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**IMPACT OF DIGITAL PAYMENTS ON FINANCIAL INCLUSION**

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**Abstract**

*A considerable influence on financial inclusion has been brought about by the widespread use of digital payment methods, which have helped to close the gap between the unbanked population and formal financial institutions. The purpose of this study is to investigate the ways in which digital payment technologies, such as mobile wallets, UPI, and online banking, have helped to the expansion of financial access, particularly for members of underserved populations and those living in rural areas. The use of digital payments helps to lessen reliance on cash, reduces the costs of transactions, and offers a simple and safe means of conducting financial transactions, all of which are essential for increasing economic participation. Within the context of expanding the use of digital payment methods, the paper shows the impact that government initiatives, fintech businesses, and legislative frameworks play. Nevertheless, obstacles such as digital literacy, cyber security, and restrictions in infrastructure continue to exist, which calls for the implementation of strategic measures in order to guarantee that the advantages of digital payments are accessible to all different segments of society. The purpose of this paper is to give a complete knowledge of the revolutionary role that digital payments play in improving financial inclusion and to recommend solutions to overcome hurdles that are currently in place.*

**Keywords:** *Digital Payments, Financial, Inclusion***Introduction**

In particular with regard to the concept of financial inclusion, digital payments have emerged as a significant driving factor in the process of transforming the landscape of the financial sector. The capacity to digitally transfer money, make payments, and gain access to financial services has the potential to involve millions of people who were previously not a part of the official banking system. Financial inclusion, which may be described as the process of ensuring that individuals and companies have access to financial goods and services that are both helpful and accessible, is an essential component for the development of the economy and the eradication of poverty. There has been a tremendous increase in the use of digital payment platforms all over the world. These platforms include mobile wallets, the Unified Payments Interface (UPI), online banking, and contactless cards. This growth has been driven by technology developments, the proliferation of smartphones, and governmental frameworks that are supportive of the move. In developing nations, digital payments have become an important means of

reaching out to underserved and isolated groups. This has made it possible for individuals to take part in the economy in a manner that is both more convenient and more safe. One of the most important factors in the development of digital payment ecosystems is the role that government efforts and regulatory laws play. Programs that encourage cashless transactions, the incorporation of financial technology (fintech) services, and collaborations between the public and commercial sectors have all contributed to the acceleration of the use of digital payment methods. This advancement not only helps with day-to-day transactions, but it also gives small firms more leverage, improves access to financing, and makes it easier to distribute social welfare benefits. Despite these developments, there are still a number of obstacles to overcome. There are a number of factors that can impede the broad adoption of digital payments, including cultural aversion to change, concerns around cybersecurity, a lack of internet infrastructure, and digital literacy. Furthermore, the advantages of digital financial services are not dispersed in a uniform manner, with marginalized groups, such as the elderly, those with low incomes, and rural populations, frequently encountering larger hurdles. Through an examination of the ways in which digital payment systems assist in bringing unbanked and underbanked populations into the formal economy, this article investigates the influence that digital payments have on the inclusion of financial services. It evaluates the obstacles that need to be overcome in order to achieve inclusive growth and addresses the role that stakeholders, such as governments, fintech businesses, and financial institutions, play in this revolutionary process.

There is more to the transition toward digital payments than just a change in technology; it also symbolizes a substantial change in the socio-economic landscape. In light of the fact that traditional banking techniques are frequently unavailable to a large number of low-income and rural communities owing to geographical constraints and onerous verification requirements, digital payments offer an alternative channel through which individuals can have access to financial resources. Digital payments lessen the reliance on cash, which may be expensive and unsafe to handle, particularly in regions with poor banking infrastructure. This is accomplished by enabling transactions to take place through mobile phones and internet platforms. When it comes to emerging countries, where a significant portion of the population does not have access to conventional financial services, the arrival of digital payment methods has proven to be a game-changer. The use of mobile money services, for instance, has made it possible for individuals who do not have bank accounts to electronically save, transmit, and receive deposits. These individuals, who sometimes experience financial exclusion as a result of societal or economic hurdles, have benefited tremendously from this, particularly women, owners of small businesses, and migrant workers. In addition, the capacity to pay bills, make purchases, and gain access to government services through digital means contributes to a greater degree of financial integration and fosters economic growth. In addition, one of the most important aspects of financial inclusion is the role that digital payment systems play in expanding access to credit and savings choices. For the purpose of determining a person's creditworthiness, a digital payment history may be utilized. This makes it possible for people and small enterprises to get loans that were previously unavailable to them. In a similar vein, digital payment ecosystems make it possible to design unique financial products that are tailored to meet the specific requirements of the underserved population.

These products include microloans, pay-as-you-go services, and insurance. The adoption of digital payments has also been pushed by initiatives sponsored by the government and policymakers. These initiatives include the establishment of digital identity systems, cash transfer programs, and subsidies for digital financial services. For example, in India, the Pradhan Mantri Jan Dhan Yojana (PMJDY) plan, in conjunction with the development of the Unified Payments Interface (UPI), has been instrumental in facilitating the expansion of financial access to millions of individuals. Similar programs in other

countries, such as Kenya's M-Pesa and Brazil's digital payment efforts, have established precedents of how governments might harness digital payments to foster financial inclusion. These programs have been implemented in similar ways. Nevertheless, despite the fact that the expansion of digital payment methods gives a substantial number of benefits, it is not without difficulties. In spite of the fact that many people still lack the skills essential to make good use of digital payment systems, digital literacy continues to be a significant barrier because of this. Concerns have also been raised over the privacy of users' data and the security of their information, as there is a possibility that users might be victims of fraud or identity theft. In addition, the accessibility of digital financial services may be restricted due to infrastructural constraints, such as limited smartphone adoption and inadequate internet connectivity, particularly in regional areas that are geographically isolated.

A multi-pronged strategy is required in order to effectively address these difficulties. This strategy should include investments in digital infrastructure, educational programs aimed at improving digital literacy, and legislation that aim to increase cybersecurity. Furthermore, a focus on user-centered design and financial products that are tailored to the requirements of the underprivileged can assist in overcoming cultural barriers and ensuring that digital payments are accessible and inclusive to all individuals. The present state of digital payments and the influence they have on financial inclusion will be investigated in depth throughout this paper, which will also analyze a variety of case studies and trends. In addition to this, it will offer policy suggestions to various stakeholders in order to guarantee that the expansion of digital payment methods will contribute to a financial system that is more egalitarian and inclusive, consequently promoting the emergence of sustainable economic growth.

### **Benefits of Digital Financial Inclusion:**

"digital access to, and the use of, formal financial services by the excluded and underserved population," is how the Commonwealth Government Accountability Program (CGAP) defines "digital financial inclusion." Innovative digital financial services that are accessible through mobile phones and other similar devices have been introduced in at least eighty countries at the present time. The purpose of these services is to persuade millions of consumers who are economically disadvantaged to solely utilize digital financial services rather than cash-based transactions. To begin, the process of digital financial inclusion is predicated on the notion that the population that is excluded and/or underserved have some kind of formal bank account and requires digital access in order to be able to carry out fundamental financial activities remotely. An effective digital financial inclusion program should be tailored to meet the needs of the excluded and underserved population, and it should be delivered in a responsible manner at a cost that is both affordable to customers and sustainable for providers. If the excluded and underserved population understands the intended benefits of digital financial inclusion and can be convinced of them, then the program will be considered successful.

The incorporation of digital financial services offers a few advantages. Through the elimination of waiting lines in banking halls, the reduction of manual paperwork and documentation, and the maintenance of fewer bank branches, digital financial inclusion has the potential to assist financial institutions in lowering their costs. The advent of digital financial inclusion has made it possible for a significant number of depositors to transfer banks in a matter of minutes. This has compelled banks to deliver high-quality services or run the risk of losing depositors to competing banks. When it comes to the regulators of the financial and monetary systems, digital financial inclusion not only helps to minimize the quantity of physical currency that is in circulation, but it also plays a significant role in lowering the high levels of inflation that are prevalent in emerging and impoverished nations. Individuals

and organizations that have access to a trustworthy digital platform that allows them to access funds in their bank accounts in order to carry out financial transactions can benefit from digital financial inclusion, which can significantly increase their well-being. If the cost of getting a digital transactional platform by low-income persons is insignificant or cheap, then the anticipated benefits of digital financial inclusion may be fully realized. A digital transactional platform includes mobile phones, personal computers, and other devices that are connected to the digital realm.

### **Banking Cards (Debit/Credit/Cash/Travel/Others):**

Any other means of payment does not compare to the level of security, convenience, and control that banking cards provide to customers. The huge flexibility that is offered by the large range of cards that are available, which include credit, debit, and prepaid cards, is another advantage. These cards include two-factor authentication for safe payments, such as a secure personal identification number (PIN) and a one-time password (OTP). Among the many examples of card payment systems, some examples are Visa, MasterCard, and RuPay. People now have the ability to make purchases in stores, on the internet, through mail-order catalogs, and over the phone thanks to the availability of payment cards. Due to the fact that they save both customers and merchants time and money, they make it possible for transactions to be completed more easily.

### **Unstructured Supplementary Service Data(USSD):**

Using the Unstructured Supplementary Service Data (USSD) channel, the cutting-edge payment service \*99# is able to process transactions. It is not necessary to have a mobile internet data capacity in order to use USSD-based mobile banking because this service enables mobile banking transactions to be performed using a mobile phone with an elementary feature set. Through the provision of financial deepening and the incorporation of underbanked society into mainstream banking services, it is envisioned what would be accomplished. The financial services have been made available to every ordinary man across the country with the introduction of the \*99# service. Customers of financial institutions can take use of this service by dialing \*99#, which is a "Common number across all Telecom Service Providers (TSPs)" on their mobile phone. They can then conduct transactions using an interactive menu that is presented on the screen of their mobile device. Among the many services that are provided by the \*99# service, the most important ones are the transfer of funds from one bank account to another, the inquiring of balances, and the provision of mini statements. (Source: NPCI) As of the 30th of November in 2016, the \*99# service is now being provided by 51 of the most prominent banks and all GSM service providers. It is also available in a total of twelve distinct languages, including Hindi and English. The \*99# service is a one-of-a-kind direct-to-consumer service that is interoperable and brings together a wide variety of ecosystem partners, including banks and TSPs (telecom service providers).

### **Objectives**

1. The purpose of this article is to examine the role of digital finance in expanding access to formal financial services.
2. To enable clients to transfer money and access their bank accounts using mobile devices.

### **Impact of Digital Finance on Financial Inclusion:**

The primary area of concentration for this study is the influence that digital finance has on the dependability and stability of the financial system. Through the use of digital media, financial institutions, governments, and public authorities are consistently working to expand access to financial services. The

consumer ideology, which is one of the most significant obstacles to the accomplishment of an e-commerce enabled economy or financial inclusion, is the reason why digital financial inclusion is not developing as projected or as it should be. Despite these widespread attempts to promote it, however, it is not progressing as effectively as it should be. The purpose of this article was to evaluate the many programs and efforts that have been implemented and to determine the extent to which they have been effective. Additionally, the study aimed to identify several consumer ideologies that serve as obstacles to the goal of digital financial inclusion. The advent of e-commerce has led to an increase in the number of digital financial services that are offered to all types of customers, including individuals and corporations. This trend, which is also known as E-commerce Enabling Financial Inclusion or Digital Financial Inclusion, is characterized by the fact that non-profit organizations are increasingly providing services such as electronic payments, credit financing, and insurance at the point of sale (POS). Within the framework of its economic plans, the Government of India has always placed a high priority on financial inclusion. The game has been altered by initiatives such as Jan Dhan, Aadhaar-Mobile, and Digital India. These initiatives have ensured that the underbanked population in India has equitable and affordable access to financial services, which has resulted in a reduction in the income gap. The demand for digital financial products and services among microenterprises and individuals at the bottom of the economic pyramid has been successfully created through the use of e-commerce, which has been highly effective in this regard. The expansion of digital financial inclusion in India has been fueled by recent developments in both the public and private sectors.

**Currently Existing Obstacles and Observations** The fact that India has made significant headway in integrating economically disadvantaged portions of the economy into the digital banking system is something that appears to be beyond any reasonable debate. When compared to this, the digital gap is much too large, and there are a number of bottlenecks and hurdles that call for a prompt reaction:

- Because of the legacies of government-owned banks, it is more difficult for new private institutions to build a degree of confidence and loyalty that will improve consumers' inclination to migrate their cash into such a digital account. This is because of the legacy of government-owned banks.
- Companies that provide digital financial services and are expanding their operations to regions with relatively low incomes will face challenges related to low literacy rates and the ability to comprehend the fundamentals and implications of using digital financial products throughout this expansion.
- As a result of the fact that buyers prefer cash and sellers likewise conduct business in cash, it is more rational to continue using a cash economy. A lack of demand is one of the primary factors that contributes to the non-adoption of digital payment methods.
- The shift from a cash-based economy to a digital one, according to the opinions of some shops and merchants, will force small businesses and individuals who are not currently paying taxes to fulfill their financial obligations.
- Many individuals who live in distant and rural locations still do not have access to the network and digital infrastructure that is required to encourage trust in the use of digital services and to encourage their frequent utilization of these services.
- Despite the early and modest growth of digital money in distant and rural regions, cash-based economies continue to be the dominating form of economic activity in rural areas. People with lower incomes are particularly sensitive to any changes in the cost of data. Therefore, the cost of



data is another fundamental obstacle that serves to link individuals living in rural areas to digital financial inclusion.

- The vast majority of digital financial products that are first made accessible in English and, on occasion, in Hindi. However, due to illiteracy and unfamiliarity, the majority of individuals living in rural areas are reluctant to communicate in other languages. As a result, they choose digital financial solutions that are available in their native language.
- One of the most significant obstacles to digital financial inclusion is the absence of sufficient financial products that are suitable to the situation.

## Research Methodology

The gathering of primary data was accomplished through the meticulous preparation of a questionnaire that was well-structured. In order to investigate the influence that digital finance has on financial inclusion, questions with multiple choice answers and Likert scales were thoughtfully constructed. The dependability and validity of the data is demonstrated by the Cronbach's alpha value of 0.976. For the purpose of analysis, the data were input into the version 20.0 of the Statistical Package for the Social Sciences (SPSS). The statistical methods of One-way Analysis of Variance (ANOVA) and Reliability test were utilized in the process of assessing the data. An analysis of variance (ANOVA) with one way is comparable to a test; however, it is utilized in situations when there are two or more groups and the objective is to compare the mean scores on a continuous variable. Due to the fact that you are examining the influence of a single independent variable on your dependent variable, this method is referred to as the one-way method. During the course of the research, a post hoc test was carried out in order to determine whether group is substantially distinct from another group.

## Analysis and Findings

The purpose of this study is to determine the extent to which digital finance, which includes Internet Banking, Mobile Banking, Mobile Wallets (Apps), Credit Cards, and Debit Cards, has an effect on the inclusion of financial services. For the purpose of determining the influence that digital finance has on financial inclusion, one-way analysis is utilized.

**Table 1: Examining the major differences between digital finance and financial inclusion using a one-way analysis of variance**

FinancialInclusion	Digital Finance					F value	P value
	Internet banking	Mobile banking	Mobile wallets (Apps)	Creditcard	Debitcard		
Convenience	3.37a (1.165)	3.24ab(1.091)	4.05b (1.105)	4.00b (.849)	3.94b (1.056)	2.655	.037*
Adaptability	3.37 (1.165)	3.35 (.931)	3.95 (1.050)	4.00 (.843)	4.06 (1.507)	2.348	.060
Affordability	3.47 (1.219)	3.59 (.939)	4.05 (.923)	4.00 (.849)	3.94 (1025)	1.289	.280

Security	3.37a (1.165)	3.47ab(1.007)	4.05ab (1.050)	4.12ab (.766)	3.94b (1.026)	2.384	.057
User friendly	3.42a (1.170)	3.41a (1.121)	4.20ab (.894)	4.00ab (1.104)	3.94b (1.056)	2.418	.054
Low Service charge	3.37a (1.165)	3.29a (1.160)	4.15ab (1.040)	4.00ab (.849)	4.06b (1.046)	2.639	.039*
Accurate timing	3.07a (1.165)	3.35ab (1.169)	4.15ab (1.030)	3.00b (.829)	4.21b (.863)	2.652	.038*
Online Monthly statement	3.58 (1.071)	3.41 (1.121)	4.05 (1.050)	3.96 (.824)	3.94 (1032)	1.408	.237
Quick financial decision making	3.58a (1.219)	3.35ab (1.057)	4.20ab (768)	4.00ab (.849)	3.94b (1.058)	2.407	.055
Easy inter bank account facility	3.47a (1.219)	3.35ab (.931)	4.25b (.786)	4.00b (.856)	3.94b (1056)	2.871	.027*
Internet connectivity	3.47 (1.124)	3.35 (1.007)	4.05 (1.050)	4.00 (.849)	3.94 (1.056)	1.599	1.81
Usability	3.37a (1.165)	3.24a (1.091)	4.05b (1.050)	4.12b (.766)	4.06b (1.056)	3.385	.012**

(Source: Primary data) \*\* Highly Significant \*Significant

## Inference

### \*\*with DMRT (Duncan multiple range Test)

In terms of usability, the null hypothesis is rejected at the 1% level of significance since the p-value is lower than 0.01, according to the statistical analysis. Internet banking and mobile banking are considerably different from one another, according to the Duncan Multiple Range Test (DMRT), with mobile wallets (apps), credit and debit cards accounting for 5% of the difference. Internet banking, mobile banking, mobile wallets (apps), credit cards, and debit cards are all comparable in terms of their use. Therefore, there is no substantial difference between these two types of banking.

### \*with DMRT (Duncan multiple range Test)

For the reason that the p-value is lower than 0.05 According to the criteria of convenience, low service price, precise time, and convenient interbank account facility, the null hypothesis is rejected at a level of 5%. Internet banking, mobile wallets (apps), credit cards, and debit cards are considerably different from one another, according to Duncan multiple range tests, which found a difference of 5%. On the other hand, mobile banking is precisely the same as any other organization in terms of its digital finance. The debit card is 5% of the total amount, which is notably different from the low service charge, internet banking, and mobile banking programs. The mobile wallet and credit card, on the other hand, are not different from any other group in terms of their digital financial. Internet banking has dramatically diverged from credit card and debit card transactions at a level of five percent, according to accurate timing statistics. However, the digital finance of mobile banking and mobile wallets (apps) is not distinct from any other type of digital financial services. There is a considerable difference between Internet banking and mobile wallets, credit cards, and debit cards when it comes to the convenient interbank account facility compared to it. Internet banking and mobile banking, on the other hand, are not distinct from any other category when it comes to digital money. When it comes to adaptability, affordability,

security, user-friendliness, online monthly statement, and the capacity to make rapid financial decisions, there is no substantial difference between digital finance (Internet banking, mobile banking, mobile wallets (APPS), credit card and debit card) and traditional banking. owing to the fact that the p-value is higher than 0.05. As a result, the null hypothesis is accepted at a level of 5% with respect to adaptability, affordability, security, user-friendliness, online monthly statement, and the capacity to make rapid financial decisions.

## **Conclusion**

Individuals and enterprises who have historically been excluded from the official financial system now have access to financial inclusion possibilities that have never been available before thanks to the advent of digital payments, which have become a significant instrument for increasing financial inclusion. The financial divide is being bridged by digital payment platforms, particularly in emerging economies, since these platforms make it possible for individuals to have access to financial services in a manner that is less complicated, safer, and more cost-effective. Microloans, savings accounts, and pay-as-you-go services are some examples of the novel financial products that may be made available through these platforms. They also help overcome geographic obstacles, lower transaction costs, and offer innovative financial products that cater to the requirements of disadvantaged groups. The increasing involvement in the formal economy, improved access to credit, and higher economic empowerment of underrepresented groups, such as women, small business owners, and rural areas, are all examples of the beneficial influence that digital payments have had on the expansion of financial inclusion. As seen by a variety of successful case studies conducted all around the world, the adoption of digital payment systems has been significantly influenced by the policies and regulatory frameworks implemented by governments, as well as by public-private partnerships. Examples of initiatives that demonstrate how focused efforts may revolutionize the financial environment and encourage equitable growth include the Unified Payments Interface (UPI) in India, the Mobile Pesa (M-Pesa) in Kenya, and the digital financial programs in Brazil. On the other hand, the path toward attaining universal financial inclusion through the use of digital payment methods is not devoid of obstacles. The full potential of digital financial services is still being hampered by a number of challenges, including a lack of digital literacy, dangers associated with cyber security, and limits in infrastructure. Vulnerable groups frequently face higher hurdles to access owing to a lack of digital skills, restricted connection, and cultural aversion to change. The advantages of digital payments are not dispersed fairly, and vulnerable groups are often the ones who face these challenges. It is necessary to make a concentrated effort in order to overcome these obstacles and guarantee that the benefits of digital payments are accessible to all sectors of society. The enhancement of digital infrastructure, the investment in digital literacy initiatives, the implementation of effective cybersecurity measures, and the development of user-centered financial products that target the unique requirements of the underserved are all included in this. It is imperative that governments, financial institutions, and technology providers work together to provide a supporting environment that cultivates trust, stimulates adoption, and tackles the specific difficulties that are encountered by various communities. In conclusion, although digital payments have made tremendous achievements in fostering financial inclusion, there is more work to be done in order to build a financial system that is completely inclusive and equitable for all people. The revolutionary potential of digital payments can be used by stakeholders to promote sustainable economic growth and enhance the quality of life for millions of people all over the world. This can be accomplished by simultaneously tackling the difficulties that are already there and continuing to innovate.

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