The Exploration and Analysis of Malaysia Web 3.0 Financial System's Design Factors with Quantitative Survey and Clustering Method

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While the adoption of Internet technology has revolutionized the Malaysian financial industry, the current Malaysia Web 2.0 financial systems lack transparency, security, and accessibility. The shortcomings could be resolved by introducing Web 3.0 to Malaysia's financial industry. This research aimed to explore the factors that influenced the adoption of Web 3.0 financial systems among Malaysian adults. Firstly, a Web 3.0 prototype system was developed with Web 3.0 design features. The web system's interfaces were included in the questionnaire form, where 150 Malaysian adults were prompted to respond with their agreement on whether the factors of decentralization, security, transparency, accessibility, effectiveness, learnability, and ease of use are important and have positive significant relationships with intention to use Web 3.0 financial systems. The findings from hypothesis analysis found that only the factors of transparency, security, and accessibility had positive relationships with the intention to use Web 3.0 financial systems among Malaysian adults. The findings were later proposed as Malaysia Web 3.0 financial systems' design framework, and further analyzed with the K-Means clustering method, for the benefit of Web 3.0 industry players to better understand adult users' preferences. These research findings will support and grow the usage of Malaysia's Web 3.0 finance systems.

Keywords: Accessibility, Malaysia Financial System, Security, Transparency, Web 3.0.

1. Introduction

Malaysia achieved independence in 1957 in Southeast Asia. Its economy heavily relies on manufacturing section multinational corporations (MNCs) play a significant role in exporting manufactured goods. This involvement of MNCs has helped mitigate economic downturns and aid in the country's recovery [1]. Malaysia faced significant economic challenges but managed to recover successfully following the 1997 financial crisis. The aftermath of the Asian financial crisis resulted in ongoing financial reforms, leading to the

establishment of a more diversified, expansive, and resilient financial infrastructure. Malaysia displayed a GDP growth rate of 4.2%, indicating a robust and promising economic recovery in 2002 [2].

Bank Negara Malaysia which is the central bank of Malaysia plays a vital role in promoting economic sustainability and stability within the monetary and financial systems. It acts as the primary financial banker, agent, and advisor to the government, contributing significantly to the country's financial well-being and development [3]. The predominantly Muslim population in Malaysia creates a substantial domestic market for Shariah-compliant offerings. Malaysia has successfully established a comprehensive Islamic financial system encompassing banking, capital markets, and insurance, positioning itself as a prominent advocate of Islamic finance through proactive initiatives [4]. Islamic banking operates on the principles of Shariah law [5].

The research problem centers on the observation that various countries worldwide have adopted and integrated Web 3.0 into their financial systems [6]. Yet, there is currently no proposed Web 3.0 financial system within the Malaysian context. This critical issue arises from the insufficient cryptography skills among talents in Malaysia [7]. Additionally, there is a need to gain a deeper understanding of the preferences of various factors by clusters to facilitate more accurate and targeted design framework delivery to Web 3.0 target customers. The utilization of clustering analysis stands as a crucial methodological approach intended to reveal underlying patterns and preferences within the collected survey data [8]. It aims to unveil hidden patterns within the dataset, facilitating a comprehensive investigation into the factors that influence the intention to use a Web 3.0 financial system in Malaysia.

This research seeks to understand what influences adults in Malaysia to adopt and use Web 3.0 financial systems by identifying factors that foster positive relationships. It aims to propose a practical framework for designing these systems based on the findings. This study also seeks to delve into the identification and exploration of distinct respondent clusters associated with various Web 3.0 system design factor groups. The literature review, methodology, quantitative survey, and clustering analysis result, with the conclusion of the research findings, are written in the following sections.

2. LITERATURE REVIEW

I. Current State of Malaysia Web 2.0 Financial System

Bank Negara Malaysia which is the central bank of Malaysia has significantly contributed to the growth of digital banking services through the introduction of progressive policies and guidelines [9]. BNM has unveiled the five successful applicants for digital banking licenses which were approved by the Ministry of Finance Malaysia on April 29, 2022. Three are predominantly owned by Malaysians among the five consortiums. These include Boost Holdings, RHB Bank Berhad, Sea Limited, YTL Digital Capital Sdn. Bhd, and KAF Investment Bank Sdn. Bhd [10]. Digital banks hold a competitive advantage over traditional banks due to their ability to utilize existing customer bases, financial resources, and technology. This enables them to offer a wide array of financial services through a digital interface usually in the form of an online application [11]. The advancement of mobile banking apps and e-wallets has displayed notable progress that showcased the nation’s

increasing focus on digital financial services [12]. It provides an interface for users to connect with the banking platform using their mobile devices. Financial institutions and e-wallet providers have facilitated the adoption of e-wallets through diverse offers and promotions [13]. The increasing utilization of e-wallets in Malaysia has a substantial impact on the nation's financial ecosystem. It has not only reduced dependence on conventional payment methods like cash and credit cards but also encouraged the transition towards a cashless economy [14].

II. Malaysia Web 2.0 to Web 3.0 Financial System

Bank Negara Malaysia (BNM) has taken proactive steps to acknowledge the transformative potential of Web 2.0 technologies in Malaysia's rapidly evolving financial sector. BNM recognized the dynamic evolution of the financial landscape acknowledged the significance of embracing emerging trends such as Web 3.0 and understood the need for continuous adaptation to stay at the forefront of technological advancement [15]. Web 3.0 is commonly referred to as the next iteration of the web. It is characterized by stronger decentralization, intelligence, and safety properties compared to its predecessor, Web 2.0 [16]. Many believe that Web 3.0 will offer improved security because of its decentralized design and the heavy use of cryptography.

Web 3.0 technologies present opportunities for tokenization by allowing assets to be represented as tokens on the network that could potentially transform ownership structures. Tokenization enables the division of illiquid assets into multiple fractions [17]. This helps in democratizing access to investments and assets, making them more accessible to a broader range of individuals. Moreover, this transition will also impact existing digital banking platforms and electronic wallet applications within the traditional Web 2.0 financial sector. Malaysian banks could use smart contracts to automate intricate banking procedures which enhance efficiency and alleviate costs. The concept of self-sovereign identity will empower users to have control over their digital identities. It helps reduce the need for managing multiple accounts and passwords.

III. Comparison between Web 2.0 and Web 3.0 Financial System

Web 2.0 and Web 3.0 financial systems display distinct stages in the evolution of the financial industry. The difference in characteristics is outlined in Table 1. Web 2.0 financial system prioritizes centralization and complete control over user data. On the other hand, the Web 3.0 financial system emphasizes decentralization, efficiency, and transparency [18].

Table 1 Comparison of various aspects between Web 2.0 and Web 3.0 financial system

Aspect	Web 2.0	Web 3.0
Network architecture	Centralized network architecture with reliance on a few major institutions	Distributed network architecture with nodes spread across the globe, reducing central points of control
Security measure	Depends heavily on traditional cybersecurity measures	Utilizes blockchain's inherent security features safeguarded by heavy usage of cryptography
Data transparency	Transaction information is not open for public access	Transaction information is transparent to all parties
Efficiency	Not inherently support smart contract usage	Extensive use of smart contracts in automating financial agreements

Tokenization	Limited support for asset tokenization, challenging to represent assets as digital tokens	Extensive support for asset tokenization, allowing various assets to be represented as digital tokens

IV. Web 3.0 based framework

Research efforts dedicated to formulating a financial framework leveraging the potential of Web 3.0 technologies within the existing financial system have been relatively limited based on the current state of knowledge. The literature on the Web 3.0 framework can be classified into both technical and conceptual papers. Technical papers typically focus on the technical aspects of a particular problem or solution that often involve the development of new technologies, methodologies, or frameworks. Conversely, conceptual papers are literature works that primarily revolve around theoretical or high-level concepts and frameworks rather than technical detail. These papers delve into ideas, concepts, or theoretical constructs without necessarily providing practical implementations. Table 2 presents a comparative analysis of the reviewed papers in the literature.

Table 2 Comparison between different categories of paper

Type	Source	Key Contributions
Technical Paper	[19]	Proposed a blockchain-based semantic exchange framework for Web 3.0
	[20]	Introduced a unified blockchain-semantic framework for Web 3.0
Conceptual Paper	[21]	Focused on the need for organizations to develop adaptive marketing capabilities in the context of Web 3.0
	[22]	Presented a conceptual framework explaining the impact of Web 3.0 on marketing, artificial intelligence, and blockchain

Table 3 compiles insights from ten empirical research papers focused on Web 2.0 financial system adoption. The research papers employed well-established models such as the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM) to investigate the factors influencing adoption across various domains.

Table 3 Overview of relevant empirical research in financial system adoption

Source	Model used	Findings
[23]	UTAUT	The UTAUT model was applicable in Malaysia to understand the intention to use Internet banking.
[24]		The individual intention to adopt mobile banking was greatly influenced by social influence, perceived financial cost, performance expectancy, and perceived credibility, in their order of influencing strength.
[25]		Confidentiality and trust, facilitating conditions, attitude towards using technology, performance expectation, and effort expectation were significant to overall satisfaction and e-government adoption in UAE
[26]		The user intention to adopt Internet banking was forecasted by effort expectancy, assurance, performance expectancy, website design, customer service, and reliability.
[27]	UTAUT and Flow-Based Theoretical Model	Performance expectancy, perceived playfulness, social influence, and facilitating conditions were among the major variables that influenced behavioural intention on ICT use significantly.
[28]	TAM	Self-efficacy, anxiety, usefulness, and intrinsic motivation were key factors for individual use of the web as a survey tool.
[29]		Perceived usefulness and perceived ease of use were factors that influenced students' attitudes toward using Moodle.
[30]		Perceived Social Influence had great effects on Behavioural Intention to

		Internet Banking (BI).
[31]		The usefulness factor played a critical role in determining the level of Bitcoin adoption.
[32]	TAM2	Excluding the effect of "image" on "perceived usefulness," all the other social influence processes and cognitive instrumental processes of TAM2 affected users' perception of the degree of interaction and sharing strengthened by Web 2.0.

3. RESEARCH METHODOLOGY

The theoretical framework is built on factors and components gathered from various research sources as outlined in Table 4. Decentralization and security are the main considerations due to their essential roles in addressing the scalability trilemma when evaluating Web 3.0 financial systems. The scalability trilemma serves as a widely recognized framework utilized by experts to evaluate blockchain systems [33]. Transparency is also a crucial factor chosen for evaluating the adoption of Web 3.0 financial systems, especially considering regulatory frameworks such as the EU General Data Protection Regulation, which have incorporated data transparency as a fundamental principle across various application domains [34]. Accessibility, Effectiveness, and Learnability are additional factors chosen from the ISO 25010 model to evaluate the intention to use Web 3.0 financial systems, reflecting their importance within the broader scope of technology adoption research.

Detailed information regarding these factors is specifically underlined in Speicher's research [35]. Moreover, Joo's [36] findings have shown that users are more likely to adopt and interact with websites that are easily accessible and effective in accomplishing desired objectives. The inclusion of Ease of Use as a key factor in assessing the intention to utilize Web 3.0 financial systems is guided by its essential role in the Technology Acceptance Model. The TAM model consistently emphasized that users are more inclined to accept and adopt a technology if they perceive it as easy to use [37].

Table 4. Source of factor derivation in the theoretical framework

Type of factors	Metric	Adopted from
Independent	Decentralization	Taxonomy of blockchain decentralization [38]
	Security	Scalability trilemma [39]
	Transparency	Dimensions of data transparency [34]
	Accessibility	ISO/IEC 25010, 9241 [35]
	Effectiveness	
	Learnability	
	Ease of Use	Technology Acceptance Model [37]
Dependent	Intention to Use	

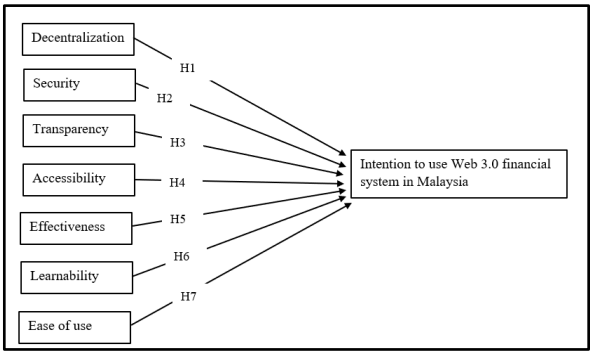

Figure 1 Theoretical framework of research

The hypotheses are formulated by using the factors outlined in the theoretical framework as shown in Figure 1.

H1: Decentralization has a positive and significant relationship with the intention to use the Web 3.0 financial system in Malaysia.

H2: Security has a positive and significant relationship with the intention to use the Web 3.0 financial system in Malaysia.

H3: Transparency has a positive and significant relationship with the intention to use the Web 3.0 financial system in Malaysia.

H4: Accessibility has a positive and significant relationship with the intention to use the Web 3.0 financial system in Malaysia.

H5: Effectiveness has a positive and significant relationship with the intention to use the Web 3.0 financial system in Malaysia.

H6: Learnability has a positive and significant relationship with the intention to use the Web 3.0 financial system in Malaysia.

H7: Ease of use has a positive and significant relationship with the intention to use the Web 3.0 financial system in Malaysia.

To support the understanding of the design factors in the questionnaire study, a proof-of-concept system is then developed to serve as a visual tool for participants to understand the workings of a Web 3.0 financial system. The questions in the questionnaire are formulated based on the findings of the literature review and may be adopted from relevant research works. Collected responses from the pilot test were then subjected to a reliability test to assess the reliability of the questionnaire before distributing it in online form. Participants volunteered to complete an online questionnaire regarding the adoption level of the Web 3.0 financial system. The collected data was analyzed by using various analysis techniques. Based on the research findings, a Malaysian Web 3.0 financial framework is then derived.

The study population comprises expert individuals working in the Web 3.0 field drawn from the public across Malaysia in the pilot study. The pilot study included a sample of 30 highly experienced individuals working in the Web 3.0 sector. It only encompasses individuals with expertise in Web 3.0 technologies. Following that, the study population for the questionnaire

survey included individuals aged 16 and above from the public across Malaysia. Inclusion criteria specify that participants must own a bank account and have experience using it. The intended sample size for the research survey encompasses 150 individuals across Malaysia. This sample size exceeds the recommended minimum requirement of 100 for statistical analysis stated by [40]. Furthermore, it surpasses the required sample size of $N > 50 + 7m$ proposed by Pallant, where 'm' represents the number of independent variables [41]. With seven independent variables to be investigated, the sample size needs to exceed 106 ($N > 50 + 8(7)$) in the theoretical model. Although the recommended minimum requirement is 106 individual responses, the survey decided to gather 150 responses.

Data collection for this full questionnaire survey was conducted through an online questionnaire hosted on the Google Forms platform. The data collection timeline spanned approximately two months. Each participant spent 5 to 10 minutes completing the questionnaire survey. Table 5 provides an overview of the techniques of data analysis applied in this research.

Table 5. Techniques of Data Analysis

Questionnaire section	Data analysis approach	Purpose
Section 1: Survey study	a) Histogram/Bar chart, Frequency analysis, Cross-tabulation	a) To understand the demographics of participants
Section 2: Hypothesis testing a) Decentralization b) Security c) Transparency d) Accessibility e) Effectiveness f) Learnability g) Ease of Use	a) Validate questionnaire • Reliability test b) Hypothesis testing & data analysis • Pearson Correlation Test • Multiple regression c) Explore participants' cluster • K-means clustering	a) Ensuring that the questionnaire includes questions that comprehensively cover all relevant aspects of the research topic b) Use of appropriate techniques to analyze survey data collected like multiple regression c) Explore and identify the cluster of respondents for different factor groups using clustering techniques like K-means clustering

4. FINDINGS AND RESULTS

Pilot Test

During the pilot test, a strategic decision was made to improve Cronbach's alpha value associated with the decentralization factor to enhance the reliability of the questionnaire survey study. The initial reliability test yielded a Cronbach's alpha of 0.679 for the decentralization factor indicating insufficient reliability of this factor. It was found that removing a specific question (DC3) can improve the overall reliability of the decentralization factor. The subsequent improvement in Cronbach's alpha value from 0.679 to 0.726 signified an improved level of reliability.

Table 6 displays the outcomes of the reliability test conducted on pilot responses obtained via a questionnaire comprising 34 questions from 30 well-established individuals working in the Web 3.0 industry. The result yielded an average Cronbach's alpha value of 0.8405, signifying a good level of reliability.

Table 6. Results of reliability test run on pilot responses

Variable	Number of Items	Alpha Cronbach	Reliability Level
Decentralization	3	0.726	Acceptable
Security	5	0.799	Acceptable
Transparency	5	0.883	Good
Accessibility	4	0.826	Good
Effectiveness	4	0.829	Good
Learnability	5	0.909	Excellent
Ease of Use	4	0.830	Good
Intention to Use	3	0.922	Excellent
Overall Result	33	0.8405	Good

Visual aids in the questionnaire survey

The questionnaire survey integrated a Proof of Concept (POC) system built using the Next.JS framework, with MetaMask and MongoDB API connectivity that aimed at enhancing user understanding of the Web 3.0 financial system. The questionnaire survey included screenshots of the POC system. These screenshots were intended to offer visual context and aid in providing a more comprehensive understanding of the innovative features and functionalities inherent in the Web 3.0 financial system. Table 7 offers an in-depth description of the underlying features within the Proof-of-Concept system.

Table 7. Description of Proof-of-Concept system's features

Feature description	Relevant Factor
Transactions are stored on Ethereum blockchain	Decentralization
Users need to sign the transaction with their private key	Security
Transaction history can be viewed on Etherscan block explorer site that is opened to everyone	Transparency
System can complete intended task without any issue	Effectiveness
Menu interface is designed with simple and intuitive considerations	Learnability
	Ease of Use

Descriptive analysis of survey responses

The survey response data was gathered from 150 Malaysian individuals working across various industries. The respondents were segmented into six distinct age groups: 16-24, 25-34, 35-44, 45-54, 55-64, and 65 or above. Majority of the respondents were from the age group of 16-24 years old (34.7%), followed by 25-34 years old (26%), and 35-44 years old (19.3%). Only 2% of senior citizens aged 65 and above participated in this survey.

6. Quantitative analysis of survey responses

Pearson Correlation Test

The results presented in Table 8 from the hypothesis testing analysis utilizing the Pearson correlation test offer valuable insights into the factors that influence the intention to use Web 3.0 financial systems.

Table 8. Pearson correlation test of survey responses

Hypothesis	P-value (p)	Pearson Correlation Value
H1: Decentralization	<0.001*	0.4545 (low & positive correlation)
H2: Security	<0.001*	0.5226

		(moderate & positive correlation)
H3: Transparency	<0.001*	0.3706 (low & positive correlation)
H4: Accessibility	<0.001*	0.6707 (moderate & positive correlation)
H5: Effectiveness	<0.001*	0.7631 (high & positive correlation)
H6: Learnability	<0.001*	0.5146 (moderate & positive correlation)
H7: Ease of Use	<0.001*	0.6401 (moderate & positive correlation)

* Correlation is significant at 0.01 level (2-tailed).

Decentralization and Transparency show a weak positive correlation coefficient falling within the range of 0.3 to 0.5 which suggests a low association with the intention of users to adopt the technology. Security, accessibility, learnability, and ease of use demonstrate moderate positive correlation coefficients ranging between 0.5 and 0.7, indicating a more robust influence on users' adoption intentions. Furthermore, the high positive correlation coefficient within the range of 0.7 to 0.9 observed for effectiveness indicates a primarily strong relationship, implying that users perceived the effectiveness of the Web 3.0 financial system as a core driver for adoption. The p-values for all independent variables were less than 0.001, indicating a very small chance of observing such strong correlations by random chance alone. This shows compelling statistical evidence to dismiss the null hypothesis and favor the alternative hypothesis which indicates a meaningful linear connection between each independent variable and the dependent variable.

Multiple regression test

A multiple regression analysis was conducted to investigate the relationship between several independent variables (Decentralization, Security, Transparency, Accessibility, Efficiency, Learnability, Ease of Use) and dependent variables (Intention to Use). Table 9 presents the coefficients obtained from the regression analysis along with their corresponding significance values. Decentralization, Security, and Transparency exhibit high significance values, suggesting a lack of statistical significance in their contribution to explaining the variance in the dependent variable. A decision was made to run the test again after removing these insignificant variables from the model to improve its focus on predictors that demonstrate a more robust impact.

Table 9. Coefficient Beta and Significance value of multiple regression test (first run)

Variables	Coefficients Beta	Sig	Interpretation
Decentralization	-0.27	0.699	Insignificant
Security	0.127	0.076	Insignificant
Transparency	0.022	0.738	Insignificant
Accessibility	0.166	0.05	Significant
Effectiveness	0.552	<0.001	Significant
Learnability	-0.178	0.036	Significant
Ease of Use	0.281	0.004	Significant

The coefficient for the variable Learnability is now -0.147, and its significance value is 0.74 according to the findings presented in Table 10 for the second run. The significance value of

0.74 indicates that there is a high possibility that the observed relationship between the variable Learnability and the coefficient of -0.147 may have occurred by random chance. Therefore, a third test is conducted with Learnability excluded from the model.

Table 10. Coefficient Beta and Significance value of multiple regression test (second run)

Variables	Coefficients Beta	Sig	Interpretation
Accessibility	0.209	0.008	Significant
Effectiveness	0.554	<0.001	Significant
Learnability	-0.147	0.74	Insignificant
Ease of Use	0.284	0.003	Significant

The R-square value of 0.621 during the third multiple regression test indicates that around 62.1% of the variance in the dependent variable can be explained by the included independent variables in the model.

The results of the third multiple regression analysis demonstrate a statistically significant relationship among the variables included in the model confirmed by the ANOVA test. The significance level (sig) calculated to be less than 0.001 indicates strong statistical significance for the multiple regression test. These findings imply that the variables incorporated into the regression analysis are key predictors of the adoption process.

Findings from the third multiple regression analysis are presented in Table 11. The regression study results highlight that when developing the Malaysia Web 3.0 financial system, accessibility, effectiveness, and ease of use are all crucial factors to consider. The dependent variable in the model is positively influenced by these variables in a statistically significant manner, as demonstrated by the coefficient beta assigned to each variable.

Table 11. Coefficient Beta and Significance value from multiple regression test (third run)

Variables	Coefficients Beta	Sig	Interpretation
Accessibility	0.187	0.018	Significant
Effectiveness	0.552	<0.001	Significant
Ease of Use	0.169	0.02	Significant

K-means clustering analysis

The three critical factors which are Accessibility, Efficiency, and Ease of Use that demonstrated statistically significant p-values in the Pearson correlation and Multiple Regression tests were employed for the K-means clustering. The calculation method of Within-Cluster Sum of Squares (WCSS) was adopted to identify the optimal number of clusters (K). The optimal number of clusters (K) has been identified as 10, implied dividing the dataset into 10 clusters ensures meaningful separation between clusters. The clustering output is shown in Figures 2 and 3.

Number of Cases in each Cluster

Cluster	1	10.000
	2	20.000
	3	19.000
	4	48.000
	5	15.000
	6	2.000
	7	11.000
	8	2.000
	9	13.000
	10	10.000
Valid		150.000
Missing		.000

Figure 2. Distribution of cases in each cluster

Figure 2 displays the distribution of cases across each cluster. The cluster with the most cases is Cluster 4 which comprises 48 cases with values ranging between 3.9 and 4.0 (refer Figure 3). This cluster represents a large concentration of respondents who hold similar perspectives regarding the emphasized factors. The high concentration within Cluster 4 suggests a strong consensus among the respondents belonging to that cluster. Clusters 6 and 8 exhibited the lowest distribution of cases of only 2 with inconsistent values. Clusters with the lowest case distribution and inconsistent values may indicate a diverse range of user preferences within these groups.

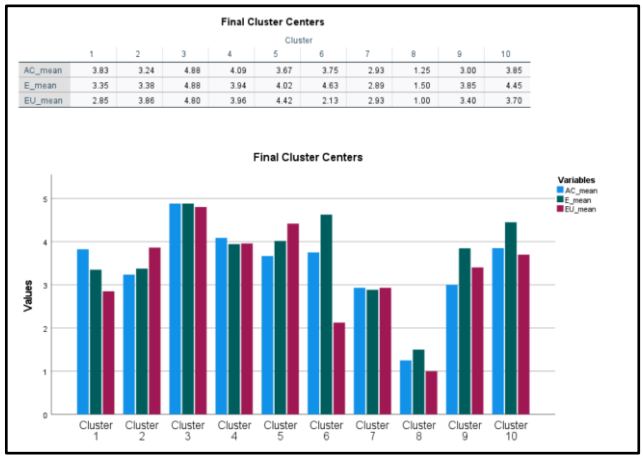

Figure 3. K-means clustering on three emphasized variables (Accessibility, Efficiency, Ease of Use)

By reviewing the clustering output, the Web 3.0 financial systems' developers can understand which factors had a high or low relationship with the intention to use the system, with different numbers of users in each cluster. The top 2 largest clusters (cluster 2 & 4) showed high ratings (near rating 4 to 5) of the three variables. It represented approximately 45.3% of the total survey population. Hence, the Web 3.0 financial systems' developers

should ensure that the systems are highly accessible, efficient, and easy to use so that Malaysian citizens will use Web 3.0 in the future.

7. Conclusion

In summary, this research offers valuable insights into the important factors that affect the adoption of Web 3.0 financial systems. The Pearson correlation test indicated a positive relationship between all factors (Decentralization, Security, Transparency, Accessibility, Effectiveness, Learnability, Ease of Use, Intention to Use) and the intention to use Web 3.0 financial systems in Malaysia. The multiple regression test indicated that Accessibility, Effectiveness, and Ease of Use are significant factors to be included in the formulation of the system design framework for Web 3.0 financial systems in Malaysia. The exploration of the K-means clustering algorithm allows for the understanding and identification of respondent clusters associated with various design factor groups.

It is important to acknowledge certain limitations and challenges in the study. Firstly, it's essential to note that the study's sample size was limited to 150 participants primarily due to time constraints. Furthermore, conducting research in the field of Web 3.0 presents a unique challenge since the concept is still relatively new, and not everyone is familiar with its functionalities. Future questionnaire-based research efforts should strive to broaden the participant pool to achieve a more diverse and inclusive representation of the targeted demographic. In the future, researchers should explore alternative models beyond TAM (Technology Acceptance Model) to gain a more comprehensive understanding of the adoption of research fields. Designers and developers should prioritize user-friendly interfaces, efficient functionalities, and seamless accessibility when constructing Web 3.0 financial systems.

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