibrugarh, Assam, India, [Email- saikia.meghna10@gmail.com](mailto:saikia.meghna10@gmail.com)

Abstract

With the breakthrough of the internet, the global economy is advancing towards a digital ecosystem. Every aspect of the economy is going paperless be it from investment to money transfer. Mobile banking is one such step taken by the banks towards achieving a digitalized banking environment in the economy. It is one of the bi-product and key initiatives of Green Banking which aim at providing banking facilities to its customers at ease, convenience and comfort of their home at a lightning speed. It enables customers to initiate and perform their banking tasks using their mobile phones or tablets in a few simple steps. This paper thus, covers the concept of mobile banking and its uses and has made an attempt to study consumer's perception analysis of mobile banking based on select population of Dibrugarh town, Assam.

Keywords: Digital economy, Mobile banking, paperless transaction.

I. INTRODUCTION

Banking is one of the India's most important and crucial sectors when it comes to financial institutions. With the advent of technology followed up by the evolution of the internet, the banks took a major step towards achieving a digital ecosystem by introducing digital banking in India. Mobile banking is among the available services which stood as one of the most important innovative digital tools for banks. Mobile banking is a banking service available for 24*7 enabling its customers to carry out financial transactions remotely via mobile phones or a tablet. It is one of the bi-product and key initiatives of Green Banking which aim at providing banking facilities to its customers at ease, convenience and comfort. Mobile banking alone helps its customers with the convenience of various banking operations, thereby making it time saving and cost effective. It has so many advantages to offer to its customers like balance enquiry, quick receipt and transfer of funds, online utility bill payments, buy goods and services, SMS alert etc. to name a few.

Before the introduction and activation of mobile web services in 1999, mobile banking was carried primarily through text or SMS; it was known as SMS banking. European banks were on the frontier of mobile banking service offering, using the mobile web via WAP support. SMS banking and mobile web were the most popular mobile banking products before 2010. With the development of smartphones with iOS or Android operating systems, mobile banking applications (apps) began to evolve. Clients were able to download the banking apps onto their smartphones with more sophisticated interfaces and improved transactional abilities. To date, many financial institutions make use of both SMS and mobile applications to keep their clients informed of their account activities or to send out alerts regarding possible fraud and/or updates and maintenance of service provision. There is a revolutionary transformation undergoing in the world of banking sector which is quite evident with the emergence of new products through new channels of servicing to its customers in the banking industry. The technology is playing a vital role in this

transformation which has created a wide range of products and services breaking all the geographical barriers.

Daniel (1999) defined the term electronic banking as the provision for information, products and services by the bank towards its customers electronically available through wire or wireless channels. For example services like - Internet, mobile phone, and telephone. Keen and Mackintosh (2001) in their study have showed that hi-tech features have played an equally important role in the adoption of mobile banking, which are expected to grow even further thereby enabling mobile phones to serve beyond communication. Forrester Research Group (2007), in their research work found more than 219 million users having access to the Internet via mobile phones. The mobile phone usage is estimated to be approaching four billion subscriptions globally, giving the mobile operators and advertisers an opportunity to connect to the potential consumers through mobile phones (Hibberd, 2007). However, by now there are 5.31 billion unique mobile phone users in the world, according to the latest data from GSMA Intelligence. The rapid increase in the telecommunication sector along with an increase in the mobile phone usage has made the financial industry more competent which has led to the adoption and inclusion of mobile phones within their system of service. This inclusion therefore, has created a revolutionary change in the realm of banking and the financial sectors.

II. Objectives:

- To understand the concept of mobile banking.
- To study consumer's preference and perception analysis of mobile banking on select population (Boiragimath residential area) of Dibrugarh town, Assam.

III. Data and Methodology

3.1 Source of data

To cope with the objectives of the paper, an evaluative and descriptive method has been adopted. The paper relies on select secondary data collected from various reports, websites,

journals, relevant books, and research articles in the proposed area of study under consideration.

Besides, the paper is also backed by primary data collected from 200 respondents of different age groups through structured questionnaires purposively distributed on select population (Boiragimath residential area) of Dibrugarh town in Assam based on convenient sampling technique. The responses were recorded to study consumer's preference and perception analysis of mobile banking.

3.2 Method of Analysis

The data collected were first tabulated, then interpreted and finally analyzed by using arithmetic tools such as percentage method. Ranking method was also used to analyze the data. Impact Index method was applied in order to analyze the preference of the consumers.

$$\text{Impact Index} = \frac{\sum R_i W_i}{M_i} \times 100$$

Where, $R_i W_i$ = Weighted Score, M_i = Maximum Weight

The following ranges were considered for the purpose of analysis of the index:

0%-20% = Very Low, 20%-40% = Low, 40%-60% = Moderate, 60%-80% = High and 80%-100% = Very High.

IV. Importance of Mobile banking

Mobile Banking is simply an amalgamation of the telecommunication and the banking industry, through which one can avail the services of banking via mobiles and tablets. It acts as a common agent and provides mutual benefits for both the banks and the customers. In this mode of operation, the banks do not require huge investments nor have to alter their existing infrastructure, and can in fact cater to the needs of a large number of people in lesser effort. With mobile technology, banks are able to cut down on operational costs while still maintaining client satisfaction. Banks get the most valuable data relating to customer's varied requirements achieved through customer's relationship management with effective practices. Banks can now reach out to its customers in far distant and isolated areas which previously were unreachable through the use of mobiles phones and proper networking. Since, all banks are

having their customer database, SMS advertising is used to give information about the products and services to its existing customers as well as to its new customers. Along with the banks, the customers are also provided with added advantages of receiving all the banking services in just a click irrespective of time and place. It has made banking services hassle free for both the customers as well as the banks to a great extent.

V. Mobile Banking services in India

In India, Mobile Banking services were first introduced and started with SMS messaging in the year 2002 which slowly picked up pace with the increase of mobile subscriber base. While now, in 2021, it had reached to 1.2 billion subscribers of which about 750 million were smartphone users. It is in fact poised to be the second-largest smartphone manufacturer in the next five years, according to Deloitte's 2022 Global TMT (Technology, Media and Entertainment, Telecom) predictions. Almost all banking transactions, such as checking account balance statements, paying utility bills, transferring funds etc. can now be completed using mobile phones. However, besides having a large number of mobile subscribers and being aware of its varied usage, very few of them are using their mobiles for availing banking services. Even though mobile banking platform is convenient, it is not being utilized to its optimum potential due to certain constraints. These constraints can be in the form of lack of trust, transactional risk involved, complicated user interface, and poor network connectivity and the like. The world of smart phones is in turn making people to use the ever growing internet usage on mobile handsets, for using the applications based on banking services have emerged as a new concept, Peterson, (2009). Banks in India compete with each other to use this advanced technology to increase customer base and reduce their operational costs, Wang, Lin & Tang, (2003); Ashta, (2010). The primary factor which attracts customers to mobile banking is its 24*7 availability and ease of transactions, but still mobile banking has a long way to achieve as majority of customers still prefers traditional modes of banking.

The Reserve Bank of India has given a set of operating guidelines for the banks to adopt and

follow in terms of Mobile banking. Only banks which are licensed, regulated and have a physical presence in India are permitted to offer mobile banking services. The services are restricted only to customers of banks and/or holders of debit/credit cards issued as per the extant Reserve Bank of India guidelines. Only Indian Rupee based domestic services shall be provided. Use of mobile banking services for cross border inward and outward transfers is strictly prohibited. Banks may also use the services of Business Correspondent appointed in compliance with RBI guidelines, for extending this facility to their customers. The guidelines issued by Reserve Bank on "Know Your Customer (KYC)", "Anti Money Laundering (AML)" and "Combating the Financing of Terrorism (CFT)" from time to time is applicable to mobile based banking services as well. Only banks who have implemented core banking solutions would be permitted to provide mobile banking services. Banks can file Suspicious Transaction Report (STR) to Financial Intelligence Unit – India (FIUIND) for mobile banking transactions as in the case of normal banking transactions.

VI. Types of Mobile Banking Services

Mobile banking services can be categorized into the following:

- Account information access

Account information access allows clients to view their account balances and statements by requesting a mini account statement, review transactional and account history, keep track of their term deposits, review and view loan or card statements, access investment statements (equity or mutual funds), and for some institutions, management of insurance policies.

- Transactions

Transactional services enable clients to transfer funds to accounts at the same institution or other institutions, perform self-account transfers, pay third parties (such as bill payments), and make purchases in collaboration with other applications or prepaid service providers.

- Investments

Investment management services enable clients to manage their portfolios or get a real-time view

of their investment portfolios (term-deposits, etc.)

- Support services

Support services enable clients to check on the status of their requests for loan or credit facilities, follow up on their card requests, and locate ATMs.

- Content and news

Content services provide news related to finance and the latest offers by the bank or financial institution.

VII. Adoption difficulties and challenges

Mobile banking is still underutilized despite its wide range of advantages and the substantial investments in it. Its adoption rate is lower than expected. Potential barriers to adoption of mobile banking include customers' perception of its usefulness, its ease of use, its associated cost, e-literacy, and culture. Security, privacy, trust, and risk also raise issues of concern on its adoption. Mobile banking needs to be secure, convenient, and competitive in charges. Trust is equally important in achieving customer loyalty because there is no face-to-face interaction in mobile banking and involvement of sensitive personal information makes the case even more worse. Age is also an important factor in adoption behavior. Studies show that younger people tend to use mobile banking more than the older generation. Factors that have direct impact on adoption and usability of mobile banking include cultural differences, convenience, and literacy. Lack of literacy and education also acts as a possible barrier as they may find difficulties in handling complex devices such as smart phones and personal digital assistant (PDAs). Besides, factors that hinder its adoption include perceived security risk and lack of trust. Technology anxiety also affects the usage of self-service technologies thereby preventing customers from learning new technologies.

There are certain unique challenges faced by the mobile banking system. One major problem is that of preventing fraud. The bank must ensure that transaction requests are made by legitimate mobile users. The 'Personal identification number (PIN)' and in some case 'One time password (OTP)' are typically used for authenticating users. Also there exist no

universal standard set for mobile banking services. As such banking structures and systems vary from one nation to another. Despite the wide range of benefits provided by mobile banking, it has failed to take off in most developing nations. Security and trust primarily acts as major barriers to mobile banking usage. There is a perceived challenge of interoperability between mobile banking applications due to absence of common standards. There are different platforms of smart phones: Android, iOS, and Windows phone. Besides, most mobile devices have smaller screen sizes and limited software and hardware capabilities. For this reason, mobile applications should be designed in such a manner as to allow the users to have effective interaction.

VIII. Findings and Discussions

8.1 Demographic Profile of the Respondents

Table 1: *Gender wise responses of respondents*

Gender	Frequency	Percentage
MALE	90	45
FEMALE	110	55
TOTAL	200	100

Source: Primary data

For the purpose of the study 200 sample respondents were selected out of which 90 respondents were male (i.e. 45%) and 110 respondents were female (i.e. 55%).

Table 2: *Age Group of Respondents using Mobile Banking*

Age Group	Frequency	Percentage
21-30	75	37.5
31-40	65	32.5
41-50	40	20
50 and above	20	10

Total	200	100
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Source: Primary data

Table 2 shows the age group of the respondents using mobile banking. 75 respondents (i.e. 37.5%) of the mobile banking users are in the age group between 21-30 years, 65 respondents (i.e. 32.5%) of are in the age group of 31-40 years, 40 respondents (i.e. 20%) were in the age group of 41-50 years and 20 respondents (i.e. 10%) were in the age group of 50 years and above.

Table 3: *Educational Qualification of the respondents*

Educational Qualification	Frequency	Percentage
Under Graduate	16	8
Graduate	100	50
Post Graduate	64	32
Others	20	10
Total	200	100

Source: Primary Data

Table 3 shows the educational qualifications of the respondents. Out of 200 respondents, 8% were under graduate, 50% were graduate, 32% were post graduate, and 10% were found to be in the other category.

Table 4: *Employment status of the respondents*

Employment Status	Frequency	Percentage
Student	20	10
Self employed/business	50	25
Public sector service	60	30
Private sector service	40	20

Professional	30	15
Total	200	100

Source: Primary Data

In table 4, it can be seen that 30% of the respondents are in public sector service, 25% are self employed or engaged in business activities, 20% in private sector service, 15% in Professional activities and 10% are students.

Table 5: *Monthly Income of the Respondents*

Income	Frequency	Percentage
Under 20,000	30	15
20,000-40,000	40	20
40,000-60,000	60	30
60,000-80,000	50	25
80,000 and above	20	10
Total	200	100

Source: Primary data

Table 5 represents the monthly income of the respondents. About 15% of the respondents have an income under 20,000, 20% of the respondents have an income in the range 20,000-40,000, 30% of the respondents have an income in between 40,000-60,000, 25% of the respondents have an income in between 60,000-80,000 and 10% of the respondents have an income above 80,000 respectively.

8.2 Consumer's perception analysis of Mobile Banking

In this section, the preferences and perception of the consumers towards Mobile Banking are analyzed and interpreted.

In the surveyed population, cent percent of the respondents had and use mobile phones; Cent percent of them had accounts in their respective banks; 94.9% were aware of mobile banking

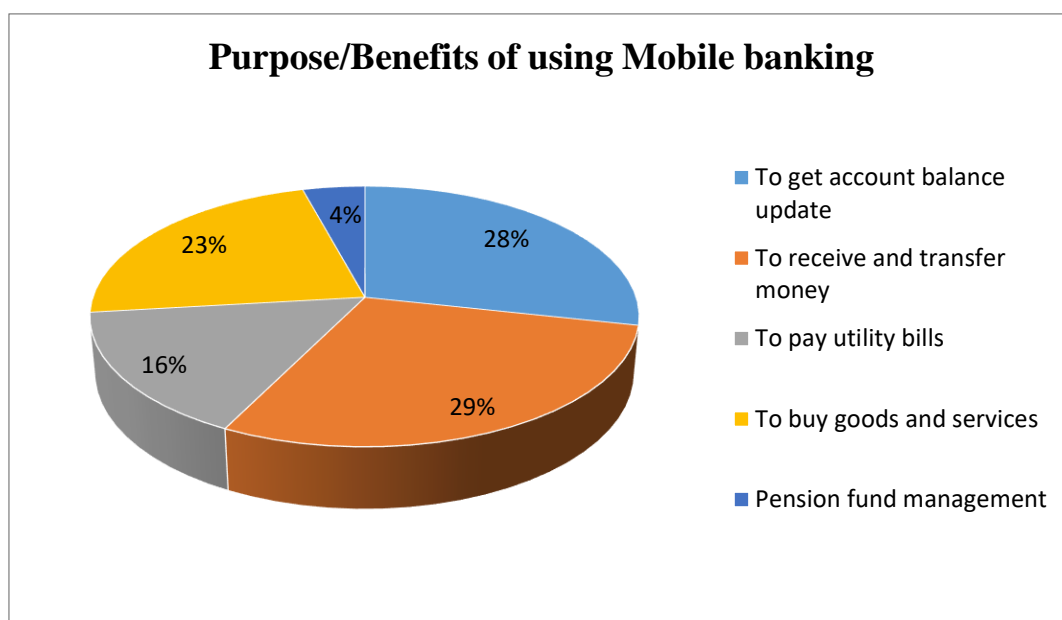
services; 5.1% had no clue of its existence; 72.5% of the total respondents actively make use of mobile banking services while 27.5% of them were either not interested or not comfortable using it. The survey also found that apart from banks, internet and social media platforms, friends and family, mobile service providers, newspapers, television, magazines and others also played a massive role in creating awareness regarding the availability of mobile banking services thereby influencing them to actively engage in it as well. Of the total positive respondents, 83.9% of them also made recommendations in favour of mobile banking usage to others.

Factors like age and educational qualification were found to have a higher impact on the use of mobile banking among the surveyed population

while the impact of employment status and monthly household income were found to be neutral. For instance, respondents in the age group (21-40) years were more prone to using mobile banking in comparison to the respondents who were below 20 and above 50 years. While those under (41-50) years were found to be neutral. Also, individuals who had higher educational qualifications were found to embrace the use of mobile banking more compared to those having relatively lower educational qualification.

The followings charts and table will give a further understanding of the findings of the survey based on individual responses of the sample population be it in favour or disfavor of the mobile banking system.

FIGURE 1: *Percentage of benefits of using mobile banking services*



Source: Primary data

Of the total of 200 respondents, 145 individuals were in favour of using mobile banking services and were also actively engaged in utilizing its benefits. Figure 1 thus, shows the percentage of mobile banking services commonly used among the surveyed population based on 145 positive responses. 29% of them used mobile banking services for payment and receipt of money to and from others respectively; 28% used it for checking their balance update; 23% used it for making purchase of goods and services; 16% used it for the payment of varied utility bills like electricity, piped gas, etc.); and only 4% used it for savings and pension fund management.

Table 6: *Factors influencing use of Mobile banking of the Respondents*

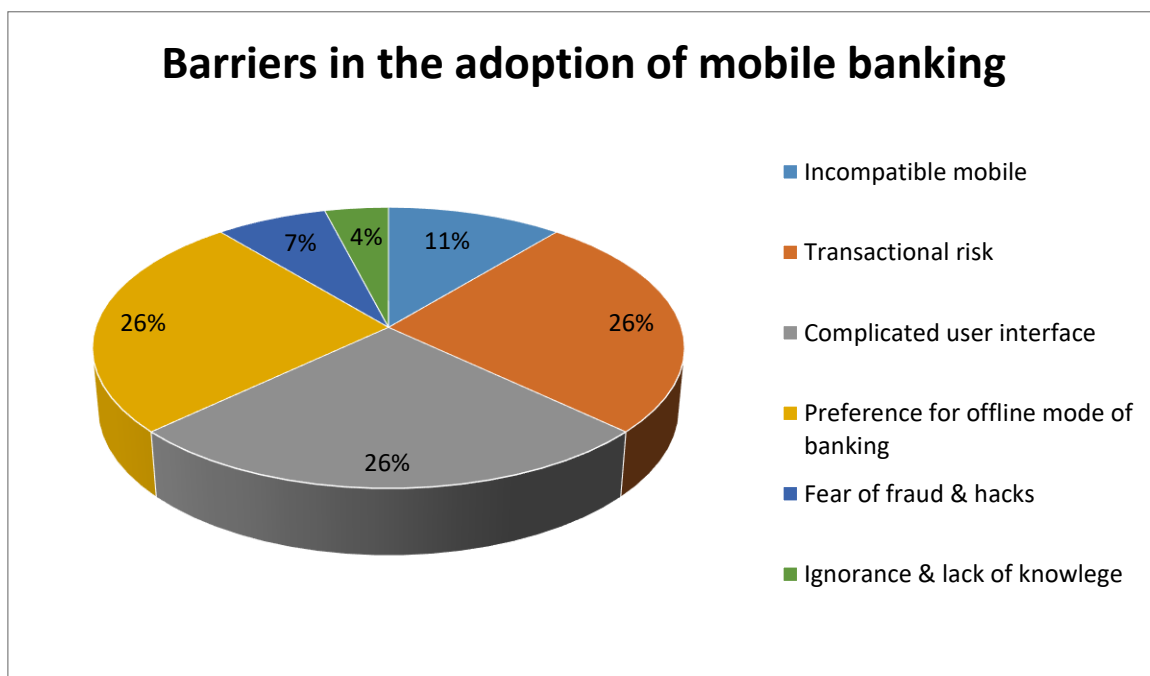
Factors	Responses						Total
	R1	R2	R3	R4	R5	R6	
Time Saving	40	50	36	30	27	17	200
Cost Effective	35	45	50	35	20	15	200

Convenience & Comfort	60	45	35	25	20	15	200
User friendly Interface	35	25	20	45	50	25	200
24*7 availability & accessibility	45	30	40	50	20	15	200
Satisfactory level of data & information	25	20	25	35	45	50	200

Note: R1, R2, R3, R4, R5 & R6 are rank 1, rank 2, ..., rank 6 respectively.

In the above table 6, 6 probable factors that influence mobile banking were taken into

Figure 2: Consumer's perception analysis of barriers for adopting mobile banking among non-users



Source: Primary data

Out of the total respondents, 27.5% of them were non-users of mobile banking services as in they were either not interested or not

comfortable using it. Of this percentage, 26% of each accounts for transactional risks, complicated user interface and preference for

account such as, time saving, cost effective, convenience & comfort, User friendly Interface, 24*7 availability & accessibility, and satisfactory level of data and information. The respondents were asked to give ranks to these 6 factors that influence their use of Mobile banking.

In the table, it has been found that the highest number of respondents have given rank 1 for convenience and comfort (60 respondents), for time saving (50 respondents) have given rank 2, for cost effectiveness (50 respondents) have given rank 3, for 24*7 availability and accessibility the highest number of respondents (50) have given rank 4, for User friendly Interface the highest number of respondents (50) have given rank 5, and for satisfactory level of data and interpretation rank 6 is given by a maximum of 50 respondents. Thus, from the analysis it can be interpreted that the factors influencing consumers towards mobile banking are rank 1 for convenience, rank 2 for time saving, rank 3 for cost effectiveness, rank 4 for 24*7 availability and accessibility, rank 5 for user friendly interface and rank 6 for satisfactory level of data and interpretation.

offline mode of transaction respectively. Besides, 11% of them had an issue of incompatible mobile phones as in their mobiles do not support the mobile banking applications. Moreover, fear from online frauds and hacks (7%), ignorance and lack of knowledge (4%),

poor network connectivity, fear of losing phone data etc. also caused hindrances in its acceptance and usage. However, given all the barriers, some respondent also does showed up interest towards learning the technologies involved and being aware of mobile banking services and its uses.

Table 7: Overall consumer's preference for Mobile banking

Responses	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	Total
Weight (W _i)	5	4	3	2	1	
No. of Respondents (R _i)	30	70	45	30	25	200
Weighted Scores ($\Sigma R_i W_i$)	150	280	135	60	25	650

Source: Author's own computation based on primary data

$$\begin{aligned} \text{Maximum Weight (Mi)} &= \text{Maximum Score} \times \text{Total Number of Respondents} \\ &= 5 \times 200 \\ &= 1000 \end{aligned}$$

$$\begin{aligned} \text{Impact Index} &= \Sigma R_i W_i / M_i \times 100 \\ &= 650 / 1000 \times 100 \\ &= 65\% \end{aligned}$$

As the impact index calculated is found to be 65%, it belongs to the fourth category, i.e. 60% to 80%. Hence, the overall consumer preference towards mobile banking can be said to be high.

IX. Findings and suggestions

1. Non-user respondents were interested in being aware of its benefits and usage. Thus, the Banks should take up initiatives for creating awareness about the mobile banking services through advertisements, pamphlets, demo fares, etc. so as to make the customers feel well informed thereby encouraging them to utilize its benefits.
2. Trust, as well, acts as a crucial factor in influencing people's acceptance of anything new. Here, trust should be built by the service providers with their customers through facilitating provisions for high tech security system.
3. Perceived ease of use and perceived usefulness are found to be important factors in influencing consumer's intention to adopt mobile banking. Thus, the focus should be given on the development of

usefulness of the system, improved user friendly interface, trust building, reduce risks involved and lower cost.

4. Perceived cost is also equally important as that of perceived usefulness; and hence, the study suggests creation and implementation of promotional pricing policies so as to attract more price-conscious customers.

X. Conclusion

From the above analysis it can be concluded that Mobile banking have an immense potential for smoothly conducting financial transactions and other banking operations thereby leading to massive financial growth at a much reduced cost. It is rapidly changing the way people do transactions throughout the globe. Time is an important factor and people tend to find it convenient to carry their transactions from their comfort space using phones or tablets instead of queuing in the banks. It is time saving, cost effective and also convenient for the people to opt for mobile banking platforms compared to the traditional/offline mode of banking. Overtime, the preferences of the consumers are changing. Thus, to reap the benefits of mobile banking and for achieving inclusive growth, it should reach to the common masses at the far and distant places of the nation. For fulfilling this, all stakeholders like the Government, Regulators, Telecom service providers as well as mobile phone manufactures combined with the banks need to make rigorous efforts so that penetration of mobile banking reaches from high-end to low-end users and from metros and cities to towns and rural areas as well. There is also need to generate awareness about the mobile banking services so that more and more people can avail the benefits from it. Thus, Mobile technology can be seen drastically transforming the global banking and payment industry by providing added advantage and convenience to existing bank customers, as well as by offering new services to the unbanked customers in emerging markets.

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