Digital Currency and Its Effect on The Government, General Public and The Indian Financial System

Rahul Modi* , Mr. Pradeep Tomar

Student, ITM University, Gwalior, (MP)

Asst. Prof., SOM, ITM University,Gwalior, (MP)

ABSTRACT

The research team behind the report "Digital Currency and Its Effect on the Government, General Public, and the Indian Financial System" set out to examine the ways in which digital currencies have changed the financial landscape in India. The study combines a descriptive method with a quantitative one to provide an in-depth understanding of digital currency's consequences in India. A self-structured questionnaire and accessible sampling methods are used to collect information from a sample of 150 people. Government personnel from various financial institutions and persons with expertise in the Indian financial system make up the population of this study, making it representative of the important stakeholders. SPSS statistical methods such as "correlation analysis," "frequency analysis," and "regression analyses" are used to analyze the gathered data. With the use of these instruments, trends and variables may be identified and the extent to which digital currency has impacted the Indian government, the general people, and the financial system can be calculated. The results of the research demonstrate that digital money has significantly impacted both the people and the government. An assortment of spheres, including monetary policy, regulatory frameworks, financial accessibility, security, and privacy, can be impacted. Interestingly, the study found no significant impact of digital money on the Indian monetary system. This unexpected result calls for more research into the underlying processes responsible for the lack of impact and an examination of plausible explanations. The study's results might help policymakers, regulators, and stakeholders better understand the effects of using digital currencies. Officials need to be aware of the areas where digital money is having a major impact so that they can maximize the benefits and minimize the risks. The study also highlights the necessity of continuously monitoring and adapting to the changing environment of digital currencies in order to maintain effective regulation and defend the interests of the government, the general people, and the Indian financial system. It is recommended that the scope of the research be broadened to include a larger range of people, and that the reasons of the stated lack of impact on the Indian

financial system be investigated. To further understand the effects of digital money in the Indian context and to make decisions based on evidence; future research should address these caveats and build upon the results.

Keywords: Digital Currency, Financial System, General Public, Monetary Policy.

INTRODUCTION

Money is used in all the transactions that fuel modern economies, thus they would collapse without it. However, both the recognized forms of payment and money have developed throughout the centuries. Payments were first conducted via the barter system and then with coins made of precious metals in the main civilisation. Gold and silver have long since lost their former prominence as means of exchange to paper money, the value of which is determined not by the price of gold but by the actions of the central bank. Today, most people keep their money in banks, where it is digitally recorded instead of written down. Money transfers between customers of the same bank are settled via the latter's checking and/or savings accounts. Nonetheless, interbank balances are resolved by the transfer of claims on a central institution, often the central bank of a particular country, and interbank payments are cleared through a centralized clearing mechanism. In recent times, however, new schemes have emerged that combine new independent payment systems with new currencies, sometimes referred to as "cryptocurrencies" or "digital currency." As of this writing, Bitcoin is still the most well-known of these systems due to its pioneering status. Traditional currencies and payment systems serve as models for digital currency, which is then intended to mimic their characteristics. They don't need approval from central banks to be created, and they may be used to settle transactions between individuals directly, bypassing intermediaries like conventional banks. In contrast to traditional cash transactions, users are not forced to declare the amount of digital currency they possess while making a purchase **(Carapella & Flemming, 2020)**.

There hasn't been anything quite like the advent of digital currencies as a payment method. If digital currencies attain broad acceptability and take on the functions of money (i.e., medium of exchange, unit of account, and store of value), then economic theory might classify them as money. A resource's usefulness for these objectives may fluctuate over time and between individuals. Even if the item fits these economic conditions, its legal and regulatory status as

money is unclear. The widespread use of digital currencies is still a ways off. Despite the volatile price fluctuations, the data suggests that these consumers mostly use digital currencies as a savings vehicle and very sometimes as a medium of trade. The use of virtual currencies as an alternative to government-issued currency has not been successful so far.

The supply of most cryptographic currencies is capped automatically. Digital currencies as currently envisioned have very little chance of being widely embraced since a fixed money supply may be damaging for the economy as a whole, leading to deflation in the price of goods and services and salaries. If the money supply can't fluctuate to match consumer demand, we may expect more volatility in prices and levels of activity. To be sure, not all digital currency systems need a predetermined supply **(Zhang et al., 2021)**.

Technology behind digital currencies-Blockchain

The blockchain might significantly alter the banking and finance sector. Every single Bitcoin transaction in history has been recorded on a public digital ledger called a blockchain. Blockchain technology has been dubbed "The Trust Machine" because it has removed the need for a third party to mediate disputes, allowing previously wary parties to work together. Because distributed ledgers allow each node in a network to independently and concurrently record and validate all digital transactions, they may replace the requirement for a centralized database. Like electronic mail, digital money will have far-reaching effects on the way we do business and interact with one another. As a result, we anticipate that decentralization from traditional monetary systems will play a significant role. It is believed that the use of blockchain technology in international trade and stock trading would lower transaction costs. Private blockchains, in contrast to public blockchains, are operated by financial organizations that retain control of the corresponding cryptographic keys. **(Kaur, 2019)**

Digital Currency as Payment Mode

One way to look at today's money is as a group of promises to pay, or "IOUs." The bank views a depositor's funds as a liability, whereas the depositor views them as an asset. The vast majority of money in circulation is stored in the form of bank deposits, and new money is created mostly via loans. A bank creates new money when it makes a loan and promptly transfers the borrowed amount into the borrower's account. Banknotes are both an obligation of the central bank and an asset of the note holder **(McLeay et al., 2014)**.

There is no government or central bank backing digital currencies like Bitcoin or Litecoin. They are thus maybe a kind of commodity. They are virtual commodities that resemble physical ones like gold but are not the same. Digital currencies are worthless unless there is consensus on their value. An open ledger and a method of updating it, which involves the issuance of new money, are the backbone of this system. Digital currencies are not IOUs or liabilities of the central bank (or the state), hence they may be used as money despite their significant differences from national currencies **(Ali et al., 2014)**.

Most existing digital currencies have fixed creation restrictions that limit the total amount of coins that may ever be created **(European Banking Authority, 2014)**. For instance, the Bitcoin protocol states that there may never be more than 21,000,000 bitcoins in circulation at any one time; current estimates place that year as the latest by which that cap will be met. Users that provide their processing power to verify other users' transactions are compensated in the form of the freshly minted cryptocurrency. Network activity on a quantitative scale. This redistribution is analogous to seigniorage (the production of monetary value minus the cost of its creation), to the degree that digital currencies act as money **(Financial Action Task Force, 2014)**.

The three uses for currency

There has always been a coexistence of physical and digital currency. According to economic theory, a currency's worth is based on the requirements of a society, and more specifically, on how well the criteria listed below are supplied.

- A kind of money that may be used to buy things now but defer their usage until later.
- A medium of exchange; anything that may be traded for other things.
- A fixed monetary amount that may be spent on any available commodity.

These roles may or may not be fulfilled by a given asset. These tasks may be carried out by a number of assets at various times. These services may be made available to certain people but not to others. Cigarettes, for instance, performed all three of these functions in World War II prisoner-of-war camps. It is not certain that anything that possesses some monetary features would be treated as money for legal and regulatory reasons.

It's possible that there's a pecking order to how cash is put to use. For example, homes are often amassed as a form of wealth but seldom used as a means of exchange. In order for an asset to serve as a medium of exchange, it must be acceptable as payment by both parties to a transaction. Finally, a unit of account is a medium of exchange that may be used in a variety of transactions

with a wide range of individuals, evidencing collaboration at the societal level. Some economists, because of this, give great weight to money's role as a unit of account. One of the things that sets monetary policy apart is the power of central banks to change the value of the unit of account (**Ali et al., 2014**).

Digital currencies versus money's three functions

An asset's ability to hold wealth is based on how effectively investors can predict its future supply and demand. There will inevitably be a limit to the overall quantity of digital money in circulation, but when that limit will be achieved is far more up to speculation. Due to the lack of a backing institution and the absence of intrinsic demand in either production or consumption, any projection of the future demand for digital currencies should focus on the premise that they would be used as a medium of exchange.

There must be some population that finds value in digital currencies for their price to be anything other than zero. However, they are not good short-term value storage choices because of their significant volatility in contrast to fiat currencies. Since the beginning of 2012, the value of one bitcoin has fluctuated against the US dollar every day, just as the value of one pound has. Bitcoin's daily standard variation in price is about 17 times that of the pound. The demand for Bitcoin as a medium- to long-term store of wealth is influenced by investors' confidence in the cryptocurrency's long-term viability.

How broadly a currency is accepted may be seen as an indication of how often it is utilized as a medium of trade. Many vendors (especially those operating online) now accept Bitcoin as payment. A company's acceptance of one kind of digital currency does not always mean that it is widely accepted.

The amount of transactions in a digital currency over a certain time period is the best measure of the currency's potential as a medium of exchange. Since the volume of Bitcoin transactions can be calculated, it may be possible to predict how often a certain digital currency will be used. After spiking when the famous Bitcoin gambling website Satoshi Dice launched in the first half of 2012, this metric and others that monitor transaction volume have now settled down to relatively low levels. (**Frankenfield, 2023**)

Review of literature

(**Kshetri, 2023**) To help more people get access to banking and other financial possibilities, a

research looked at the feasibility of using the digital yuan. In it, the digital yuan is ranked against some of its most formidable competitors. Experts also explored how the "Chinese Communist Party" may exploit the digital yuan as a powerful new instrument for economic and population surveillance. In this study, they examine the digital yuan's potential for international use in depth. This research provides a fresh viewpoint on the digital yuan while also contributing to the development of international standards for national digital currencies.

(Banerjee & Sinha, 2023) This study aims to shed light on how CBDC may be used to increase usage of banking services. A 'Central Bank Digital Currency' (CBDC) from the RBI has been discussed. Recent research has highlighted the importance of India's banking sector to the smooth rollout of the CBDC. India has pioneered cutting-edge methods of making digital payments. The central banks sponsored by the CBDC are adaptable enough to deal with changing economic and financial conditions. The goal of this "quantitative regression analysis" is to uncover potential drivers of the banking industry's efficiency and stability in order to assess the impact of CBDC implementation on financial inclusion. The CBDC should be developed by the central bank using the Structural Vector Auto-Regression model with an eye on the transparency of the payment infrastructure of the monetary system. The proposed study has the potential to provide light on the barriers to complete financial inclusion in India, which might help in the development of CBDC. Policymakers' ability to maximize consumer benefits is another potential focus of the suggested study. The study's findings suggest RBI might have a role in the actualization of CBDC. The research shows a trend in India's financial system that augurs well for the popularity of CBDC and its advantages.

(Pavoor & Ajithkumar, 2022) 'Central Bank Digital Currencies' are digital currencies issued by national central banks that are being prepared for legal tender status. The Reserve Bank of India has expressed similar intentions openly; therefore a CBDC in India should become accessible soon. Until the benefits and drawbacks of CBDC adoption are weighed, an accurate assessment of the impact is impossible. The current banking system is keeping an eye on CBDC. The expansion of CBDC, which is supported by national central banks, is helping to speed up the adoption of blockchain technology and digital currencies worldwide. In this study, we combed through international CBDCs literature. The Indian digital rupee is compared to numerous private Cryptocurrencies.

(**Farooqui, 2022**) The market for various types of digital money has expanded tremendously since the advent of cryptocurrencies in 2009, and this article discusses and analyzes the major elements affecting this expansion. Digital currencies have been accused of experiencing a speculative bubble despite their recent price increase due to the trilemma of inadequate regulatory oversight, the possibility of illicit use within an undeveloped and obscure trading system, and the strain on infrastructure caused by the proliferation of digital wrongdoing. The combination of these two factors makes it less likely that technology money standards will be accepted as a reliable financial asset. Despite their limited capacity to concentrate, central banks have sped up the development of new digital currencies. A growing body of monetary research, focusing on the "saves for all" feature of CBDCs for consumer spending, sheds light on these initiatives. CBDCs' effects on competitiveness, payment system integrity, and security may be better understood when seen in the context of the larger information economy and the information dominance. In this work, we provide a review of the expanding CBDC literature, focusing on the macroeconomic effects on the financial system, monetary stability, and financial structure, and the microeconomic effects on functional structures, innovations, and safety.

(**Kumar, 2021**) There has been a gradual transition from paper to digital forms of the currency cash. It has been a powerful force in establishing the modern payment system and now forms a crucial part of the global economic foundation. Digital money issued by a central bank and supported by the government is known as CBDC (Central Bank digital Currency). The growing popularity of digital transactions and new developments in the banking industry have revealed flaws in the current monetary system. Central bank legitimacy has been called into doubt ever since 2008, when cryptocurrencies like Bitcoin first appeared. In addition, global monetary authorities credit Central Bank oversight for fostering public confidence in the banking system. According to the BIS study, the percentage of central banks across the world planning to create a CBDC has increased from 60% in 2017 to 80% in 2019. The purpose of this article is to investigate CBDC's potential effects on the Indian economy.

(**Jani, 2018**) Many facets of our daily lives have become more versatile and efficient as a result of the convergence brought about by the rapid development of information and communication technology. Because of the dramatic growth in internet users, new concepts from the virtual world have emerged, giving rise to a new economic phenomenon: cryptocurrencies, which are used to

conduct monetary transactions such as buying, selling, and trading. Cryptocurrencies, which stand in for valuable but intangible goods, are used in a wide variety of contexts, including online social networks, online social games, virtual worlds, and peer-to-peer networks. Recent years have witnessed widespread acceptance of virtual currencies on several sites. In this study, we investigate how consumers predict the future of digital currency will pan out. At a time when cryptocurrency use is not entirely controlled, it also explores the faith that bitcoin users have in the system. The essay also seeks to measure the pace of cryptocurrency adoption so as to provide an accurate picture. In addition to examining the impact on Indian law, the research examines the regulatory and legislative reactions of 21 other countries to cryptocurrency.

(Sapovadia, 2018) Despite our increasingly interconnected world, more than a third of people still do not have access to formal financial services. More and more research suggests that when consumers and businesses have simple access to reliable financial services, everyone benefits. Economic and social marginalization have many root causes. Many people are unable to afford basic necessities like food, housing, and medical care due to the shortcomings of the traditional banking system. The widespread use of digital money and mobile banking has the potential to increase financial inclusion for previously underserved populations. The findings demonstrate that utilizing a traditional financial system for transactions with low values of money is too expensive. Small transactions might be simplified, reduced in cost, and made more accessible with the use of mobile apps and digital money. Large financial transactions may be processed more quickly, more easily, and more accurately as a result. Mobile phone networks are being used by some developing countries to combat financial exclusion. This chapter examines the use of mobile technology to provide access to financial services for the unbanked, including its advantages, disadvantages, obstacles, solutions, and worldwide experience.

Objectives of the Study

The following are some of the objectives of this study:

- To study the impact of digital currency on govt and the general public.
- To study the impact of digital currency on the Indian financial system.

Hypothesis of the Study

The following hypotheses of this study are:

H_01: There is no significant impact of digital currency on govt and general public

H_a1: There is a significant impact of digital currency on govt and general public

H_02: There is no significant impact of digital currency on the Indian financial system.

H_a2: There is a significant impact of digital currency on the Indian financial system.

RESEARCH METHODOLOGY

Examining how digital currency affects the government, the populace, and the 'Indian financial system' is the goal of this research. A "digital currency" is "money" that solely exists in digital or electronic form, such as digital money or cryptocurrency, according to one definition. It is not minted, circulated, or held in tangible form like paper currency. The cryptographic technology upon which digital currencies are built guarantees the safety and veracity of financial transactions. Bitcoin, the first decentralized digital currency, was released in 2009 and pioneered the use of blockchain technology to facilitate peer-to-peer transactions. Both a descriptive research approach and a quantitative research design are utilized in the carrying out of this investigation. Descriptive research is to document and explain the characteristics, routines, and occurrences of the subject or population under investigation. It entails amassing information so as to provide a clear picture of the phenomenon being studied. Descriptive research is concerned only with reporting and summarising facts in a methodical and unbiased fashion; it does not attempt to explain causation or make predictions. Questions like "What is happening?" or "What is the current state of affairs?" are what descriptive research aims to shed light on. The researchers just keep an eye on the study environment and take notes without changing or influencing anything. This method is often used in the social sciences, marketing research, and other areas where an in-depth understanding of a phenomena is desired (**Matua & Van Der Wal, 2015**). While on the other hand, Quantitative research design is a research approach that focuses on collecting and analysing numerical data to draw conclusions, make predictions, and establish relationships between variables. It emphasizes the use of statistical analysis and mathematical modeling to examine and quantify phenomena. This research design aims to provide objective and measurable evidence to address research questions or test hypotheses (**Bloomfield & Fisher, 2019**). The main data-collecting strategy is used to help acquire the data. Primary data collection is the process of obtaining data directly from the source. The process of gathering information for the sole aim of a study or inquiry. Several methods exist for gathering primary information, each with its own advantages and disadvantages based on the specifics of the study (**Blog, 2021**). The self-structured questionnaire survey is part of this strategy for collecting data. Following the completion of the data collection with the help of a

survey, an analysis of data was carried out with the assistance of statistical software known as SPSS. To gain insight, make conclusions, and answer research questions or hypotheses, research data analysis includes organising, cleaning, transforming, and analysing data. In order to make sense of the data and draw meaningful conclusions to back up the study, the analysis step is essential. SPSS software comes with various analytical tools which are used for the purpose of data analysis. The study employed Cronbach's alpha test for data reliability, correlation and regression analysis.

Sample Design

A sample design is a planned method for selecting a portion of a larger population for research. It outlines the process by which a researcher selects the items to include in their study. The method by which the desired sample size is determined follows naturally from the sample design process. Therefore, sample design is decided upon in advance of data collection. Among the several sample design strategies that are accessible, the researcher must choose samples that are reliable and appropriate for his study. A sample design is a methodical plan for collecting representative samples from a target population. It alludes to the procedure through which the researcher selects the objects that make up the sample **(Clark & Steel, 2022)**. The sample design for this study is divided into the sub-sections of the sample frame, sampling technique, and sample size.

Sampling Technique

The non-probability sampling method "Convenience sampling" is utilised for data gathering in this research. Convenience sampling picks participants based on how easily and readily they can be reached by the researcher. It requires selecting convenient participants. This sampling approach is utilised when the researcher needs data quickly and cheaply. Convenience sampling selects participants based on proximity, availability, or convenience. Researchers may recruit subjects at a shopping mall, online, or in their neighbourhood. Pilot studies, early research, and other scenarios that prioritise speed above representativeness employ this sampling method. Convenient sampling saves time and money but limits generalizability **(Nikolopoulou, 2022)**.

Sampling size: 150

Data Collection

Data collection is used to answer research questions, test hypotheses, or acquire insights into a subject. It includes systematic data collection, recording, and documentation. Data quality, correctness, and completeness affect study validity and dependability, making data collecting vital. The data was collected using primary sources. In order to have the most up-to-date and

reliable information possible, academicians and researchers need to rely on primary data, which is compiled from primary sources. To do this, one must gather information in person, verify its accuracy, and put it to practical use. Methods used in the collection of primary data are surveys, interviews, observation, and focus groups **(Agarwal, 2019)**.

Collecting the Data

The information of this study is collected with the help of a structured questionnaire survey. In survey research, structured questionnaires serve as the principal measuring tool **(Cheung, 2021)**. Because the data is collected through the questionnaire survey in a numerical format which demonstrates that the research design of this study is "quantitative research design". The usage of structured questionnaires and quantitative analysis are closely related **(Price & Lovell, 2019)**. This questionnaire contained questions related to this study topic and objectives. These questions collected the responses of the respondents of this study. For contacting the respondents, various social media sites, Emails, and other online methods are used.

Analyse the Data

After conducting the data collection, the next step is the analysis. For conducting the data analysis, it was segregated and tabulated according to each variable of this study. After this, the dataset was analysed with the help of a statistical software known as SPSS ("Statistical Package for Social Sciences") **(Greatorex, 2015)**.

Statistical Tool for data Analysis

Various statistical tools such as 'reliability tests', 'frequency analysis', 'correlation analysis', and 'regression analysis' were utilised to analyse the dataset. The reliability analysis method computes several standard measures of scale dependability and explains connections between scale components **(IBM, 2022)**. As a measure of reliability, Cronbach's alpha contrasts the covariance (the amount of shared variance between items) in an instrument with its total variance **(Amirrudin et al., 2020)**.

Reliability Test

In the domains of psychology and social science research, the term "Cronbach's alpha" refers to a measure of internal consistency reliability that is used in the process of determining whether or not a scale or questionnaire is consistent or reliable. It gives a numerical measure of the degree to which distinct items on a scale are correlated with one another, so exposing the extent to which they all measure the same underlying notion. It does this by providing a measure of the degree to

which different items on a scale are connected with one another. Cronbach's alpha reliability test is a statistical technique in SPSS that determines an instrument's internal consistency using Cronbach's alpha coefficient. It delivers a single number that represents the typical within-item correlation of the variables considered. The value for Cronbach's alpha might be anything from 0 to 1. Indicating that the items on the scale are consistently assessing the same concept, higher ratings of internal consistency or reliability are desirable. When everything has a reliability of 1, there is a perfect correlation between the variables. Researchers may check whether their scales or questionnaires consistently measure the target construct by doing a Cronbach's alpha reliability test in SPSS. This ensures the instrument is trustworthy and can be relied upon to provide consistent findings in future research **(Priya Chetty and Shruti Datt, 2017)**.

Frequency and percent Analysis

The distribution of categorical variables in a dataset may be examined using the statistical technique of frequency and percent analysis. It details the number and percentage of observations that belong to each category of the variable. The frequency measures the total number of occurrences or observations in each category, whereas the percent measures the percentage of total observations that fall into each group. Categorical variables (such demographics, survey answers, or group membership) are ideal candidates for this kind of research since they can be summarised and their distribution may be better understood.

Correlation analyses

When investigating the relationships that may exist between a number of distinct variables, SPSS employs a statistical method known as correlation analysis. It determines the degree and direction of the relationship between variables by calculating correlation coefficients like Pearson's. When the value is positive, the correlation is strong; when it is negative, the connection is weak; and when it is near zero, there is no or very little correlation. By highlighting patterns, correlations, and possible dependencies between variables, this approach aids researchers in comprehending the closeness of these relationships. The goal of correlation analysis, which is also occasionally referred to as bivariate analysis, is to first ascertain whether there is a relationship between the variables, and if so, to ascertain the kind, degree, and direction of that relationship **(Senthilnathan, 2019)**.

Regression Analysis

Finally, to test the hypotheses, the regression analysis method is be employed. Regression analysis

is a method of statistical analysis that examines a dependent variable together with one or more independent variables and maybe other variables. It is possible to make an estimate or a prediction for the value of the dependent variable based on the values of the independent variables. The link between changes in independent variables and changes in the dependent variable may be better understood with the use of regression analysis **(Tyagi et al., 2022)**.

RESULTS AND DISCUSSION

Reliability Test

A set of variables designed to measure the same construct are evaluated for internal consistency and reliability using a statistical technique called the "Reliability Analysis." It computes a variety of reliability coefficients, the most popular of which being Cronbach's alpha.

Researchers use SPSS's reliability test to see how well a questionnaire's items or questions measure a given concept consistently and reliably. The results are helpful in determining whether or not different items are assessing the same underlying concept consistently.

Table 3.1: Reliability Statistics	
'Cronbach's Alpha'	N of Items
.933	20

The statistics on the dependability of the data are shown in the table above; the value of 'Cronbach's Alpha' is 0.933, and the number of observations, N, is 20. Since the value of Cronbach's Alpha is quite near to the significant value of 1, one conclusion that can be drawn is that the dependability of the data is extremely high.

Demographic Analysis

Table 3.2: Demographic Analysis				
S. No.	Demographic Variable		Frequency(n)	Percentage (%)
1.	**Gender**	Male	109	72.7

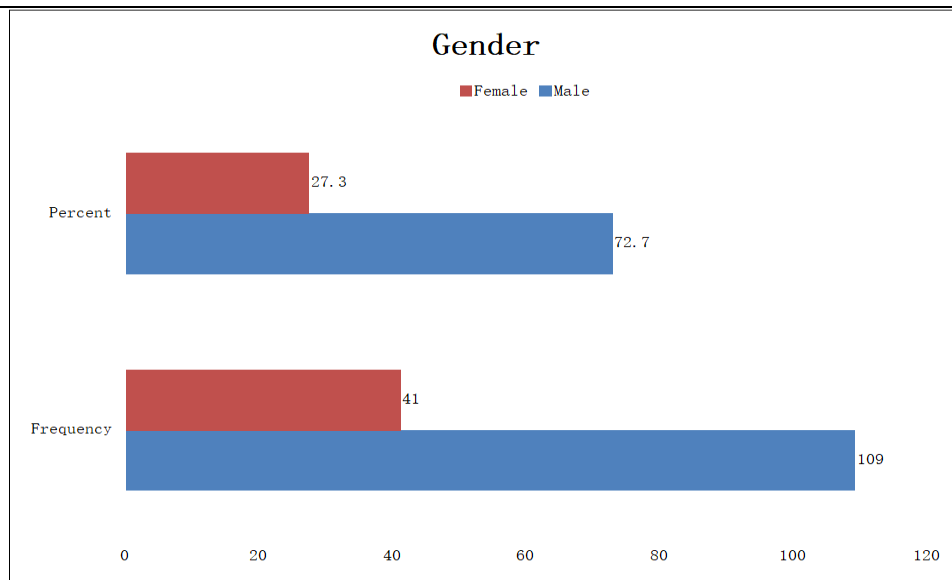|		Female	41	27.3
2.	Age	18-24	106	70.7
		25-34	39	26.0
		35-44	2	1.3
		45-54	3	2.0
3.	Occupation	Employed	65	43.3
		Self-employed	24	16.0
		Unemployed	6	4.0
		Student	55	36.7
			*Total Respondents = 150	
			Source = Primary Data	

Figure 3.1: Gender of respondents

The above Figure illustrates the distribution of respondents as per their gender. Out of 150 respondents, 109 (72.7) were male while rest 41 respondents were female. Hence the majority of the responses obtained from male population for this study.
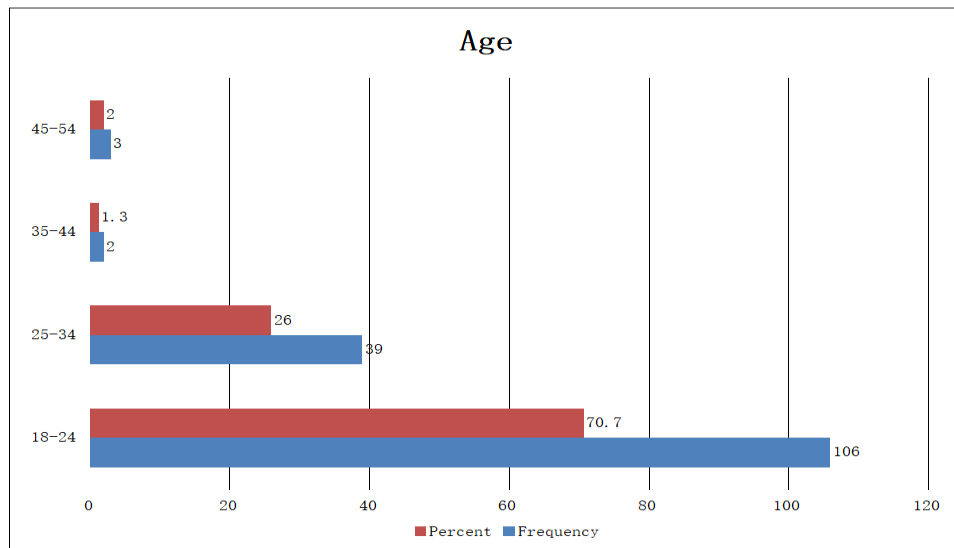
Figure 3.2: Age of Respondents

The above figure depicts the distribution of respondents as per their ages. Out of 150 respondents 106 (70.7%) were from 18-24 age group, 39 (26%) were from 25-34 age group, 2 respondents were between 35 to 44 while rest 3 belongs to age group of 45 to 54 years. Hence the majority of respondents comprises from a fairly young age group of 18 to 24 years.
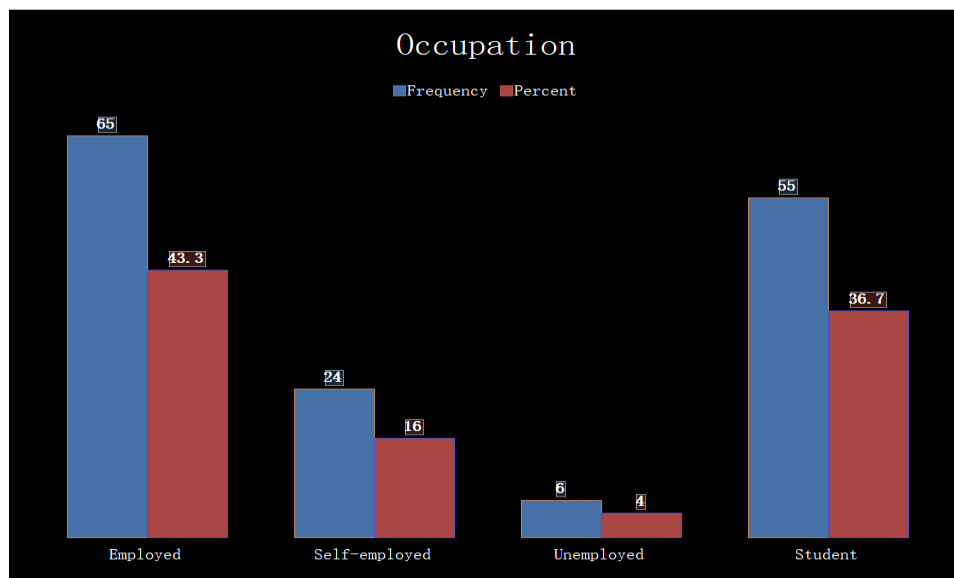

Figure 3.3: Occupation of Respondents

The above figure shows the distribution of respondents as per their job role or occupation. Out of 150 respondents, 65 were employed, 24 were self-employed, 6 were unemployed while 55 were students. Hence the majority of respondents of this study were employed.

Nonparametric Correlations

Nonparametric correlations, also known as rank-based correlations, are statistical measures used to evaluate the strength and direction of an association between two variables without making any presumptions about the distribution of the data. The ordinal positions or rankings of the data are used as the basis for these correlations, rather than the data themselves.

In cases when it is not possible to analyse the data using parametric correlations, such as when the variables being analysed have skewed distributions, outliers, or are assessed on an ordinal or non-linear scale, nonparametric correlations may be used instead. They provide a reliable and adaptable method for investigating correlations between many different types of variables (**Chen & Popovich, 2002**).

Table 3.4: Nonparametric Correlation					
		DIGITAL CURRENCY	EFFECT OF DIGITAL CURRENCY ON GOVT	EFFECT OF DIGITAL CURRENCY ON GENERAL PUBLIC	EFFECT OF DIGITAL CURRENCY ON IFS
DIGITAL CURRENCY	'Pearson Correlation'	1	.599**	.607**	.485**
	Sig. (2-tailed)		.000	.000	.000
	N	150	150	150	150
GOVERNMENT	'Pearson Correlation'	.599**	1	.654**	.614**
	Sig. (2-tailed)	.000		.000	.000
	N	150	150	150	150
GENERAL PUBLIC	'Pearson Correlation'	.607**	.654**	1	.660**
	Sig. (2-tailed)	.000	.000		.000
	N	150	150	150	150

IFS	'Pearson Correlation'	.485**	.614**	.660**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	150	150	150	150
**. Correlation is significant at the 0.01 level (2-tailed).					

Above table depicts the nonparametric correlation values which are mentioned separately for each variable.

For 'DIGITAL CURRENCY' variable 'EFFECT OF DIGITAL CURRENCY ON GOVT' Pearson correlation coefficient value is 0.599, Sig value is 0.000 and N number is 150. For 'EFFECT OF DIGITAL CURRENCY ON GENERAL PUBLIC' Pearson correlation coefficient value is 0.607, Sig. value is 0.000 and N number is 150. For 'EFFECT OF DIGITAL CURRENCY ON IFS' Pearson correlation coefficient value is 0.485, Sig. value is 0.000 and N number is 150.

For 'GOVERNMENT" variable 'DIGITAL CURRENCY' Pearson correlation coefficient value is 0.599, Sig. value is 0.000 and N number is 150. For 'EFFECT OF DIGITAL CURRENCY ON GENERAL PUBLIC' Pearson correlation coefficient 0.654, Sig value is 0.000 and N number is 150. For 'EFFECT OF DIGITAL CURRENCY ON IFS' Pearson correlation coefficient value is 0.614, Sig value is 0.000 and N number is 150.

For 'GENERAL PUBLIC' variable 'DIGITAL CURRENCY' Pearson correlation coefficient value is 0.607, Sig value is 0.000 and N number is 150. For 'EFFECT OF DIGITAL CURRENCY ON GOVT' Pearson correlation coefficient value is 0.654, Sig value is 0.000 and N number is 150. 'For EFFECT OF DIGITAL CURRENCY ON IFS' Pearson correlation coefficient value is 0.660, Sig. value is 0.000 and N number is 150.

For 'IFS' variable 'DIGITAL CURRENCY' Pearson correlation coefficient value is 0.485, Sig. value is 0.000 and N number is 150. For 'EFFECT OF DIGITAL CURRENCY ON GOVT' Pearson correlation coefficient value is 0.614, Sig value is 0.000 and N number is 150. For 'EFFECT OF DIGITAL CURRENCY ON GENERAL PUBLIC' Pearson correlation coefficient value is 0.660, Sig value is 0.000 and N number is 150.

Ordinal Regression

An ordinal dependent variable and one or more independent variables are modelled and analysed using the statistical analysis technique known as ordinal regression. It is intended for use where there is a natural hierarchy among the categories that make up the result variable. Ordinal

regression calculates the probabilities of each category of the dependent variable given a set of independent variables. In contrast to strictly categorical or continuous outcomes, those that lie on a scale may be studied and predicted with the use of this method. Insights into the nature and magnitude of relationships between the independent variables and the probability of being in a certain category of the ordinal dependent variable are revealed by the outcomes of ordinal regression in SPSS **(Tutz, 2022)**.

Table 3.5: Model Fitting Information				
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	248.278			
Final	157.433	90.846	3	.000
Link function: Logit.				

Above Table depicts the model fitting information utilizing the logit link function. Provided are intercept-only and outcome-only models. The Sig. value in this table is 0.000, which is less than the significance threshold of 0.05. Consequently, the results are significant.

Table 3.6: Goodness-of-Fit			
	Chi-Square	df	Sig.
Pearson	257.207	125	.000
Deviance	118.730	125	.641
Link function: Logit.			

The goodness of fit of the model is shown in the above table. It has a "Pearson chi-square" value of 257.207 and a significance level of 0.000, with 125 degrees of freedom. This indicates that there is a considerable discrepancy between the actual values and the predicted values based on the model.

Table 3.7: Pseudo R-Square	
'Cox and Snell'	.454
'Nagelkerke'	.492
'McFadden'	.236

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Link function: Logit.

Above table represents the Pseudo R-Square of the model. In this table, the value of Cox and Snell is 0.454, the value of Nagelkerke is 0.492, and finally, the value of McFadden is 0.236.

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[VAR25 = 1.00]	2.077	.937	4.920	1	.027	.242	3.913
	[VAR25 = 2.00]	4.855	.846	32.960	1	.000	3.197	6.512
	[VAR25 = 3.00]	7.651	.985	60.397	1	.000	5.722	9.581
	[VAR25 = 4.00]	10.867	1.161	87.569	1	.000	8.591	13.143
Location	GOVT	1.067	.274	15.223	1	.000	.531	1.604
	GENERAL_PUBLIC	1.083	.267	16.450	1	.000	.560	1.606
	IFS	.079	.258	.093	1	.760	-.427	.585

Table 3.8: Parameter Estimates

Link function: Logit.

Above table 4.36 shows the parameter estimates, as can be seen in this table the degree of freedom is 1 and sig. value is 0.000 for all variables (except for 'IFS'). Which is less than the significant level of 0.05. hence, it can be said that null hypotheses are rejected and alternate hypotheses are accepted.

Hypotheses Results

H$_0$1: There is no significant impact of digital currency on govt and general public

Reject null hypothesis

H$_a$1: There is a significant impact of digital currency on govt and general public

Accept the alternative hypothesis

H$_0$2: There is no significant impact of digital currency on the Indian financial system.

Accept null hypothesis

H$_a$2: There is a significant impact of digital currency on the Indian financial system.

Reject the alternative hypothesis

CONCLUSIONS

This research has significant policy and practical consequences for the government of India, the people of India, and the Indian financial system as a whole. The study clarified the effects of digital currency adoption in the Indian context by using a descriptive research approach and quantitative research design. The study's findings show that digital currency has a considerable influence on both the government and the general public. This influence extends to many spheres, such as fiscal policy, regulatory frameworks, financial access, safety, and confidentiality. Policymakers and regulators must proactively address these implications for good governance and consumer protection, as shown by the findings. It is interesting to see that the research did not detect any major effect of digital currency on the Indian financial system. Given the surprising nature of this finding, further research is needed, and it is possible that special dynamics inside the Indian financial system limit the revolutionary potential of digital currency. More investigation into the causes and reasons for this lack of effect is needed in future studies. The study's limitations—including its small sample size, respondents' selection, and the use of easy sampling—mean that the results should be evaluated with care. In order to increase the generalizability of the findings, the study's sample size might be increased and a more diverse group of participants could be recruited.

The study does, however, stress the need of constant monitoring and adaptability in the face of the ever-changing world of digital Currency. If policymakers and other interested parties want to reap the advantages of digital currencies while mitigating the dangers they provide, they must stay abreast of new developments in the field.

The implications of digital currency adoption in the Indian financial system are better understood as a whole thanks to this study. To better cultivate responsible digital currency practises, promote

financial inclusion, and guarantee the stability and security of the financial ecosystem, the insights acquired may help policymakers, regulators, and stakeholders develop suitable solutions. Future research may fill up these gaps and enhance evidence-based decision making in this rapidly evolving area by expanding on these findings and resolving the noted limitations.

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