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AN EMPIRICAL STUDY ON DIGITAL CURRENCY IN INDIA: AN USER PERSPECTIVE.

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Abstract: *The 21st Century is the era of digitalisation. In India, the time is to bring in respect of implement full pledged electronic version of transactions, trade, commerce and digital mode of payments. Digital money (or digital currency) refers to any means of payment that exists in a purely electronic form. Digital money is not physically tangible like a dollar bill or a coin. Digital Currency is the present market tool to deal with capturing the market. And it is to play a safe game, because of no physical transactions takes place. But the toughest challenge is cyber crime and the way of dealing it.*

This paper is mainly focusing on the users' perspective towards e-transactions, digital payments, cryptocurrency. The way public respond to the new venture is very important for its success and growth. In this new normal period, it is definitely a remarkable turn in every perspective. Government of India is taking step forward on the path of digitalising all the sectors. Artificial Intelligence with block-chain technology will help us for proper administration and transparency.

Key Words: *Cryptocurrency, Cyber-Security, Digital Currency, Ease of Use, Government Regulations.*

1. INTRODUCTION:

The advent of digital technologies, ample of our existing realities is undergoing radical changes. Those changes dramatically evolve and may even disappear over time. It is not known if there will be more or less physical form in the future. In this modernized era the world becomes a global village with taking scope of internet. With the passage of time everything goes behind the digital platform, e.g. education, trade and banking etc. In this situation monetary system of business world is not exceptional from being digital. Posing of currency for digitalisation is a burning issue. Currency is an exchange tool in commercial transaction. It is universally accepted by the people, its legal tender and value is guaranteed by the Government in an economy. Currency of an economy seems like water for a tree. A slightest shuffle can make an economy become haphazard. While we all agree that digitalisation fundamentally changes our society and current system. Perhaps, leads to a question whether our domain will benefit users from digitalisation.

Currently it is look like difficult to estimate changes and technology will be the pioneer or the disruptive element starting to bring the revolution. There is always a silent struggle is ongoing between the inside the users mind on the acceptability of change. Now, we are seeing Digitalisation of a currency becoming emerging issue in the contemporary business world. Hence, it needs to study the users' behavior towards adoption and application of digitized currency.

2. DIGITAL CURRENCY:

A digital currency is a currency that can be accessed digitally and a currency in electronic form. The digital currency has all its unique characteristics, whether it is real money or digital currency, and can be exchanged out-of-the-box to perform consistently for global segmentation while connecting to supported devices and networks. Cryptocurrency Virtual Currency, Central Bank Digital Currency and e-cash although all cryptocurrencies are digital currencies, it is acknowledged that not all digital currencies are cryptographically equivalent. Digital currency is intangible money in digital or electronic form. Digital currencies go by various names such as digital money, electronic money, electronic money, cyber cash, etc., and tend to move between materials or between clients using assistive technologies such as PCs, mobile phones, and the Web. The Digital currency enables cross-border ownership exchange and instant marketing, and can be used for the purchase of goods and services.[1]

Digital currency payments are made directly between the executing parties without an intermediary, so exchanges are generally cheaper at one time. These fees are in better contrast to conventional payment techniques, including banks. Digital currency-based electronic exchanges also acquire basic record keeping and transaction

accuracy. There are several benefits on digitalising currency such as loss through physical holding of cash, including fraud prevention and easier international payments.

Cryptocurrency means any information or code or number or token not being part of any official Digital Currency, generated through cryptographic means or otherwise, providing a digital representation of value which is exchanged with or without consideration, with the promise or representation of having inherent value in any business activity which may involve risk of loss or an expectation of profits or income, or functions as a store of value or a unit of account and includes its use in any financial transaction or investment, but not limited to, investment schemes ***(2019) Banning of Cryptocurrency & Regulation of Official Digital Currency Bill, 2019.***[2]

Digital Currency schemes are not widely used or accepted, and they face a series of challenges that could limit their future growth. As a result, their influence on financial services and the wider economy is negligible today, and it is possible that in the long term they may remain a product for a limited user base on the fringes of mainstream financial services ***(2015) Committee on Payments and Market Infrastructures, Digital currencies***.[3a] However, the operation of some digital currency schemes in recent years indicates the feasibility of using distributed ledgers for peer-to-peer value transfers in the absence of a trusted third party.

Electronic money (e-money), defined in the CPMI's A glossary of terms used in payments and settlement systems as "value stored electronically in a device such as a chip card or a hard drive in a personal computer", is also commonly used around the world.[3b]

Supply Side Factors:

The major effects of digital currency, that influence on the future development of digital currencies are based on Fragmentation, Scalability and efficiency, Pseudonymity, Technical and security concerns, Business model sustainability.

Demand Side Factors:

In order to increase acceptance, ease of use, security, government role on digital currencies have to provide end users with benefits over traditional services. Some of the latent factors that are influence in the evolution of demand for digital currencies and their related payment mechanisms are Security, Cost, Usability, Volatility and risk of loss, Irrevocability, Processing speed, Cross-border reach, Data privacy/pseudonymity, Marketing and reputational effects.

3. LITERATURE REVIEW:

Gilbert S. & Lio H. (2018)[4] in this paper, they considered digital currency from a traditional asset pricing perspective, risks of seller fraud or currency theft and examined fluctuation and systematic risk in the price of Bit-coin. In the analysis part, agents are only allowed to allocate their wealth in between the stock market and Bit-coin since the excess market return. In reality, agents may allocate their wealth to various assets, such as government bonds, corporate bonds, real states, etc. To achieve a more precise analysis of the systematic risk of Bit-coin and the optimal proportion of Bit-coin in an investment portfolio, we construct an agent's wealth index that includes varieties of assets in the market. They also examined the systematic risk of Bit-coin using the CAPM and the Fama-French Three Factors Model between the period of 4 years from 2010-2014. The results were suggesting that Bit-coin is a non-systematic risk asset around the world markets. These results imply that including Bit-coin in an investment portfolio can diversify its risk wherever the investment is located.

Otoo B.A.A. & Nemati H. (2017)[5] the paper studied about the conventional discussion on this emergent technology to explore what publics can do with changing perspective. The theoretical framework of Sen's (1992, 1993) in his, capability approach the study explores how the adoption of digital currency at the individual level impacts quality of life in a deprived environment, with limited access to banks. They focused on the impact of the adoption of digital currency on an individual's quality of life and the antecedents to the adoption of digital currency have the main objective of the study. The results of hypothesis were discussed Effective research in this area will inform policy making and business decision making for the benefit of individual users at large.

Barontini C. & Holden H. (2019)[6] in this paper a survey had been conducted on Proceeding with caution on central bank digital currency system. The model expressed on money flower relating to *taxonomy of money*. In the paper they discussed the three variants of CBDC highlighted by the grey shaded areas within the "money flower". The first one was a "general purpose", "account-based" variant, an account at the central bank for the general public. At initial, they concentrated on widely available and primarily targeted at retail transactions. The second form was a "general purpose", "token-based" variant, a type of "digital cash" issued by the central bank for the general public. And the last form was a wholesale, token or value based variant. The evidence from this survey was that central banks are proceeding cautiously and also that they were collaborating and sharing the results of their work.

T. Syahrul Reza (2018)[7] in his paper he discussed about cryptography and its applicability. The impact of technology on digitalization and security regarding privacy is the key matter of the paper. Insights of crypto-currency, the effects of Bit-coin, cryptosystems, leakage of personal information were also discussed. The study present professional countermeasures and attempts to define how the existing cryptology functioned being used worldwide by using Bit-coin as the prime. By understanding the current world phenomenon, it would be easier to answer the question of how secure and reliable cryptology actually is. Each encryption system has different cryptographic complexity. The actual degree of security achieved overtime varies, as more computer machinery power and more powerful mathematical methods become available. The study also focused on Government surveillance program, its constitutional acceptability, non-abusive, and necessary to stop terrorism and a national security threat through the digital mode of transactions. From the above reviews, the following objectives and hypotheses are framed.

4. OBJECTIVES OF THE STUDY:

- To understand the concept of Digital Currency.
- To analyse the Consumer Perception towards Acceptability of Digital Currency.
- To know the relationship between Government role in acceptability of Digital Currency.

5. HYPOTHESES OF THE STUDY:

H_1: There is a significant impact of "ease of use" on acceptability of digital currency.
H_2: There is a significant impact of "security" issues on acceptability of digital currency.
H_3: There is a significant impact of "government role" on acceptability of digital currency.

6. RESEARCH METHODOLOGY:

Currently, each and every transaction takes place through virtual mode. Hence, Digitalisation is an urge of every area of daily life. The study focuses on the acceptability of digital currency by the users**.** In this research study, data is collected from the users of Digital Currency. A structured questionnaire has been sent to users of Digital Currency, using judgement sampling method. Out of 173 responses received, 150 responses are taken for the study. The questionnaire is formed on the basis of three aspects, Ease of Use, Security and Government role in Acceptability of Digital Currency (Figure.1)

In this study, to draw the inference about Acceptability of Digital Currency Multiple Regression tool is used on the three aspects against the Acceptability of Digital Currency. It is to represent the collected data and interpretation of relationship between the outcome variable and predictive variables. The equation is explained, As follows:

$$A_i = \beta 0 + \beta 1 EoU1 + \beta 2 SEC2 + \beta 3 GOV3$$

A_i= Acceptability of Digital Currency
EoU= Ease of Use
SEC= Security
GOV=Government Role

Figure.1 Model on Acceptability of Digital Currency

As the data is used for analysis, the reliability of internal accuracy of data is must be documented. The most familiar reliability measure is the alpha value of Cronbach, which is used to evaluate whether the internal instruments are reliable. A reliability coefficient is greater than 0.6 usually shows that there is a substantial accuracy of data. SPSS 28.0 has been used for descriptive statistics and to test the hypothesis by using regression analysis.[8]

7. ANALYSIS AND INTERPRETATION:

A. Reliability Analysis:

Table.1.1

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.814	.814	4

Table.1.2

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Ease of Use	11.5228	2.167	.656	.437	.756
Security	11.9700	2.109	.661	.438	.754
Government Role	11.8406	2.319	.587	.354	.788
Acceptability of Digital Currency	11.6417	2.236	.632	.415	.768

The findings shows that Cronbach's Alpha value of dimensions is more than 0.6 and the dimensions were appropriate and could be used in the study to describe the impact of acceptability of digital currency.

B. MULTIPLE REGRESSION ANALYSIS:

Table.2.1

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.644[a]	.415	.403	.45524	.415	34.502	3	146	<.001
a. Predictors: (Constant), Gov, EoU, SEC									

Table.2.2

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	21.451	3	7.150	34.502	<.001[b]
	Residual	30.257	146	.207		
	Total	51.708	149			
a. Dependent Variable: Acceptability of Digital Currency						
b. Predictors: (Constant), Gov, EoU, SEC						

According to the model summary, 40% variation in the acceptability of digital currency by users is explained by independent variables namely ease of use, security and government role. The P value is less than 0.05 and therefore, it could be concluded that the model is of best fit.

In this case of each independent variable, two variables are significant impact on acceptability of digital currency, i.e., ease of use and security, but not the government role.

Table.2.3

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics		
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Tolerance	VIF
1	(Constant)	1.119	.296		3.776	<.001	.533	1.705			

Ease of Use	.358	.077	.366	4.654	<.001	.206	.510	.576	.647	1.546
Security	.270	.077	.286	3.529	<.001	.119	.422	.544	.609	1.641
Government Role	.110	.079	.109	1.391	.166	-.046	.267	.443	.654	1.528

The first factor that influence the acceptability of digital currency is ease of use ($p < 0.05$, $t = 4.654$). The second influencing factor is security ($p < 0.05$, $t = 3.529$). The third factor is government role ($p > 0.05$, $t = 1.319$). According to the Table the variance inflation factor (VIF) values are less than 10 and therefore, there is no serious multi Colinearity issue with the independent variables under the study.

$$A_i = \beta 0 + \beta 1 EoU1 + \beta 2 SEC2 + \beta 3 GOV3$$

A_i (Acceptability of Digital Currency) = *1.119 +0.358 (Ease of Use) + 0.270 (Security) +0.110 (Government Role)*

Table.3

Hypotheses	Status
H_1: There is a significant impact of "Ease of Use" on acceptability of digital currency.	**Accepted**
H_2: There is a significant impact of "Security" issues on acceptability of digital currency.	**Accepted**
H_3: There is a significant impact of "Government Role" on acceptability of digital currency.	**Rejected**

8. DISCUSSIONS AND CONCLUSION:

The main objective of the study was to examine the applicability of digital currency with a perceptual analysis. The study focused on three aspects –Ease of Use, Security and government role on the implementing digital currency. The findings of the study suggest that the applicability of digital currency is positively impacted by Ease of Use, Security. In the Ease of Use -Time, Cost of transactions and Security –cyber crime, risk against handling physical cash and personal security features are considered.

On the contrary with the government role in acceptability of digital currency in the users' perspective has lower impact because of government policies, regulations in implementing digital currency system. So, it is believed that government has to take measures to build reliability of digital currency usage and enhanced scope.

The way public respond to the new venture is very important for its success and growth. In this new normal period, it is definitely a remarkable turn in every perspective. Government of India is taking step forward on the path of digitalising all the sectors. Artificial Intelligence with block-chain technology will help us for proper administration and transparency.

The quantitative approach has been considered for this study is the major limitation. For further research, both quantitative and qualitative approaches are recommended to enhance accuracy. This study relay on perceptual views of 150 respondents is another limitation of the study. For the future research, it is recommended to use more variables to determine versatility of digital currency applicability.

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