Journal of Advances and Scholarly Researches in Allied Education
Vol. 19, Issue No. 4, July-2022, ISSN 2230-7540

Evaluation of the qualitative factors related to blockchain technology and impact For UAE's resident Happiness

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Abstract - Together with a broad range of other enabling technologies, blockchain generates the genuine value for the populace and the economy. In order to effectively employ artificial intelligence in the healthcare sector, there are a number of challenges that must be solved, including privacy issues, a lack of large-scale, high-quality data sets, the requirement for high dimensionality, high sensitivity, and high specificity. By employing blockchain as the method, the current inefficiency problem in the financial sector may be alleviated. The potential of blockchain technology is already being explored by more than 45 financial institutions. The research showed that this technology is still in its early stages of development. The more thorough analysis, suggestions, and real-world examples. The study addresses both the applicability of blockchain technology and the many initiatives that have been discussed in the UAE and throughout the globe. In the background, there was some conversation concerning the development of BC technology. The most crucial step was to do study to determine how well BC technology will work in the UAE.

Keywords - Block-chain technology, Resident Happiness

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INTRODUCTION

The true value for the people and the economy is created by blockchain in conjunction with a wide variety of other supporting technologies. Privacy concerns, a lack of large-scale, high-quality data sets, the need for high dimensionality, high sensitivity, and high specificity are some of the obstacles that must be overcome in order to successfully use artificial intelligence in the healthcare industry. The majority of the difficulties can be overcome by integrating Artificial Intelligence and Blockchain technology into problem-solving strategies.

Blockchain technology's potential for smart cities:

The application cases for smart cities might benefit greatly from blockchain technology. The need for mobility services and electricity grids to have a solution that is safe, transparent, and decentralised may be effectively supported by blockchain technology. Autonomous and electrically driven cars that are privately owned and operated have the potential to promote the development of blockchain technology.

The Potential of Blockchain Technology for Financial Services:

The present inefficiency issue in the financial industry may be helped by using blockchain as the mechanism. Over forty-five financial institutions have already begun investigating the potential of blockchain technology. The following should be kept in mind with regard to blockchain technology:

1. **Enhanced Security:** With blockchain immutability characteristics and crypto data, there is no possibility of a breach, and recovery is quick in the event that one node goes down.
2. **Simplification and Cost Reduction:** Blockchain technology helps to eliminate the need for middlemen, and it also makes it possible for banks to share infrastructure and have automated processes in place thanks to smart contracts. This will assist banks in significantly lowering their operating costs and making their current procedures easier to understand.
3. **Transparency:** This helps complete regulatory requirements and ensures compliance; moreover, financial institutions are able to get insight on data despite the

fact that it is a shared resource protected by information security measures.

Direction of Blockchain Technology:

The Hype Cycle is a useful tool that demonstrates how rapidly technology is advancing and how it is gradually gaining control of the world. Mike Walker, Research Vice President at Gartner, made the following statement: "As a technology leader, you will continue to be confronted with quickly accelerating technological advances that will fundamentally alter the way you engage with your workforce, customers, and partners. The patterns that are being brought to light by these new technologies are positioned to become the next most influential technologies. These technologies have the potential to disrupt your company, and your executive teams need to be actively monitoring them.

Strategy for the Blockchain in Dubai:

To the Most Noble Sheikh Hamdan, the Crown Prince of Dubai in the United Arab Emirates, recently announced the launch of a Blockchain Strategy for Dubai. This strategy demonstrates the country's vision to lead in the implementation of technology to provide a secure, seamless, and impactful experience for both residents and tourists. As can be shown in the following list, the Dubai Blockchain Strategy is comprised of the following three pillars, or priority areas:

The Emirates' Approach to Blockchain Technology:

In April 2018, the United Arab Emirates Government released the Blockchain Strategy 2021 for the emirates. The plan anticipates that by 2021, blockchain technology will be used for fifty percent of all transactions involving the government.

The blockchain technology will have an effect on a variety of aspects, including the reduction in the amount of time required for the transaction cycle as a whole as well as the saving of time and effort. The goals outlined below are ones that the UAE government hopes to achieve via the use of blockchain technology.

- Cost reductions of 11 billion AED related to the processing of documents and transactions
- A decrease in annual burden equal to 77 million work hours saved.
- Doing away with the printing of 398 million documents per year

OBJECTIVE OF THE STUDY

- To evaluate the impact of resident understanding about block chain on UAE potential economic development.
- To assess the impact of block chain on Resident happiness
- To examine the impact of resident understanding about block chain on Resident happiness.

METHODOLOGY

Primary and secondary sources were used to compile this information. Primary data will be collected through a combination of quantitative methods (distribution of a research questionnaire to 500 randomly selected residents covering various nationalities in the UAE) and qualitative methods (structured interviews with technology leaders who have participated in blockchain related initiatives).

This justifies a sample size of 500.

This research will focus on the United Arab Emirates.

The survey is done using a standardised questionnaire that was designed and planned in advance of any contact with the respondent; the respondent will have no say in the order of questions asked but must provide honest answers. A questionnaire will be supplied to each respondent, and the researcher will describe the study's goals in detail. Researchers use primary sources, such as interviews and surveys, to get insight into the characteristics and behaviours of the individuals they're studying and develop solutions to pressing issues. That's why this survey only includes participants who had either actively used or heard of a service that relied on blockchain technology. Everyone living in the United Arab Emirates (UAE) is a permanent resident. The study population consists of adults of various ethnicities and ages above the age of 18.

Cronbach's alpha is calculated for the original research data to ensure its validity and trustworthiness. Given the quantitative and deductive nature of this study, it is essential that its variables be operationalized in a form that allows for precise numerical measurement.

In structured interviews, the same set of questions are asked in the same sequence in each interview, making it simple to compare and contrast the

responses. The most important factor is ensuring that responders come from a wide range of cultural backgrounds and have experience working on blockchain projects in a variety of capacities. With the participants' approval, field notes and audio recordings are made of the interviews, and the transcripts are then compiled and analysed. In addition to the interviews, fieldnotes chronicled every observable moment. In addition, it is used to code and analyse all of the data obtained using qualitative data analysis tools, allowing researchers to identify themes and establish primary study directions. The results are detailed and compared to previous research and analysed documents.

RESEARCH METHODOLOGY

H1: There is no significance impact of resident understanding about block chain on UAE potential economic development.

H2: There is no significant impact of block chain on Resident happiness

H3: There is no significance impact of resident understanding about block chain on Resident happiness.

DATA ANALYSIS

Descriptive analysis of the variables:

Table 1 express the descriptive statistics of the demographic and other variable. After percentage analysis to check the significance of the result, descriptive statistics are calculated and based on the result (Mean > ½ s.d.) the significance of the result are decided. All measures depicted in table-50 are significant as their mean values are greater than the half of their respective standard deviation.

Most of the resident responding for the block chain technology are from 3rd age group (26 years to 45 years) and most of the resident are post graduate. Large proportion of the respondent representing the UAE resident using Block chain technology is male. Likewise, they are from service classes having 4-5 family size with 2-3 dependent in the family. They have 100AED – 150AEd annual income. These residents are still dependent for their financial decision on someone to guide.

Representative of resident referred that they have moderate level of understanding and awareness about block chain technology, its features and its various categories. Block chain technology does have moderate influence on resident happiness of UAE.

However, Economic development with the adoption of block chain technology does have high potential of growth and development. This already has influenced the UAE economic functionality among the public and private sectors.

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Age	529	1	4	2.86 ~3	.762
EDUCATION	529	1	4	2.59~3	.577
Gender	529	1	2	1.37~2	.483
Occupation	529	1	4	2.36~2	.649
Family Size	529	1	4	1.72~2	.678
Number of dependent	529	1	4	1.18~1	.533
Income (Annual in AED)	529	1	4	3.48~3	.769
Social Class	529	1.00	4.00	2.7183~3	1.01227
Awareness	529	2	5	3.49~3	.503
Resident happiness	529	1	5	3.49~3	.441
UAE Economic Development	529	1	5	4.04~4	.443
Influence of BCT on UAE economy	529	1	5	4.04~4	.493
Blockchain optimality	529	2	5	4.01~4	.403
Valid N (listwise)	529				

Source: Author Calculation

Nevertheless, in UAE block chain technology are function its optimum level as it reported 4 score.

2- Model-2

H0: there is no significant impact of block chain on UAE potential economic development

H0: there is no significance impact of resident understanding about block chain on UAE potential economic development.

To examine these two hypotheses, linear regression model is being applied with the equation of

E D= a0 + a1* BC + a2* Aw + v1……(1)

From Model summary table, R square value is 0.706 which is good indication about the selected variable and their ability to explain the model variation.

Second table ANOVA dies contain significant model frame with the linear relation between the variable as p value is 0.000.

Next for moving the coefficient analysis with the respective variables. From the coefficient table as p value for both (Block chain and its awareness) does contain 0.000 value which refers the rejection of null hypothesis and acceptance of alternative hypothesis. Which indicates a positive impact of Block chain function and its optimal function on UAE potential economic development. Likewise, Awareness and understanding about the Blockchain technology among the Resident also ensure the UAE potential economic development.

Model-3:

H0: there is no significant impact of block chain on Resident happiness

H0: there is no significance impact of resident understanding about block chain on Resident happiness.

To examine these two hypotheses, linear regression model is being applied with the equation of

RH= c0 + c1* BC + c2* Aw + w1……(1)

From Model summary table, R square value is 0.64 which is good indication about the selected variable and their ability to explain the model variation.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.706[a]	.499	.497	.314

a. Predictors: (Constant), Awareness, Blockchain optimality

Another ANOVA table express the significance of assumed model. Again, P-value of model represent the significance linear relationship between the variables.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.894	2	20.947	181.072	.000[b]
	Residual	60.849	526	.116		
	Total	102.742	528			

a. Dependent Variable: Resident happiness

b. Predictors: (Constant), Awareness, Blockchain optimality

Moreover, the coefficient table express the impact assessment of the variable on resident happiness. Block chain Function and awareness among the resident are the reason to make them happy business and economic activities and uplifting their standard of living as p value is less than .05 (.00).

Block chain adoption and its functionality does have positive impact on resident happiness with the marginal rate of 0.255 and awareness does also have positive impact on resident happiness with 0.426 marginal rate.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.134	.140		8.108	.000
	Blockchain optimality	.351	.040	.319	8.825	.000
	Awareness	.428	.032	.486	13.452	.000

a. Dependent Variable: UAE potential economic development.

FINDING AND CONCLUSION

Because block chain technology is popular among the younger generation, age has a negative influence. Education has a favourable influence since highly educated individuals are better acquainted with blockchain technology and use it in their company operations. Because men are coded as 1 and females as 2, a person's grasp of blockchain technology decreases as they become more feminine. The size of a person's family influences their understanding of blockchain technology. Another factor to examine is the number of dependents living in the household; persons with a large number of dependents are less acquainted with blockchain technology. Understanding of blockchain technology is positively connected with wealth; high-income individuals comprehend the technology better than low-income ones.

The development of this technology is only getting started. The more extensive research, recommendations, and practical examples The relevance of blockchain technology and the many efforts that have been debated in the UAE and throughout the world are both addressed in the research. There was also some discussion about the history of the BC technology in the background. The most important component was to do research into how successful it would be to use BC technology in the UAE. Because of this, the focus of the study was on the findings of a survey that had been sent to a variety of businesses in the UAE. Seventy-one different businesses were given the opportunity to talk on how they integrated BC technology into their operations. The findings provide more insight into the prevalence of blockchain technology and its applications. In addition to this, a solid comprehension of the manner in which public and private businesses in Dubai are conforming to the new Dubai 2021 plan is provided.

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