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Intention to Use Blockchain Technology (BCT) among Last-mile Logistics in Johor, Malaysia

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Abstract: Global e-commerce growth has caused the logistics industry to transform. The customers specifically expect door-to-door, same-day or next-day delivery services for home deliveries. Lack of capacity of logistics industry had let the companies difficult to meet the customer demand. However, the adoption of Blockchain technology is still in its early stages among the logistics sectors in the Malaysia. The aim of this study is to identify the level of intention to use blockchain technology and to determine the relationship between three independent variables which are Relative advantage, Top management support, Government Support and intention to adopt blockchain technology intention. Technology Organization Environment theory was used in this study. A number of 45 respondents were included in the questionnaire analysis from the Last-mile Logistics companies. Based on the analysis and findings it showed that organizations will likely to adopt blockchain technology while it is better than existing technology. Besides, top management plays a role for decision making and allocates resources for blockchain technology adoption. The government support can drive the organization to research and development the new technology.

Keywords: Blockchain Technology, Intention to use, Last-mile Logistic, TOE models

1. Introduction

1.1 Research Background

The Postal Service Act of 2012 covers postal and courier services (APP 2012). New provisions in APP 2012 work to protect the delivery of universal services, advance industry development, and strengthen regulation of the postal and courier service sector in a multi-player environment (Malaya Corporate Group, 2022). The Postal Service (Licensing) Regulation 2015 indicates that there are three different kinds of postal service licences: universal service licensee and non-service licensee. The

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licences A, B, and C can also be used for non-service licensees. In Malaysia, licence A for the postal service includes both domestic and international courier services. In contrast to licence C, which primarily focuses on intra-state domestic courier service, licence B focuses on both domestic and international inbound courier services. A company must have enough operating capital to carry out the service, service integrity, standard delivery, and other conditions in order to apply for the licence. (Postal Service (Licensing) Regulation, 2015).

The Covid-19 pandemic's emergence of e-commerce emphasises the significance of effective delivery and collection procedures (Hannah Rafee, 2021). Along with to this scenario, the courier, express, and parcel (CEP) industry could see growth in door-to-door, same-day or next-day delivery services, particularly for housing deliveries. (Esser and Kurter 2006). The expansion of e-commerce is the significant determinant of Malaysia's courier, express, and parcel industries. (Mordor Intelligence Inc, 2022). Hence, the postal and courier services industry should indeed play a significant part in encouraging such growth (MCMC Annual Report, 2020).

As reported by in the Malaysia Investment Development Authority (MIDA), online customers have high demands for the quality and diversity of services as well as for exclusive and customized solutions. To compete effectively and meet the demands of their local and international customers, many logistic firms are already integrating components of automation, robots, internet of things, big data analytics, cloud-based computing, and in-house software systems into their operational process (Malaysia Investment Development Authority, 2021). The growth of international trade, expanding internet and smartphone usage, increasing middle population and spending incomes, and higher standards of living are all driving to the impressive growth of Malaysia's courier, express, and package (CEP) industry (Mordor Intelligence Inc, 2022).

Delivering goods to customers is no longer the only goal of last-mile logistics; it is also about meeting consumer needs and expectations. One of the challenges that carriers in this industry experience is developing long, engaging relationships with customers and meeting their complex care needs such as remote deliveries, return orders, inability to deliver since of customers, and payment methods. Traditional track- and-trace technology is no longer sufficient to satisfy market demands since customers expect real-time last-mile monitoring from shipping fulfilment to drivers' places and out to the expected arrival time. (Frost and Sulivan, 2020). Customers' delivery expectations have evolved over time as a consequence of the integration of transparency in the shopping experience by Malaysia's top online retail platforms the same as Lazada, Shopee, and Alibaba (Frost and Sullivan, 2020).

Global e-commerce expansion has driven the logistic sector's transformation. Following the Covid-19 outbreak, Malaysian consumers switched from traditional brick-and-mortar stores to online retailers. As a result, the logistics sector is having trouble keeping up with the growing demand for online shopping. The logistics sector is facing a difficulty to handle the demand due to insufficient capacity (Tan Zhi Yun, 2022). The rising volume of parcels had let the customer experience delivery delays and parcel damage (Azhari, 2022). The concern with online platforms' postal purchases not reaching to the customer. The consumer who was trying to track the status of the package likewise experienced delays at any transit location since the hub was overwhelmed and unable to handle the demand. Due to the process' lack of transparency and timeliness, the consumer will feel unwelcome and lose confidence.

Nonetheless, the previous study of Frost and Sullivan (2020) states courier providers are adopting more smart technologies that should offer greater visibility over the operation and increase the efficiency in the delivery supply chain. The online retail platforms as Shopee and Lazada have provided transparency for the customer in shopping experience. Traditional track and trace technologies are difficult to meet the actual demand of customers as timeliness for delivery, real-time last-mile visibility and so on. The last-mile industry needs to balance and optimize the resource during the shorter interval of sales season and holiday cycles (Frost and Sullivan, 2020). Therefore, finding alternative methods will increase the industry delivery touchpoints.

Blockchain Technology should provide many benefits in the business activity as high security, high transparency and others. The circumstances in Malaysia are favourable for integrating new technologies to launch on the "Blockchain Brain". While, the blockchain adoption still at infancy (Cynthia Ng, 2018).

According to Lai Wong *et al.* (2020), the unfamiliarity of Blockchain Technology will lead the organization not willing to adopt it due to high risky. The organization make the decision based on different dimension even it can provide non-tangible benefit in industry. The lack of knowledge and skills of Blockchain Technology will hinder the intention of organization to use the technology into existing system (Dhirasasna *et al.*, 2020). The motivate of organization to utilize the Blockchain Technology during the it is better than existing technology (Maroufkhani *et al.*, 2020).

Blockchain Technology should enhance the transparency and efficiency in the business activity. Despite the huge possibilities of blockchain technology, previous research showed that top management support on BCT adoption is still low due to the various relevant factors (Liyan Lu, 2021). In Malaysia, Blockchain technology is quite to use. While, Malaysia considered it problematic to adopt due to the complex and expensive issue, other countries were seeking for a technological solution to the shortage problem. The logistics sector must attract investment in technologically enabled processes that are more complex, efficient, and able to handle the need for speedy deliveries (Tan Zhai Yun, 2022). Usually, the organization will possible to adopt Blockchain Technology when it is better than existing technology (Maroufkhani *et al.*, 2020). Lack of leadership backing reduces the likelihood that breakthroughs like blockchain technology will be adopted (De Castro *et al.*, 2020).

According to the report in 12th Malaysia Plan (2021-2025), The industry's fragmentation, a lack of technological uptake, poorly coordinated planning and implementation, and poor governance have led to unsatisfactory service quality and relatively higher costs. The aspiration of this plan is to improve the logistical and transportation sectors more competitive through efficient, integrated, and intelligent supply chain and logistics technologies. The Government of Malaysia has been seeking the opportunity of new technology for the development of the smart city in Malaysia. Malaysia is not starting from zero in blockchain, but as the rate of change for technology accelerated (Mastura Ishak, 2019). Hence, Malaysia Industry- Government Group for High Technology (MIGHT) reported that Blockchain Technology would be fully adopted by the year 2025. The government support is important to drive the organization to research and development the new technology.

The current study aim to determine the level of intention to use Blockchain Technology (BCT) among last-mile logistics and to determine the relationship between the relative advantage and intention to use blockchain technology (BCT) among last-mile logistics in Johor, Malaysia. Apart from that, the relationship between the top management support and intention to use blockchain technology (BCT) among last-mile logistics and the relationship between the government support and intention to use blockchain technology (BCT) among last-mile logistics in Johor, Malaysia also determined.

The researcher collected the data for this study used a quantitative survey method. The target respondents of this study is Last-mile logistics in Johor, Malaysia. According to MCMC's data, Johor has 61 postal service-licensed companies for last-mile logistics. This research was chosen for Johor since the Malaysia 2020 budget forecasts projected 5G coverage will be expanded to cover 36% of highly populated areas, including large cities as Johor.

This study is conducted to determine the level of blockchain technology intention among the last-mile logistic sector. The researcher also determined the relationship between the technological-organization-environment framework factors (relative advantage, top management support, government support) and blockchain technology intention among last-mile logistics in Johor, Malaysia. Through this study, we are able to know that the innovation of technology in logistics can help to increase the performance and transparency in process or job tasks. Besides that, the increase of e-commerce and digital platforms will raise the demand for courier service in the marketplace. Therefore, the innovation of blockchain technology can help the business to gain sustainable competitiveness from the existing competitor.

2. Literature Review

2.1 The Growth Blockchain Technology (BCT) Trend in Last-mile Logistics

According to Malaysian Communications and Multimedia Commission (MCMC), due to the rapid development of technology, Malaysia's postal service is experiencing digital disruption. By coordinating logistic hub planning and development, boosting industry player mergers and acquisitions, and driving the adoption of digital technology, the government will transform logistic service (Twelfth Malaysia Plan, 2021-2025). As a result, it will strengthen the governance structure and enhance the competitiveness of international trade.

On the other side, BCT may perform as a smart contract for commercial purposes. It is enforceable both from a traditional legal perspective and from the perspective of computer code (technology) (Mastura Ishak, 2019). In the procedure, the physical copies contract should be transformed by the smart contract. ISO/TC 307 is responsible for standardization in relation to blockchain and distributed ledger technologies (DTL). Malaysia is participating in the direction of the conversation blockchain and distributed ledger technologies. These issues will affect economies and global commerce network. BCT should therefore be a possibility for Malaysia to become an e-hub.

2.2 Blockchain Technology (BCT)

Blockchain Technology is regarded One of the fundamental technologies that will power the fourth industrialization (Kwang, 2020). BCT is a digital platform used cryptography concept and decentralization in the process. It ensures the peer- to-peer network and high security during transmission of the data. Distributed Ledger Technology (DLT) had provided the confidence to users due to the process needed for validating and verifying.

2.3 Intention to Use Blockchain Technology

According to Joseph (2017), intention is an action for (what the agent takes to be) a reason, where whatever value there is in the action is a reason for it. The people are having the intention that they believe a solution will help them to solve the problem and be valuable. Blockchain technology has become a lot of benefit for industry and country.

2.4 Factor Influencing Based on Previous Studies Intention to Adopt Blockchain Technology (BCT)

There are several theories used to explain potential determinants that impact the intention to use technology such as Theory of planning behavior (TPB), Technology acceptance model (TAM), The unified theory of acceptance and use of technology (UTAUT) and others. The previous study shows, Technology-Organization- Environmental (TOE) framework provides a useful starting point to observe the adoption process (Baker, 2012). Besides, the TOE framework also most validated theory to determine the adoption of new technology at the organization level (Rogers, 2003). The TOE framework provides a more thorough perspective on the adoption of technology (Mohtararamzadeh, Ramayah & Cheah, 2018).

(a) Relative Advantage

Relative advantage is refers the efficiency and economic benefits of the organization during used the technology for competitiveness and innovation (Roger, 1995). Relative advantage also comparing the advantages of the new technology to those of the existing technologies is related to relative advantage. It also refers to the benefit of implementing novel practices or concepts, which might result in better benefits in one or more sectors. The company will conduct a research and evaluate the new innovation in comparison to earlier versions existing equipment or capacity. The greater the perceived relative advantage of an innovation, the more rapid will be its rate of adoption (Troy Pullen, 2016). According to Bruce and Bo Xiao (2019), BCT was regarded as more advantageous than an organization's existing technology and therefore it is more likely to be adopted by others. Furthermore,

the previous research supports the idea that relative advantage and the intention to utilize blockchain technology are positively correlated (Lai-Wan Wong *et al.*, 2019).

(b) Top management support

Top management support refers to the supervisor's authority to determine whether to adopt a new strategy. The organisation will base the decision on the both internal and external considerations for the business, such as its financial position, available resources, market demand, and so forth. The lack of leadership support reduces the chances of adopting an innovation such as Blockchain Technology (De Castro *et al.*, 2020). According Bruce and Bo Xiao (2019), adoption of blockchain technology depends on successful management support. The previous study showed that an organization's decision to adopt blockchain technology is positively influenced by top management support (Saleen Malik *et al.*, 2021).

(c) Government support

Government support refers to the providing of initiatives, legislation, and policies by the government that can assist in the adoption of new technologies in various nations. Significant adoption of Blockchain Technology by organisations is still not feasible whenever a government does not offer appropriate support, such as the establishment of legislation (De Castro *et al.*, 2020). The government should create a programme or campaign to promote awareness of the necessary knowledge to adopt a new technology. Furthermore, the government should establish that technology is acceptable for usage and that no major conflicts exist. As a consequence, the previous study indicated that the responsibility of the government to support blockchain adoption will have a positive impact (Liyan Lu, 2019).

2.5 Research Hypotheses

Table 1: Hypotheses

	Hypotheses
H1	Relative advantage is positively related to the intention toadopt Blockchain Technology.
H2	Top management support positively influences onorganization's intention to adopt Blockchain Technology.
H3	Government support responsibility will positively influence blockchain adoption intention

2.6 Conceptual Framework

Based on the empirical studies hypothesis and underying theory this study will examine a conceptual framework as depictes in Figure 1

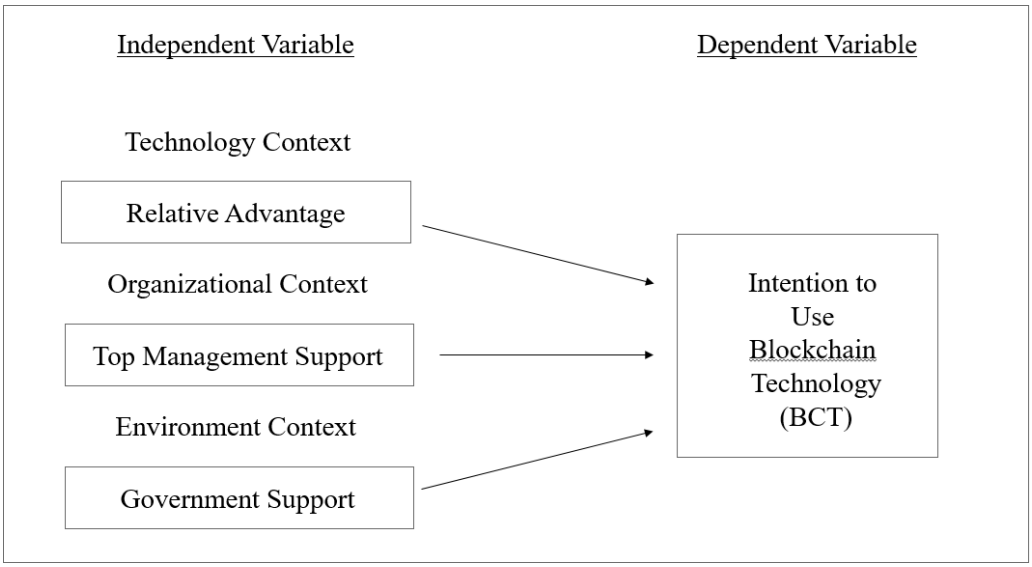

Figure 1: Conceptual framework

3. Research Methodology

3.1 Research Design

This study used a quantitative method. The quantitative method should measure the relationship between the 2 variables (dependent variable and independent variable). This independent variable of this study has relative advantage, top management support and government support while the dependent variable is intention to adopt Blockchain Technology (BCT). The researcher had conducted the questionnaire survey through an online platform to collect the data. To analyze the data, all data had been collected in the numerical form. The researcher would use the SPSS software to analyze the data which is valid. The SPSS software had presented the result in numerical as mean, min, max. Therefore, the researcher can refer to the result to make an analysis.

3.2 Data Collection

In this study, the researcher had collected different data for the research. The researcher had collected the data from the primary data method and secondary data. The differentiation for this 2 method is primary data is the original data which directly collects from the actual situation while secondary data is the data from other authors as the copied data.

(a) Primary Data

Primary data is one which was collected for the first time by researchers (Oluwatosin, 2017). In this research, the researcher used the survey method to collect the data. To use the survey form to collect the data by online platform or social application such as google form, whatsapp and other social media. The target respondents of this study is someone from last-mile logistics in Johor, Malaysia.

(b) Secondary Data

Secondary data is data already collected or produced by others (Oluwatosin, 2017). In this research, the researcher had collected the data from report, journal, article, thesis, and other online resources. To collect the related data and previous study to understand the issues for the topic and analysis.

3.3 Data Analysis

Data analysis is a procedure for modifying, compiling, examining, managing, filtering and obtaining the data (Culen, 2019). The researcher had used the SPSS software to analyze the data. They measure the reliability and validity, descriptive analysis, correlation analysis.

(a) Descriptive Analysis

The descriptive analysis summarizes all data in the basic form and easy to analyze data. In this study, the descriptive analysis is to measure the mean, standard deviation, maximum and minimum value of the data.

(b) Correlation Analysis

The correlation analysis is to measure the relationship between the 2 independent variables and dependent variables in order to achieve objective ii, iii and iv. The high correlation shows that the relationship between two variables is strong while the low correlation means that 2 variables are hardly related. Besides, if the value is 0.00, it means that 2 variables have no relationship in the research.

4. Data Analysis and Finding

4.1 Response Rate

Table 2: Response Rate

Item	Description
Population	61
Sample	52
Questionnaire distributed	61
Questionnaire collected	45
Percentage (%)	73.77%

Table 2 shows the response rate for the study. The researcher had distributed 61 set of questionnaire to respondent and success return 45 sets of questionnaire. The response rate is 73.77% for this study.

4.2 Reliability

Table 3: Reliability

Reliability Test					
		Pilot Study		Actual Study	
Variable	N of item	Cronbach's Alpha	Interpretation	Cronbach's Alpha	Interpretation
IV1	5	0.867	Good	0.894	Good
IV2	7	0.716	Good	0.72	Good

IV3	5	0.933	Excellent	0.922	Excellent
DV	5	0.866	Good	0.883	Good

IV1= Relative Advantage, IV2= Top Management Support, IV3= Government Support, DV= Intention to use Blockchain Technology

The table 3 shows the result of reliability test for the study. The researcher had selected 30 respondents for pilot study and 45 respondents for actual study to test the reliability of content validity. The researcher used the 4 variables to measure the reliability test it is relative advantage, top management support, government support and intention to use Blockchain Technology.

For pilot study, the result reliability for relative advantage (0.867), top management support (0.716) and intention to use Blockchain Technology (0.866) was indicated as good. The variable of government support shows the cronbach's Alpha result in 0.933 and deemed as excellent.

In addition, in actual study the result reliability for relative advantage (0.894), top management support (0.72) and intention to use Blockchain Technology (0.883) was indicated as good. The variable of government support shows the cronbach's Alpha result in 0.922 and deemed as excellent.

4.3 Demographic Profile Respondents

Table 4: Demographic Profile Respondents

Variable	Detail	Frequency	Percentage (%)
Gender	Female	19	42.2
	Male	26	57.78
Age	20 and below	0	0
	21-30 years old	21	46.67
	31-40 years old	19	42.22
	41-50 years old	5	11.11
	51 and above	0	0
Ethnicity	Malay	27	60
	Chinese	16	35.56
	Indian	2	4.44
	Other	0	0
Educarion Level	PHD	0	0

	Master's Degree	3	6.67
	Bachelor's Degree	36	80
	STPM/Diploma	6	13.33
	SPM/UEC	0	0
Year of experience in logistic industry	Less than 5 years	22	48.89
	5-10 years	15	33.33
	More than 10 years	5	11.11
Your Position in the organization	Owner/CEO	0	0
	Executive and Management	38	84.44
	Manager	7	15.56
Have you heard about Blockchain Technology	Yes	43	95.56
	No	2	4.44
How do you know about Blockchain Technology	Stakeholder Idea	8	17.78
	Outsourcing / Third parties	3	6.67
	Competitor	0	0

The table 4 shows the respondent backgrounds and that have 8 of categories of demographic in the research. The majority of gender of respondents is Male (26 respondents). That have 21 of respondents from the age group 21 to 30 years old. The most of respondents (27 respondents) is Malay. Besides, that have 36 of respondents is graduated from Bachelor's Degree. The results show that have 22 of respondents which have less than 5 years of experience in logistics industry. In addition, most of the respondents (38 respondents) is from executive and management department in the organization. Furthermore, most of the respondent (43 respondents) had heard about blockchain technology. Lastly, the majority of respondents (33 respondents) had get the blockchaintechnology information from news or current issues.

4.4 Descriptive Analysis

Table 5: Descriptive Analysis

Variable	Statement	Mean	Standard Deviation	Average Mean	Interpretation
Relative Advantage	Blockchain Technology can reduce overhead expenses.	3.84	1.51	3.99	High
	Blockchain Technology can help to reduce data error rates	4.02	1.39		

	Blockchain Technology can save time in business tasks	4.09	1.26		
	Blockchain Technology can increase the overall productivity	3.88	1.61		
	Blockchain Technology can enhance the efficiency in logistics activity	4.13	1.24		
	Top management encourages innovation	4.87	0.34		
	Top management actively respond and pay attention for initiated project.	4.91	0.29		
	Top management consider that Blockchain Technology as strategically important.	4.07	1.29		
Top Management Support	Top management support by providing finance for Blockchain Technology.	4.02	1.49	4.06	High
	Top management support by providing labour resources for Blockchain Technology.	3.78	1.58		
	Top management support by providing material for Blockchain Technology.	3.02	1.85		
	Top management are willing to accept risk for Blockchain Technology adoption.	3.78	1.58		
	Blockchain Technology development receivers financial from government.	3.07	1.84		
	Relevant policies are introduced by government to boost Blockchain Technology development.	4.02	1.31		
Government Support	There have legal support in the use of Blockchain Technology.	4.02	1.31	3.78	Medium
	The law and regulation that exist nowadays are sufficient to protect the use of Blockchain Technology.	3.98	1.37		
	The government is active in setting up facilities to promote Blockchain Technology.	3.82	1.39		
	My organization intend to digital transform in logistics through Blockchain Technology	4.09	1.35		
	My organization continously looking for Blockchain Technology based tasks.	4.4	0.81		
Intention to use Blockchain Technology	My organization continously looking for Blockchain Technology based tasks.	4.2	1.12	4.26	High
	My organization plan to adopt Blockchain Technology in the future.	4.56	0.94		
	My organization plan to adopt Blockchain Technology whenever they will have access to it in the future	4.04	1.33		

IV1= Relative Advantage, IV2= Top Management Support, IV3= Government Support, DV= Intention to use Blockchain Technology

The table 5 shows the results of descriptive data for independent and dependent variables. For relative advantage, the range of mean is between 3.84 to 4.13 and which high interpretation of the study. For top management support, the range of mean is between 3.02 to 4.91 and show the high and medium interpretation for this study. For government support, the range of mean is between 3.07 to 4.02 and

show the high and medium interpretation for this study. Lastly, IV4 shows the range of mean is between 4.09 to 4.56 which indicate as high interpretation of the study.

4.5 Normality

Table 6: Normality Test

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	sig	Statistic	df	sig
Intention	0.316	0.45	000	0.717	0.45	0000

This section is to determine to know whether the data collected from the respondents were normal or not. When the significant value of variable which P value is less than 0.05, the data would be not normally distributed. However, if the P value is more than 0.05 and the data would be normally distributed based on table 7.

4.6 Spearman Correlation Analysis

Table 7: Spearman Correlation Analysis

Spearman's rho				
DV	IV	Correlation Coefficient	Sig. (2 tailed)	Relationship
Intention to use	IV1	0.037	0.809	Very Weak
	IV2	0.431	0.003	Moderate
	IV3	0.469	0.001	Moderate

IV1= Relative Advantage, IV2= Top Management Support, IV3= Government Support, DV= Intention to use Blockchain Technology

Based on Table 7 shows the correlation coefficient for relative advantage is very weak and thereis no significant relationship between the relative advantage and intention to use Blockchian Technology. For top management support, the correlation coefficient is moderate relationship andshow a significant relationship between top management support and intention to use BlockchainTechnology. In addition, government support is show the correlation coefficient in moderate relationship and indicate a significant relationship between government support and intention to use Blockchain Technology.

5. Discussion and Conclusion

5.1 Discussion and Findings

Table 8: Resulted of hypothesis

		Hypothesis
Dependent Variable	Independent Variable	Hypothesis Statement
DV	IV1	There is a weak relationship between relative advantage and intention to use Blockchain Technology (BCT)

IV2	There is a relationship between top management support and intention to use Blockchain Technology (BCT)
IV3	There is a weak relationship between government support and intention to use Blockchain Technology (BCT)

IV1= Relative Advantage, IV2= Top Management Support, IV3= Government Support, DV= Intention to use Blockchain Technology

Table 8 shows the outcome for the relationship between independent and dependent variable. For relative advantage, the spearman correlation is 0.037 it showed a very weak relationship between relative advantage and Intention to use Blockchain Technology. The unfamiliarity of Blockchain Technology and hinder the intention to adopt Blockchain Technology (Lai *et al*., 2020). The organization adoption will be impact by the risk for the multi system (Bruce *et al.*, 2019). In addition, lack of experience and complexity of merging the blockchain into existing system also will let the organization does not adopt the blockchain technology to its fullest capacity (Dhirasasna *et al.*, 2020). Generally, the organization will likely to adopt blockchain technology during it is better than existing technology (Maroufkhani *et al.*, 2020).

For top management support, the results show the spearman correlation is 0.431 and moderate relationship between top management support and intention to use blockchain technology. Adoption of blockchain technology is contingent on solid leading support (Bruce *et al.*, 2019). Usually, the organization will more likely to provide the resources for innovation during it is support by upper management. The knowledge and experience regarding blockchain technology is important for an organization to investment the blockchain technology (Liyan Lu *et al.*, 2021). Generally, the top management play a role for decision making and allocates resources for blockchain technology adoption (Kamble *et al.*, 2020).

For government support, the results show the spearman correlation is 0.469 and indicate moderate relationship between the government support and intention to use Blockchain Technology. Governmentsupport included the legal structure, regulation and subsidy and will impact the intention of adopt Blockchain Technology (Sun *et al.*, 2018). The government policies can impact Blockchain Technology development and acceptance both in a direct or indirectly (Liyan Lu *et al.*, 2021). Generally, the government support can drive the organization to research and development the new technology.

5.2 Limitation Study

There are many limitations during the research and data collection. The first limitation is limited resources. Due to the Blockchain Technology is still newly in Malaysia, the researcher will difficult to get the information such as blockchain article and news which actual implement or related in Malaysia. The second limitation is time- consuming. This study is focus the firm unit of respondents, the top management or manager mostly busy for their task and difficult to get the feedback of questionnaire from them. The lastly limitation is the respondents will reply the questionnaire randomly. The respondent may not read the question and direct answer it. This issues will let the researcher feel confused during analyzed the data.

5.3 Recommentation

(a) Recommendation for Organization

Based on the results obtained in this research shows the intention to use blockchain technology still low. The firms should do the research and development about the new technology which can help them enhance the performance in the business activity. In this e-commerce generation, the majority of last-mile logistic has face the problem for overload of parcel during the festival or special session and brings the delay and missing issues of delivery. To build the confidence of consumer, the firms need

to improve their efficient and performance in the task.

(b) Recommendation for Future Researcher

Based on the results obtained in this research shows the intention to use Blockchain Technology is low due to this technology still newly. This study is only focus on the last-mile logistics in Johor, Malaysia and mostly their Head Quaters (HQ) in Kuala Lumpur and Selangor. Usually, the firms will run the new technology in HQ area and analyse it is suitable or not even Johor is the second biggest city in Malaysia. Hence, for future research the researcher may focus on the Kuala Lumpur area or one company. Besides, for getting the precise information, interview method will more suitable than distribute survey form. That is because, the researcher can get more idea and asking any question their want to know during interview.

5.4 Conclusion

In conclusion, this study is aimed to determine the intention to use Blockchain Technology (BCT) among last-miles logistics in Johor, Malaysia. This study applied the Technology Organization Environment (TEO) models to determine the intention to use Blockchain Technology (Relative Advantage, Top Management Support, Government Support). The results of the study based on spearman correlation shows the intention to use Blockchain Technology in last-mile logistics is moderate. Due to most of the business has transform to e-commerce, it is impact the volume of parcel increase and negative issues for last-mile logistics. To development the technology for last-mile logistic is important for the organization to reduce the error and efficiency. The purpose of the Blockchain Technology is help to improve the efficiency in business performance and reduce the error in the process. Generally, the organization will likely to adopt blockchain technology during it is better than existing technology. The top management play a role for decision making and allocates resources for blockchain technology adoption. The government support can drive the organization to research and development the new technology.

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