MOBILE BANKING: SUSTAINABLE STRATEGY:
PROBLEM AND CHALLENGES IN VILLAGE AREAS OF UTTARAKHAND

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ABSTRACT

The impact of technology is widespread in our lives, and it is impossible to visualize a life devoid of it. Innovations happening across the globe in different fields have made our life very relaxed and effortless. Users are now more inclined to buy goods and services online via mobile devices as a result of the move in digitalization from desktops to handheld devices. The contentment of current clients results in more services being provided at lower operational costs, which more directly leads to a rise in a bank's earnings. As a result, maintaining customers' business depends on their happiness. Consumer perception of the banking services received at the bank influences whether a customer is satisfied. The distinction is that it makes use of wireless technology-Commerce has investigated and demonstrated potential issues with mobile commerce. The use of mobile devices, such as Smartphones, tablets, and mobile phones, to access banking networks for financial services is known as mobile banking, or M-Banking. The main objective behind this research paper is to find out the problems and challenges related to Mobile Banking adoption in hilly areas as well as to find out the various suggestions and solutions to improve the situation of Mobile Banking adoption.

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***Keywords:** Digitalization, Mobile Banking, Customers, Wireless Technology, Innovations.*

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Introduction

The impact of technology is widespread in our lives, and it is impossible to visualize a life devoid of it. Innovations happening across the globe in different fields have made our life very relaxed and effortless (**Kumar & Dhingra, 2023**). Users are now more inclined to buy goods and services online via mobile devices as a result of the move in digitalization from desktops to handheld devices (**Kumar & Das, 2023).** Using our phones, we spend more than half of our time online. Our portable gadgets' addition of wireless connectivity has influenced modern software and hardware environments and aided in the digitalization of developing economies. The contentment of current clients results in more services being provided at lower operational costs, which more directly leads to a rise in a bank's earnings. As a result, maintaining customers' business depends on their happiness. Consumer perception of the banking services received at the bank influences whether a customer is satisfied. Research has been approved to examine the factors affecting how customers perceive banking services (**Kaur & Arora, 2019).** Commercial banks, both private and nationalized banks, have been offering a range of services to draw clients for business expansion on the one hand and to broaden clientele networks on the other (**Oluwaseyitan et al., 2018)**. Our portable gadgets' addition of wireless connectivity has influenced modern software and hardware environments and aided in the digitalization of developing economies. The 1980s saw the advent of personal computers (PCs), the 1990s marked the development of the Internet and e-commerce, and the introduction of mobile computing and mobile commerce marked the start of the 21st century **(Qingfei, 2008).**

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Mobile commerce, also known as M-Commerce, is a subset of e-commerce (**Sharma, 2009**) and a development of e-commerce (**Wakefield & Whitten, 2006**) that is conducted in a wireless setting, especially via the Internet (**Turban & King, 2003**). Electronic commerce is logically followed by mobile commerce **(Jahansahi et al., 2011).** M-Commerce has grown in importance as a research area for online retailers. The term "Mobile Commerce," or M-Commerce for short, was first used in 1997 by Kevin Duffey to refer to "the delivery of electronic commerce/transaction capabilities directly into the customer's hand, anytime & anywhere, via wireless network technology" during the opening of the Global Mobile Commerce Forum.

According to **Chaffey (2007**), M-Commerce is the online purchasing and selling of goods and services using wireless technologies, such as Personal Digital Assistants (PDAs) and mobile phones. The use of mobile devices, such as PDAs, cell phones, smart phones, and tablet Personal Computers (PCs), to access banking networks via the wireless application protocol (WAP) for financial services is known as mobile banking (m-banking), also known as cell phone banking (**Shaikh & Karjaluoto, 2015).**

According to **Sujata and Deshmukh (2008),** M-Commerce refers to the branch of E-commerce technology where transactions are conducted through mobile handheld devices. **K.S. Sanjay (2007)** claims that mobile hand technology, a subset of e-commerce, is more affordable and offers customers greater flexibility and effectiveness. The distinction is that it makes use of wireless technology-Commerce has investigated and demonstrated potential issues with mobile commerce. They made an effort to highlight the advantages and drawbacks of wireless technology. More interconnected circumstances that allow mobile device carriers to stay connected everywhere and at all times are ideal for M-Commerce**. Additionally, according to some academics **Ozok and Wei (2010),** M-Commerce is defined as a financial transaction carried out via a mobile device in order to exchange products and services.

Smart Phones

Smartphones have become an indispensable part of our daily lives. Smartphone is a mobile device running an operating system (such as Apple iOS, Android, Windows Mobile, Palm, or Blackberry) that provides internet access and permits the installation of apps, or tiny programs. The smart phones are swiftly overtaking other forms of communication in society as the most often used and favored option. **Aubrey and Judge (2012)** attribute the growth of 'Omni-channel' to 'Smartphone-enabled, connected consumers,' who "do not care whether they buy in-store, via mobile, or online as long as they get the product they want, when they want it, at the right price" (**Burke, 2002).**The use of mobile devices has increased remarkably quickly over the last ten years, according to the International Telecommunications Union (ITU), a United Nations organization that collects statistical data on Information Communications Technology (ICT).

The use of Smartphones to access the internet has increased dramatically as a result of this. It is now obvious that mobile smart phones cannot be disregarded in marketing research projects going forward due to current advancements in mobile technology.

Le-Marie Thompson examined this precise topic back in 2003 in a journal article titled "Death of Landline." Thompson notes that the one "group that is fostering this shift towards mobile phones is young adults," in addition to the fact that nearly all people in the developing world own a cell phone (**Burke, 2002).** Smartphones use is becoming more and more common among the general public as their main method of accessing the internet, checking email, and responding to surveys. A Smartphone is a portable gadget that combines a cell phone and a PDAs, or Personal Digital Assistant. Compared to cell phones, these gadgets are more capable and allow you to do more than just send and receive texts **(Alexander, 2021).** Retail e-commerce sales of Smartphones are predicted to surpass 432 billion dollars in 2023, having reached321 billion dollars in 2018.

Meanwhile, retailers, carriers, and other service providers are increasingly using cellular technology to enhance their customer experience, while cash flow from POS terminals no longer precludes service approval **(The Mobile Economy, 2015).**

Mobile Banking

The use of mobile devices, such as Smartphones, tablets, and mobile phones, to access banking networks for financial services is known as mobile banking, or M-Banking **(Shaikh 2017)**. Mobile banking is defined as "a channel whereby the customer interacts with a bank via a mobile device, such as a mobile phone or personal digital assistant." As stated by **Jaywant and Nayan, 2023).** According to **Barnes and Corbitt (2023),** the service facilitates low-cost remote transactions in subscribers' accounts and enables them access account-related information. However, widespread coverage and large mobile

phone use in Delhi did not result in mobile banking adoption (**Singh, 2014**). **Annesha (2014)** observed a consistent increase of wireless subscribers from 2012 to 2014. Banking sector used technology in 1960. Researches related technology to economic development. Banking industry experienced technological changes in information management and money transfer. **Unnithan and Swatman (2001**) studied technology-mediated banking service. Daily transactions limit was raised to INR 50,000**. The remittance market in RBI aimed IT and banking services to 600 million new customers (**Ketkar et al., 2012**). Mobile banking guidelines emphasized safety, efficiency, and accessibility (**Singh and Sinha, 2016**).

Table 1: Top 10 Mobile Banking Applications

S. No	Banks	Apps
1	Kotak Mahindra Bank	Kotak-811
2	HDFC	Payz App
3	SBI	Yono
4	Axis Bank	Open Paying App
5	IDBI	Go Mobile +
6	Bank of Baroda	Baroda M-Connect Plus
7	ICICI	I Mobile Pay
8	Canara Bank	Candi App
9	Bank of India	BOI MOBILE
10	Punjab National Bank	PNB ONE

Source: https://moneyview.in/

Retail Banking

Retail banking, sometimes referred to as consumer banking or personal banking, is the branch of banking that offers financial services to private individuals as opposed to companies (**Vinsen &Alfred, 2023**). Financial services offered by banks to individual consumers or small enterprises are collectively referred to as retail banking. Furthermore, technology adoption is also related to customers' need for human interaction. The forced digital transformation has severely reduced human interactions among retail banks and their customers. Even before the pandemic, the loss of human contact was considered one of the main issues related to the diffusion of SSTs (**Collier and Kimes, 2013; Demoulin and Djelassi, 2016),** and, in the post-pandemic scenario, service retailers will plausibly keep offering a mix of interpersonal and technological-based services, more unbalanced towards the latter (**Meuter, 2022).** Nevertheless, this deprivation of social contact may increase the isolation and loneliness that already characterize the elder cohort (**Patel and Clark-Ginsberg, 2020**). As retail encounters between senior customers and SSTs are increasing, exploring to what extent the absence of human Elderly customers in the bank retail sector 573 interaction has detrimental effects on customers' co-creation via SSTs is fundamental, especially in the current scenario **(Shiwen et al., 2022; Tussyadiah, 2020).**Retail banks will need to prioritize resilience and innovation in order to adjust to the severe macroeconomic problems that the global banking sector is likely to encounter in 2024.According to **Veloutsou et al. (2004),** customer loyalty and trust are positively associated with customer satisfaction in the banking industry. Satisfied customers tend to stay loyal and recommend the bank to others. Additionally, loyal customers are more likely to trust the bank and engage in positive word-of-mouth communication. Similarly, **Lewis and Soureli (2006**) found that customer trust and loyalty were crucial determinants of bank performance. The study showed loyal customers were more profitable and less likely to switch to competitors.

Statement of the Problem

Consumer buying behavior is a major factor in addressing the challenges and problems while using digital services in the mobile banking applications. If the behavior of consumers is positive towards online purchasing and information gathering for final decisions, it is a pleasing condition for the banking industry and economy. It has been observed that buying behavior of consumers is not so agreeable in the banking industry; this is true for the banking sector in the state of Uttarakhand where not too much attention is paid to buying behavior which is a pivotal factor for the growth and expansion of mobile banking applications. This is due to the low level of digital marketing practices that are applied by organizations. There are only a few websites, apps, or any other online platforms used by banks to make them aware of mobile banking applications in Uttarakhand **(Singh, 2018).**

It is a rational understanding that banks must recognize the importance of consumers' intention to use online services and understand their online buying behavior and drivers affecting it to provide them platforms according to their expectations. Otherwise, there will be a nosedive in customers' online

queries and experiences related to banking activities, and as a consequence, mobile banking applications will decline. Over a period of time as a consumer's online experiences increase, so does its former knowledge which defines future behavior **(Rose et al., 2011).** The original cause of all these issues lies in not providing the platform as expected to change consumers' buying behavior positively towards online purchases and transactions online in the banking industry. This is a major challenge for researchers and managers to find out the root cause and drivers affecting consumers' attitudes, intentions, and buying behavior while using digital platforms in a satisfying manner.

Review of Literature

The search terms employed in this analysis were "m-commerce drivers," "buying behavior," "perceived trust," "ease of use," and "attitude toward use." Both combined and individual construct searches were conducted.

The main points and conclusions of every study paper were taken from the publication year and arranged on yearly basis from current to previous year.

Jacob and Guilherma (2024) sought to investigate the framework for enhancing retail baking's churn prediction performance. According to the study's conclusions, feature engineering, imbalanced dataset treatment, and customer churn prediction were the main causes of the same.

Saikh and Geo (2023) sought to assess how clients used mobile banking apps in comparison to more conventional methods. The study employed the SOR (Stimulus Organism Response) model, and the results showed that perceived ease, quality, and attitude were the variables that emerged as the transformational instrument.

Castillo et al., (2023) sought to assess the different factors that have influenced this business's use of mobile banking applications. The UTAUT-2 model was used to compare developed and developing nations, and the results showed that behavioral impact and socio-demographic factors were the main differentiators for the adoption of mobile banking applications.

Mayayise (2023) intended to assess the different factors that have influenced mobile banking applications for M-Commerce. The PRISMA tool was used in the study, and the results showed that the mobile banking applications have been impacted by the absence of C2C, the context of trust, seller reputation, product evaluations, pricing, and the presence of a profile

Hasan and Godhuli (2023) Technology Adoption Model (TAM) and Partial Least Square Structural Equation Modeling (PLS-SEM) were utilized in this study in an effort to assess the different aspects that contributed to the adoption of mobile banking applications for M-Commerce. The results showed a favorable correlation between the user's intentions, perceived ease of use, perceived enjoyment, and perceived trust.

Shaikh et al., (2023) the purpose of this study was to identify the primary motivator behind the use of mobile banking apps. The model employed was the Stimulus Organism Response, or SOR. The results showed that the main factors influencing the uptake of mobile banking applications were customer empowerment, service quality, and mobile agent credibility.

Castillo (2023) sought to assess how different factors affected the use of mobile banking apps. The same was done with the UTAUT-2 model. The study's conclusions were that behavioral variables, influence, and intention all had a positive relationship with the uptake of mobile banking among demographic variables.

Fancello et al., (2023) sought to assess how different factors affected the uptake of mobile banking. The principle of Ecological Momentary Assessment (EMA) was applied. Parking and recreation were found to have a beneficial impact on customers' adoption of mobile banking.

Purnomo and Susanto (2023) to assess the contribution of different factors to the uptake of mobile banking apps. Partial Least Square Structural Equation Modeling, or PLS-SEM, Conclusion was applied with the Technology Adoption Model (TAM). As per the study's findings, there exists a favorable indirect relationship between the use of mobile banking services and consumer satisfaction.

Alsyouf and Lutfi (2023) to determine how different factors affected the uptake of mobile banking apps. PLS-SEM and the Technology Adoption Model were employed for the same. According to the study's findings, perceptions of ease of use and intention to use were the main factors influencing the uptake of mobile banking.

Vincent and Gracious (2023) to find out the various factors affecting the growth of retail banking sector. The finding of the study was Participation, Incentive Methods, Invention, Awareness were responsible for the increasing growth of retail banking.

Purnomo et al., (2023) aimed to find out the influence of service quality on customer satisfaction and its impact on re-use intention of mobile banking payment in e-commerce transactions by using Serqual Gap Model and PLS-SEM. The finding of the research was that mobile banking services positive indirectly moderated by customers' satisfaction with e-commerce services provided by mobile banking.

Mo'men et al., (2023) to identify the factors influencing Millennial' use and adoption of mobile banking applications. For this investigation, partial least square structural equation modeling was employed. The research revealed that there is still more to learn about the following areas: price value, hedonic motivation, social influence, facilitating conditions, and interface design quality.

Juan and Tavera (2023) sought to understand why users appreciate mobile banking applications. For this investigation, the Stimulus Organism Response was employed. According to the study's findings, the main factors influencing the adoption of mobile banking applications were perceived value, stimuli, and intention to use. There was no study done on other factors like social motivation, hedonic, customers' perception, or ubiquity.

Marc and Saranda (2023) want to investigate how banks assist retailers in obtaining green financing. A Structure Questionnaire was used to collect data from German Retail Customers for the study. The researcher's conclusions were that the main causes of the same were high transaction costs, missing information, and missing discoveries.

Aitor and Leire (2023) reviewed the application of artificial intelligence in business-to-customer retail fashion. The study's conclusions indicated that there is still room for improvement in the near future.

Research Gaps

Limited studies have explored the nested relationship between "Perceived Trust, Quality, Customer Satisfaction, Perceived Value, Sustainability, Social Motivation" of mobile banking applications amongst retail banking customers.

Limited studies have explored the relationship between "Attitude towards Use and Intention to Use" of mobile banking applications practices which leads to Buying Behavior in the hilly areas of Uttarakhand**.**

After a detailed literature review, it was found that studies based on mobile banking applications practices were focused more on Western and Developed countries and there was a lack of systematic and rigorous academic research on Mobile Banking Applications amongst retail banking customers in the Indian context especially in Uttarakhand.

Limited studies about mobile banking applications adoption behavior in India, but there is less study in which retail banking customers were studied, especially in Uttarakhand.

Lack of research with reference to Mobile Banking Applications and buying behavior of retail banking customer in Uttarakhand state.

Research Objective

- To find out the challenges and problems related to Mobile Banking adoption in hilly areas of Uttarakhand.
- To find out the solutions for the adoption of Mobile Banking adoption.
- To overcome the situations of Mobile Banking adoption amongst retail banking customers in Uttarakhand.

Challenges and Problems in Hilly areas regarding Mobile Banking

- **Lack of Awareness**: Biggest problem in hilly area is that most of the people are not aware about the usage of Mobile Banking Application and its working.
- **Fear of Security**: Security is the major concern for most of the people as they are afraid of the usage and privacy of their account and money transactions
- **Trust Issues**: Hilly areas people don't trust in any of the applications of Mobile Banking as they don't have confidence while using it.
- **Lack of Support**: Hilly areas people didn't get proper support for the adoption of Mobile Banking irrespective the facts that most of the people have their own mobile phone and account in their bank

- **Network Issues**: Network issues is the biggest challenge for the adoption of Mobile Banking in Hilly areas as, in most of the places there is connectivity problem due to which people are not adopting it.
- **Lack of Education**: Education plays a major role in the survival or growth of any nations. But due to having low education in hilly areas it's a major concern that people hesitate in using Mobile Banking Application.

Solution and Suggestions to solve problem of adoption in Mobile Banking

- **Awareness Amongst the People**: People can be made aware regarding the usage and importance of mobile applications for their ease and convenience in day to day life.
- **Privacy**: Privacy is the major concern for mobile banking applications nowadays as everyone wants that their mobile can be prevented from any type of fraudulent.
- **Trust:** Trust amongst hilly areas people can only be developed through quality service, efficient transaction and time saving facility.
- **Sharing of Information:** The local banks and people must share information regarding Mobile Banking applications and its usage and how they can be benefitted to hilly areas people.
- **Social Motivation**: Social Motivation can also play a major role in the adoption of Mobile Banking Applications as society plays a major role in the survival, adoption and up gradation of anything.
- **Innovation and Up Gradation:** Innovation and Up-gradation are the key pillars for the survival of any business. If the hilly areas people are provided with the services of innovation they will feel motivated and can easily approach towards the adoption of Mobile Banking Application.
- **Provide Education for Mobile Banking Application Adoption:** Local People and banks must educate people regarding the usage and adoption of Mobile Banking in their daily basis life.
- **Self Reliance:** The best way for the adoption of Mobile Banking adoption is that people must be self –Reliant for the adoption of such service as no one can force anyone for flexibility and adoption, it must be self driven.

Conclusion

Future of M-commerce is very bright. The industry is impacting micro, small and medium enterprise (MSME) in India by providing means of technology and financing. The Indian M-Banking industry is growing rapidly and it is expected to surpass USA by 2034. The growth in m-commerce provides employment and increase revenue for export. The government is also launching new schemes and policies for strengthening the e-commerce/m-commerce in India. The various schemes like 5G launching, digital India, PMSY and many more if such schemes are known than the growth, and profitability can be seen more in this sector. It can be said due to the emergence of M-Commerce the usage and adoption of Mobile Banking is gradually increasing specially in the developing nations like India.

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