DETERMINANTS OF DIGITAL CURRENCY ADOPTION AMONG EMPLOYEES IN UAE CENTRAL BANK

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Abstract

Recently, there has been a lot of discussion about central bank digital currency. Although this technology has a big impact on the global financial system, it has developed so quickly that the body of knowledge is lacking in many areas. One of these areas is identifying the elements that should encourage the easy adoption of this technology. Globally, and particularly in the banking sector, digital money has grown astronomically. Many central banks are considering releasing their own central banking digital currency (CBDC). Although there are numerous signs that online payments successfully satisfy consumers' expectations despite the sharp rise in both online payment usage and volume, central banks are still investigating the use of a digital currency to streamline and enhance this transaction. However, very few studies have looked into and predicted how such technology may be utilized. This study primarily examines the theory of reasoning action's elements to determine whether they have an impact on how users accept new technologies. A survey of the central bank employees in the UAE's two branches was conducted to determine how these factors affected them. The survey received 94 valid responses. The UAE has a reputation for being one of the first nations to adopt cutting-edge technologies, including smart cities, e-government, and central bank digital currency. A number of conclusions were also derived from the study's findings, which showed how crucial it is to take the Theory of Reasoning and Action into account while planning a CBDC adoption study. The suggested model is an indisputable one that integrates what is already known and offers knowledge to direct next study in a connected topic.

Keywords: Digital Currency, Technology, Information System, Subjective Norm, Satisfactory

1. INTRODUCTION

For thousands of years, the main objective of state policy has been to provide the populace with trustworthy money through central banks. A public good is reliable money. It serves as an accounting unit, a method of exchange for buying and selling goods and services, a store of value, and a way to settle financial transactions. The role of central banks in producing money for general use is crucial (Settlements et al. 2020). As of right now, the advent of digitalization has led to a major change in socio-economic structures, business models, organizational patterns, and consumption patterns. Examples include the widespread use of online collaboration, communication, banking, shopping, and other services in our day-to-day life (Cochoy et al., 2017). Online users regularly expected that in light of this, money will also experience a digital transition to meet the demands of advancing digital economies. The expansion of virtual economies is dependent on the digitization of banking, the convenience of effective services, and other advantages related with online financial transactions. As a result of this modification, the conventional model payment method was given up. (Brunnermeier and colleagues, 2019).

Central Bank Digital Currency, or CBDC, is a sophisticated digital architecture and complicated software that can provide both economic and social advantages. Building and managing a CBDC will need significant competence on the part of any government, as well as a knowledge of the designs and shortcomings that this brand-new form of money introduces into the local economy. (Agur, 2021) According to data from the Bank for International Settlements, 85 percent of central banks throughout the world are now testing or studying CBDCs.

2. LITERATURE REVIEW

The acceptability of digital money in individual economies depends heavily on central banks. According to experts, Central Banks might anticipate observable favourable consequences if the process of collaborating with digital currencies is properly supervised and managed. For example, central banks may reduce workloads and increase public acceptance of digital currency, say Peters and Panayi (2016), by sharing some liability risks with digital currency issuers as well as the cost of online transaction workloads. The financial system would become more democratic and diverse for consumers as a consequence of the introduction of digital currencies, which would also offer an important means of decentralizing the central bank's governing structure and a substitute for online transactions.

2.1 Theory of Reasoned Action (Tra)

One of the most extensive and influential study projects in social psychology history was produced by the theory of reasoned action and its offshoots, such as Ajzen's (1988, 1991) theory of planned conduct (Ajzen & Fishbein, 1980; Fishbein, 1963, 1967, 1980; Fishbein & Ajzen, 1975). Each of these concepts has hundreds of references, which indicates that this study system has had a significant influence on the area of psychology, according to a quick check of the citation database. This model, developed in 1975 by Fishbein and Ajzen, was a precursor to models of subsequent technical adoption. According to the TRA (Theory of Reasoned Action), a person's motivation might explain their use of technology. Individuals' intentions are driven by their perception that the majority of the key people in their lives feel they should act in the manner in question (subjective norm) and by their positive or negative sentiments about the target activity (attitude). An illustration of the theory is provided below.

In summary The TRA seeks to clarify how behaviour is determined by the behavioural goal used to emit the behaviour. Behavioural intention is influenced by attitudes (one's perspective on an activity) and subjective norms (one's perception of what a group thinks members should do). This concept has been applied to moral behaviour forecasting. The underlying presumption is that rational conduct will result from the availability of information inputs that influence behaviour. The higher one's perceived control and the impact of subjective norms, the larger one's favourable attitude and the willingness to participate in the action. The potential impact of resources or talents on intended behaviour was not considered in this hypothesis.

TRA put out the following three major constructs:

(1) Behavioral intention,

(2) Attitude,

(3) Subjective norm.

2.2 Behavioral Intention

The component that decides whether a technology is used is behavioral intention, which is the individual's willingness to use and continue using a technology. The inclination of an individual to use a technology system has been characterized as behavioral intention in previous findings on technology acceptance (Venkatesh et al., 2012; Venkatesh et al., 2003; Davis et al., 1989). In line with Venkatesh et al. (2012), we define behavioral intention in our study as the desire for a person to use and continue using a technology system, where the individual is a user of technology and the setting is m-shopping fashion devices. Likewise, there is common consensus throughout academics that users' intentions to utilize a particular technological system are a reliable predictor and influencer of their subsequent utilization. As a result, a key idea in technology acceptance models is the behavioral desire to adopt a technology (Venkatesh et al., 2003; Taylor & Todd, 1995; Ajzen, 1991; Sheppard et al., 1988). But there is little agreement among academics about the elements that influence a person's tendency to engage in a certain habit, in this example, using mobile apps for fashion shopping. Researchers have found many elements that influence behavioral intention, and these aspects vary depending on the technological situation. The following portions will use a number of technology acceptance models and earlier research to explain this.

2.3 Attitude

According to Triandis (1971), attitude depicts how much a person communicates approval or disapproval of novel concepts. Fishbein and Ajen (1991) assert that people might develop attitudes as a result of prior learning experiences, and as a result, users may continuously exhibit favorable or unfavorable behavior toward a certain technology or notion. Triandis (1971) defined attitude as the confluence of personal traits that determine whether behaviors, knowledge, and feelings are favorable or negative toward a notion or a subject. The core aspects of attitude influence, cognition, and conduct deal with a person's level of inclination, information, responses, and intentions towards a notion. When it comes to employing technology to enhance ability to do the job, time management, and the efficiency of the project, attitude is a predisposed state of mind. User attitudes are a key element in the process of embracing and efficiently utilizing new technology, according to earlier studies.

TAM may come under fire for not supplying enough details about the mental operations that result in a user's acceptance of new technology. The Theory of Attitude Model (TAM) maintains the central idea and constituent parts of Ajzen and Fishbein's Theory of Rational Behavior (Ajzen and Fishbein, 1980), but by eliminating the attitude structure from the TRA model, TAM effectively rejects the necessity of attitude in the understanding of behavioral hijacking. In describing behavioral intent or actual adoption behavior, models (Venkatesh and Davis, 1996; Venkatesh and Davis, 2000; Venkatesh et al., 2003) and attitudes have been used. He asserted that the role of attitude was minimal and highly constrained, and that it merely served as a partial mediator between prevailing ideas and the actions or purposes of the

accepted technology. However, this supposition lacks theoretical support and is regarded as the TAM theory's primary flaw (Kim, 2016). Therefore, it is a priority of this study to assess how attitude affects the acceptance of digital money.

2.4 Subjective Norm

Normative pressure is the term for the phenomena when people regularly alter their behaviours, feelings, or ideas in an effort to be liked and approved by others. Conformity occurs when people modify their speech or conduct to sound more typical. The ability to present a favourable first impression and the fear of shame are personal elements that affect normative control. Normative influence is most potent when someone is worried about the person in charge and when action is taken in front of the group. Because it demonstrates how much a person's social environment affects their ideas and behaviour, it is a significant phenomenon in social science. High-profile companies like Apple, for instance, have maintained a strategy of secrecy about component sourcing and practices and have only disclosed the details following intense demand from norms (Francisco and Swanson, 2018). Francisco and Swanson (2018) claim that block chain applications are "social" technologies because of the way they are made. A "critical mass" of users and growing normative pressure (Granovetter, 1978; Markus, 1987) might, however, lead to greater intents to use in this situation. This study indicates that because central banks are taking their time approving digital currencies, applying or using normative pressure in this environment is not as successful as using other factors (Saif-Almuraqab, 2019). The study found that, aside from economic pressure, which causes the central bank to give in to pressure by adopting digital currency, there is no normative pressure on central banks to approve digital currency from governments or individuals, despite the lack of evidence supporting this idea. The addition of subjective norm in this study was necessary because of the research that showed that economic pressure, governmental demand, and requirements or requests from individuals all have an impact on whether digital money is accepted in the UAE and other GCC countries like Saudi Arabia.

2.5 Framework

The model developed by the authors, whether by adapting or basing them on pre-existing theoretical methods or coming up with their own ideas, provided the conceptual framework of a research. In order to address the research concerns, this study is built upon the frameworks and methods of the earlier models, but with modifications and the addition of new factors. According to the framework, the research can offer three assumptions from the theory and construct above.

H1: Attitude of users has a significant effect on adoption of digital currencies

H2: Behaviour Intention of users has a significant effect on adoption of digital currencies

H: Subjective Norm has a significant effect on adoption of digital currencies
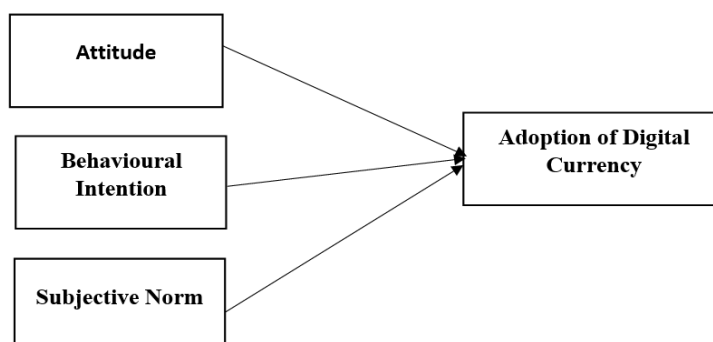
Figure 1. Conceptual Framework

3. METHOD

Any current theories should be tested using a casual explanatory research methodology that includes both data collection and numerical data analysis. An analysis of correlations and effects between the independent and dependent variables was thus conducted in this study using a correlational design. This study used the correlational research approach because it wanted to look at potential relationships between various factors (Creswell, 2013). Due to the nature of the variables and the parametric assumptions used in this investigation, the correlational approach nicely correlated with the stated hypotheses. There are six central bank branches in the United Arab Emirates, where this study was conducted. One is each in Sharjah, Dubai, Fujirah, and Ras Al Khaimah, while two are situated in the emirates of Abu Dhabi. The UAE's monetary and economic balance, as well as the country's prosperity, are the goals of the UAE Central Bank (CBUAE). In order to do this, CBUAE implements competent monitoring, cautious reserve management, the development of a sound financial infrastructure, and rules that follow international best practices (Central bank 2022). Smart Pls, which have benefits when the sample number is small, will be used to analyse the study's entire sample, which was calculated to be 94.

Instrumentation is the collective term for the set of fundamental tools needed to gather data for a project. In order to gather and organize data for social and educational research, the researcher employs tools like questionnaires, interviews, and observations. Questionnaires have taken over as the go-to method for data collecting because to their wider reach, accessibility, and affordability (Frankel et al., 2012).

4. RESULTS

A quantitative research methodology was used to evaluate the survey. The first and most crucial phases in these procedures are permission and inspection. In order to remove missing numbers and look for anomalies, the data was cleansed. Both SPSS 22 and Smart Pls were used to check for normalcy. Next, the data underwent two different types of analysis: descriptive and inferential.
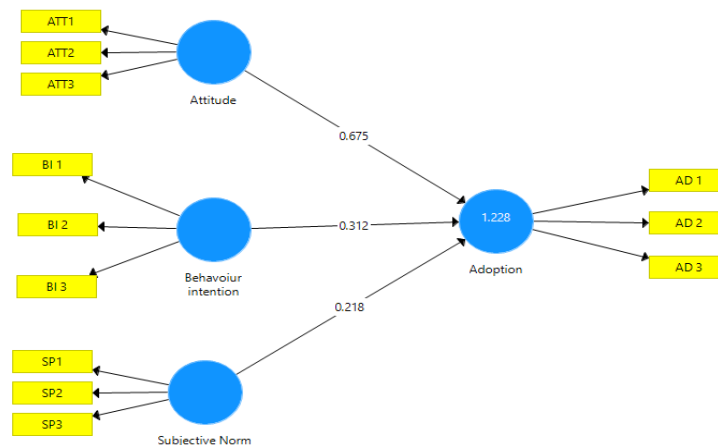
The real impact of one factor supposed to be a factor on another variable assumed to be an effect is shown by a path coefficient. Because of the fact that they are computed from correlations, path coefficients are normalized (a path regression coefficient is unstandardized). Two subscripts are used to represent path coefficients.

Path Coefficient	
Variable	Adoption_
Attitude	0.675
Behaviour intention	0.312
Subjective Norm	0.218

All of the variables are above 0, 1 which mean they are acceptable for the study. Next the researcher will test the hypothesis through bootstrapping on Smart PLS, the following results appears.

	Standard Deviation	T Statistics	P Values
Attitude -> Adoption_	0.107	3.547	0.001
Behaviour intention_ -> Adoption_	0.083	5.524	0.02
Subjective Norm -> Adoption_	0.091	2.81	0.005

The p-value decides whether a relationship is statistically significant, and in this example, all three hypothesis testing findings are statistically significant, showing a positive correlation between the three variables and adoption. P-values, a type of statistical likelihood, run from 0 (no chance) to 1. (Absolute certainty). Therefore, 0.5 represents a 50% probability and 0.05 represents a 5% risk. Results with a p-value of.05 are regarded to be on the edge of statistical significance in the majority of sciences.

R Square   R Square Adjusted

Adoption_   0.894   0.890

R-squared values typically vary from 0% to 100% and have a range from 0 to 1. An R-squared of 100% indicates that changes in the index fully explain all changes in a security (or other dependent variable). According to the above table Square around 89% of change in adoption are explained by the three variables.

5. DISCUSSION

The CBDC among UAE central bank workers was the subject of this study. The study has conducted a SEM analysis to fulfil its objectives and determine the outcome of each hypothesis as digital money becomes more widely accepted across global financial systems.

To provide suggestions, this study's specific goal was to look at the effects and causes of the TRA hypothesis in relation to CBDC. The findings showed that all of these factors had statistically significant with a P-value less than 0.05. On the subject of how broadly CBDC is used, it has been proposed that this will have a significant effect. Customers' perceptions of danger, behavioral desire to use CBDC, and judgments of how simple it is to use will all be impacted as a consequence of this campaign.

Users who use digital transactions face less obstacles than users of physical transactions, such as regional restrictions, currency barriers, language problems, ethnic borders, customs limits, and scheduling restrictions. Berentsen is a fictional character (2019). Nakamoto (2008) asserts that the usage of digital money promotes increased global commerce by enabling users to conduct secure peer-to-peer monetary operations without the involvement of top financial authorities (such as central banks). It would be challenging to connect potential buyers and sellers in online transactions without digital money. Panayi and Peters (2016). A debate between central banks and digital currencies has arisen as a result of the use of digital currency in regions without central banks. For instance, users of virtual currencies don't need to open bank accounts in order to use them. Central banks have rejected or outlawed the use of virtual currency in their economies because they are unwilling to step in, monitor, or regulate its use. Fewer people, according to this survey, have participated in the discussion about central banks and digital currencies. This is a significant obstacle that hinders individuals from utilizing digital currency in particular economies, claims the study.

The effectiveness of digital currencies that are fundamentally immune to destructive attacks has been used and monitored by users from a number of industries. Three economies—the United States, the United Kingdom, and Japan—have central banks set up as part of the Central Bank Digital Money (CBDC) program. Public adoption of digital currencies is shown by the CBDC pilot projects in the Bahamas, Lithuania, and Uruguay. CBDC will result in economic digitalization and provide benefits as a data driven in the countries identified by the authors in the list of study countries. Lower banking costs are the outcome, claims Agur (Agur, 2021) of CBDC's addition of cash and deposits for users of online transactions. With CBDC's assistance, central banks may more easily identify the developing risks to the current financial system and monetary system and take appropriate action to mitigate them. CBDC is a digital currency with widespread acceptance that might take the place of current online payments in cash.

6. CONCLUSION

The fast development of digital monies has created a need for research into the elements influencing central bank adoption of these forms of payment in daily life. This study fills that requirement. The findings highlight the primary variables that have a direct influence on the use of virtual currencies: Attitude, Performance Expectancy, and Social Norm. The central bank will be better able to weigh the advantages and disadvantages of this new financial environment and be prepared when digital currencies become a widely used form of payment the sooner it learns how to do so.

The expansion of virtual economies is dependent on digital banking, which offers effective services and other advantages connected to online or web-based financial transactions. The take-off of the regular conventional model payment element is being driven by the innovative economic expansion that is occurring on a global scale. In order to facilitate legitimate transactions between the parties involved in online transactions, a currency that is widely accepted and has fewer constraints is therefore required to supplement banks. A key factor in regulating interactions between the formal and informal economies is currency. The possibility of currency restrictions (such as those imposed by digital money) would conflict with all businesses' propensity to conduct online transactions, leading to the theft of important projects across the world's economy.

Because it encourages and develops the display of web/web commerce between company partners or organizations in diverse geological landmasses, virtual currencies will always be necessary. The exchange of millions of dollars' worth of speculative assets and a higher potential usage rate than traditional currencies make bitcoin a popular digital currency among ecommerce platforms in the Arabian Gulf and elsewhere. Because of this, there is a need for an excellent virtual currency support organization that can finance and revalue virtual currencies through internet channels and fast expand exchanges without regard to geography. Virtual currency has become more appealing in the contemporary day as a result of the rise of virtual environments. Trade and the execution of security contracts between parties on opposite corners of the globe necessitate the use of currency. These elements affect the acceptance of virtual currencies for online trading and make it simpler to use such currencies. For instance, the author emphasized that digital currency has achieved the majority of the functions traditionally associated with money, including those of a medium of exchange, a significant value store, and a unit of account, the latter of which has increased public acceptance of digital currency.

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