Factors Affecting Implementation of Blockchain in Retail Market in Malaysia

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Abstract-Certain types of blockchains were made and developed for various purposes. Despite the development of cohort systems, the blockchain needs more development from the perspective of Malaysia. In addition, blockchain is the only cryptographic block currency that improves retail marketing. This study has critically analyzed the variables of the current research Framework of the blockchain implementation in retail market. Thus, this study aims to implement blockchain in retail market for increaseing customer benefits in order to improve the retail industrial supply chain activities. In order to achieve the main aim, this study comprises of two main phases, which are theorietical study, developemnt of proposed blockchain factors and its implementation. The blockchain experience of variables, blockchain management, blockchain transaction policy, blockchain adaption and implications were discussed gradually. Finally, we demonstrate the underlying theory, the theoretical framework and the hypotheses were discussed in detail.

Key Words: *Blockchain, Retail industry, blockchain implementation, Blockchain adoption.*

1. Introduction

It is worth mentioning that retail market enhancement through blockchain is an important revolution in the retail industry. The block chain drive plays an important role in retail market. It provides digital money transaction facility in retail market. Block chain initiative which increases the use of blockchain will increase its value. However, blockchain transactions enhances the retail market into digital market [1]. Blockchain introduce a new channel between supplier to customer and a proper distribution. It also initiates a new transaction medium among stakeholders in retail markets [2].

Although sellers can use their blockchain payments to take steps to increase the value of blockchain.

Customer have no obligation to use blockchain because blockchain reliability can increase customer and seller acceptance in the retail market. The future value of Blockchain depends on how providers use the payments facility in the retail sector [3]. These factors include the willingness of retailers to accept payment in Blockchain. The blockchain regulations and banks facility also influence the digital market in Malaysia [4]. In addition, Blockchain is a techno integration in retail market in Malaysia.

2. Background of the Study

Blockchain is and will continue to be a crucial and topical issue for years to come in retail market [5]. Blockchain transaction remains relevant as new policies by administrators often generate new feelings, sentiments, needs, and expectations in retail which makes it imperative to further explore and investigate the subject [6]. Blockchain helps in guaranteeing and secure the monetary transaction in retail market [7]. In retail market, blockchain is the secret of new digital currency in retail market in Malaysia [8]. Therefore, there is need for blockchain as stronghold of ideas in retail market to provide necessary conditions to ensure blockchain implementation in retail market [8]. Blockchain plays a critical role in retail market to enhance the digital monetary system which has always been the subject of interest to researchers globally [9]. Therefore, there is need to understand the underlying factors that influence blockchain implementation in retail market in Malaysia [10]. Malaysian retail market needs to meet up in a rapidly changing and more technically demanding retail market which requires more digital monetary policy for retail trading [11].

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3. Issues of Blockchain in Retail Market

The blockchain management (BM) is not organize in Malaysian retail market. Apart from that by BM can introduce blockchain necessity in retail industry [8]. Despite the challenges faced by retail industry, empirical literatures on blockchain implementation in retail market is rarely available [9]. The existing monetary transaction policy of retail market is not transparent for consumer buy and sell process [12]. Furthermore, the study will also examine the significant of blockchain experience to initiate the blockchain in retail market [13]. Blockchain adoption (BA) policies affect the intention to introduce the actual acceptance of blockchain for retailers which is not studied yet for the implementation of blockchain in retail market in Malaysia [14]. Moreover, the mediating effect of blockchain adaption has not been previously examined [15]. The retail buying and selling process is old and not enough for online peer transaction [12]. In addition, there is no further initiative for customer payment and blockchain implementation in the retail market [1]. Few of the prior studies have examined the role of blockchain, transaction policy and experience of blockchain determining the blockchain implementation [16].

4. Research Findings

In summary, the academic literature provides more information on the factors that influence the decision of retailers to accept payments from a customer payment instrument. The literature also suggests that, due to the blockchain implication in retail market. This research has addressed the following research finding. This study examines the relationship of blockchain experience, blockchain management and blockchain transaction policy influence toward blockchain implementation in retail market. In addition, this study examines the relationship of blockchain and its effect on in retail market.

5. Theoretical Contributions

This study would contribute by adding value on the existing knowledge. It is also expected to offer empirical evidence on the role of blockchain experience and blockchain management, on implementation of blockchain by blockchain adaption

as a mediator. This study also intends to validate the UTAUT2 Theory [17] by portraying the relationship between blockchain adaption and blockchain transaction policy to implement the blockchain in retail market. Lastly, this study would provide valuable insight and more evidence on the influences of the transaction cost theory [18]; [19]. which shows that consumer and retailer have a transaction relation for product buy and sells.

6. Practical Contributions

Research on blockchain implementation is in accordance with the twelve Malaysia Plan (2016-2020) and Economic Transformation Plan, whereby the Malaysian government has emphasized the importance of enhancing blockchain technology for better and reliable retail market service. This study when completed would make appropriate suggestions in the forms of policies and strategies that would be adoptable and implementable especially with the view of solidifying the gains of blockchain implementation in retail market. This study would be of crucial benefit to retailers, the policy maker, who intends to make efforts at improving on work fulfilment in retail market. Furthermore, the study would propose a framework that would become the foundation for the furthering of upcoming explorations. Finally, this study will act as a stepping ground for making effective contributions towards understanding the best possible way to plan for the success of retail market in Malaysia.

7. Scope of the Study

The scope of the study covers the retail industries in Malaysia. The researcher examined the limitation and identifies the challenges in the implementation of blockchain in the retail industry of Malaysia and management authority to expand the existing retail sector by transforming the Blockchain.

8. Underpinning Theory and Supporting Theory

In this study we have used UTAUT2 Theory [17]; [20]. Relationship between employers and employers who demonstrates more psychological capital and as a result tend to receive more reciprocation when positive resources are deployed which enhances the

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employees. Secondly, we used another supporting theory is called Transaction Cost Theory [18]; [19]. The theory of transaction cost and agency theory are examples of contractual theories that come from the same context as the theory of property.

9. Discussion

The retail sector plays an important role in infrastructure development in Malaysia. Though retail industries are leading the strong supply chain management [21]. However, blockchain operators see a lack of payment and payment transactions [22]. The blockchain initiative will increase retail market SCM and enhance the growth of the retail industry [23]. This chapter attempts to review some of the previous work in retail market. The new blockchain innovation objectives is to manage reputed retail industries [24]. Blockchain chain management is an important part of the manufacture industries and it is well stablished in. However, there are many ways to operate and manage blockchain in retail industry [4]. On the system of BM, the blockchain works based on central digital platform. These data are stored Database through a server. There is a precise blockchain for retail industry management. The blockchain chain management is assembled and installed in blockchain for better retail digital transaction.

10. Proposed Theoretical Framework

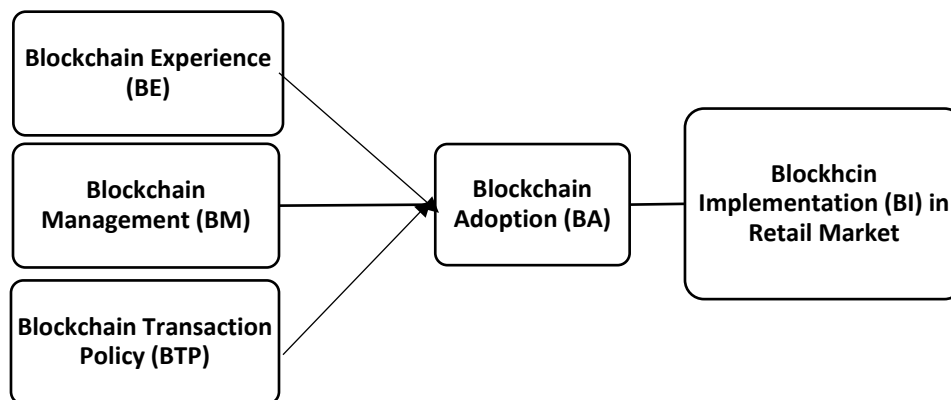In this section we demonstrate the theoretical framework of this study.

Figure 1. Theoretical framework

11. Research Hypothesis

H1A: Blockchain experiences have a significant positive effect on blockchain implementation in retail market.
H1B: Blockchain management has a significant positive effect on Blockchain Implementation in Retail Market.
H1C: Blockchain transaction policy has a significant positive effect on Blockchain implementation in Retail Market.

H2A: Blockchain experiences has a significant positive effect on Blockchain adaption.
H2B: Blockchain management has a significant positive effect on blockchain adaption.
H2C: Blockchain transaction policy has a significant positive effect on blockchain adaption.
H3: Blockchain adaption has a significant positive effect on Implementation of Blockchain in Retail Market.

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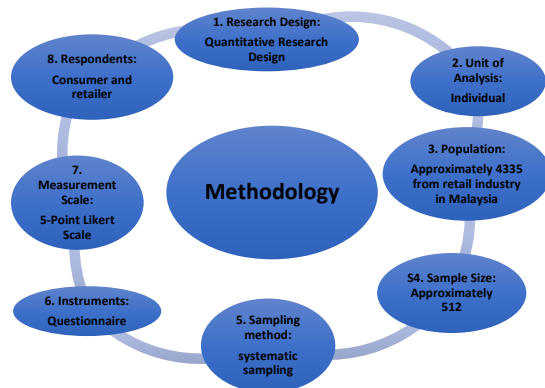
12. Methodology

Figure 2. Radical cycle of methodology

13. Data Analysis Tools

In this study we used Statistical Package for Social Science (SPSS v23) for pilot test. We also use the Smart PLS (Partial Test Squire) 2.0 because goal is predicting structure model is complex. The data is non-normal distributed which is why we used PLS [25].

14. Population of the Study

The population includes people, events or things, and we draw conclusions from these data [26]. The target population for this study is a retailer industry in Malaysia. The sample will take from all retail industry, operator and retail customers. That is why the we choose individual consumers and retail management in Malaysia.

15. Sampling Technique and Data Collection

A category of probabilistic sampling is systematic sampling [27]. In systematic sampling, the elements are selected systematically or at specific intervals when the first element is randomly selected from the population [28]. However, Malhotra (2014) stated that systematic sampling could be used to collect data from the final respondents, where the shopping complex sampling frame for the target population.

16. Result

Fornell-Larker criterion of Discriminant Validity shows in below.

Table 1. Fornell-Larker criterion

	BM	BE	BTP	BA	BIR
BM	0.72				
BE	0.32	0.726			
BTP	0.577	0.286	0.782		
BA	0.187	0.459	0.238	1.00	
BIR	0.386	0.587	0.434	0.624	1.00

HTMT Ration of Discriminant Validity describe below.

Table 2. HTMT Ration

	BM	BE	BTP	BA	BIR
BM					
BE	0.457				
BTP	0.781	0.372			
BA	0.232	0.478	0.287		
BIR	0.458	0.612	0.513	0.632	

Variance of Inflated Factor (VIF) show in this below.

Table 3. Variance of Inflated Factor

	BA (BLOCKCHAIN ADOPTION)	BIR (BLOCKCHAIN IMPLEMENTATION IN RETAIL MARKET)
BM (BLOCKCHAIN MANAGEMENT)	1.231	1.142
BE (BLOCKCHAIN EXPERIENCE)	1.538	1.354
BTP (BLOCKCHAIN TRANSACTION POLICY)	1.713	1.232
BIR	2.145	

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17. Limitation and Suggestion

This study has a limitation that is blockchain knowledge need more awareness and electronic gadget for individual consumer and its only applicable for smart consumer in retail sector. However, some research needs to do enhance to minimize the consumer adoption on electronic gadget incorporation with retail industry. Apart from that it needs more factors analysis to adapt this study more effectively in retail industry.

18. Conclusion

Finally, Blockchain is the backbone of digital

monetary system. The shared functions offer a very attractive technology to protect current financial and non-financial business problems along with the security of Blockchain. When it comes to technology, the technology based blockchain offers a vast monetary option to digital retail market. It is hoped that the proposed blockchain implementaiton model will be able to determine the best option for blcokchain implementation in retail market. By having this model, organization will be able to plan, monitor and make stratiegic decesion regarding blockchain implementation in any company or industry.

Appendix A

Table A1 Measurement Items

Variables	Items	Adapted from
Blockchain Management	I have the resources necessary for blockchain management in retail market	Venkatesh et al. (2012).
	I have the knowledge necessary for blockchain management in retail market	
	I can get help from others when I have difficulties to manage blockchain	
Blockchain Performance	I am really satisfying for blockchain performance	(Risius & Spohrer, 2017)
	Blockchain provides a high level of service quality	
	Blockchain performance is very much efficient in retail market	
Blockchain Transaction Policy	I believe that blockchain transaction policy is secure	Gefen et al. (2003)
	I trust on blockchain transaction policy	
	I do not doubt on the honesty of on blockchain transaction policy	
	I feel assured that legal and technological structures adequately protect me from problems on Mobile banking.	
Blockchain Adoption	I believe consumer need proper blockchain adoption	Puschel et al. (2010)
	Consumer needs proper blockchain knowledge	Zhou et al. (2012)
	User manual for enhance the productivity of blockchain adoption	
	Blockchain adoption need user guideline	
	Organizations stakeholder need proper adaptability on blockchain adoption	
Blockchain Implementation	My organization has achieved high customer satisfaction through blockchain	Ul-Hameeda et al. (2019)
	Blockchain increased process transparency.	
	By implementation of blockchain my organization reduces errors in work processes	
	Blockchain process reduces work redundancies.	
	Blockchain process reduces administration cost.	
	My organization can attribute high return through blockchain implementation in retail market	

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