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**EXPLORING READINESS TO ADOPT AI: JUNIOR
EXECUTIVES' PERSPECTIVE**

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UNIVERSITI UTARA MALAYSIA**

August 2023

**EXPLORING READINESS TO ADOPT AI: JUNIOR EXECUTIVES'
PERSPECTIVE**



**Project Paper Submitted to
School of Business Management
Universiti Utara Malaysia
In Fulfillment of the Requirement for the Master of Human Resource
Management**



**Pusat Pengajian Pengurusan
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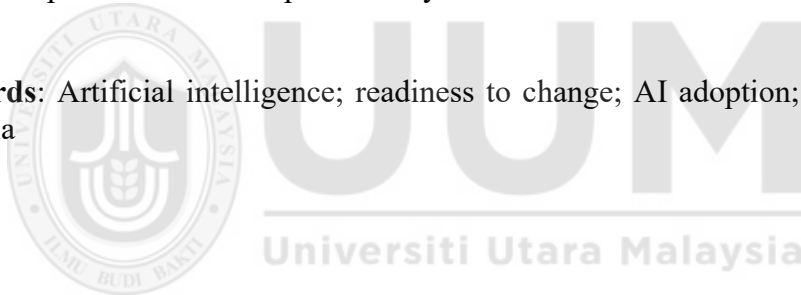


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Abstract

Malaysia is ranked as one of the most famous countries in Southeast Asia that have advanced technology. So, it is not surprising if Malaysia starts to embrace artificial intelligence into the country as AI is well-known as a technology that revolutionized the way how people live and work. The main aim of this study is to explore readiness to adopt AI among organizations in Malaysia. Hence, a qualitative approach was conducted. In this qualitative study, 10 participants were interviewed to get their opinions regarding their knowledge on AI, their perception towards AI, explore level of AI adoption in their organization and their advice to organization that plan to adopt AI. From the interview, the study found that Malaysian organizations are aware about AI but surprisingly, not all is adopting AI in their organization. In fact, majority of the participants do agree that AI is a good technology that should be adopted. Among the reasons shared for not adopting AI in the organization are financial issue, lack of expertise, lack of knowledge and AI is not needed at the moment. The participants also shared their advice to conduct readiness audit before embarking on AI. The audit will allow the organization to examine the size and capabilities of the organization to adopt AI. This current study makes a vital contribution to understand and acknowledge the readiness of Malaysian organizations in adopting AI. The implication and future research direction are outlined to allow others to explore the other scopes of study.

Keywords: Artificial intelligence; readiness to change; AI adoption; AI knowledge; Malaysia



Abstrak

Malaysia berada di tangga teratas antara negara-negara di Asia Tenggara yang mempunyai teknologi yang canggih. Maka, tidak hairanlah jika Malaysia mula ingin menceburi kecerdasan buatan ke dalam negara mereka. Memandangkan kecerdasan buatan ini sangat terkenal dalam memudahkan kehidupan manusia dari segi mereka hidup dan kerja. Tujuan utam kajian ini adalah untuk meneroka kesediaan dalam menggunakan kecerdasan buatan dalam kalangan organisasi di Malaysia. Oleh yang demikian, pendekatan kualitatif telah dilaksanakan. Dalam kajian kualitatif ini, seramai 10 orang peserta telah ditemu bual bagi mendapatkan pandangan mereka terhadap pengetahuan tentang kecerdasan buatan, persepsi terhadap kecerdasan buatan, tahap penerimaan kecerdasan buatan dalam organisasi mereka dan nasihat mereka kepada organisasi yang bercadang untuk menggunakan kecerdasan buatan. Daripada temu bual yang dijalankan, didapati bahawa organisasi di Malaysia sedar akan apa itu kecerdasan buatan tetapi yang mengejutkan, tidak semua menggunakan kecerdasan buatan dalam organisasi mereka. Malahan, peserta bersetuju bahawa kecerdasan buatan adalah teknologi yang baik yang perlu digunakan. Antara sebab yang dikongsikan tentang mengapa organisasi tidak menggunakan kecerdasan buatan adalah isu kewangan, kekurangan pakar, kekurangan pengetahuan dan kecerdasan buatan tidak diperlukan buat masa ini. Peserta turut menasihatkan agar dilakukan audit kesediaan sebelum menggunakan kecerdasan buatan. Audit ini membolehkan organisasi mengkaji tentang saiz dan keupayaan organisasi untuk menerima kecerdasan buatan. Kajian ini memberi sumbangan yang penting dalam memahami dan mengiktiraf kesediaan organisasi di Malaysia untuk menggunakan kecerdasan buatan. Implikasi dan cadangan kajian pada masa akan datang turut dibincangkan bagi membolehkan orang lain untuk meneroka lain-lain skop kajian.

Keywords: Kecerdasan buatan; kesediaan untuk berubah; penggunaan kecerdasan buatan; pengetahuan kecerdasan buatan; Malaysia

Acknowledgement

All glory be to Allah and His blessing for allowing me to complete my Human Resource Management master's project. I give thanks to God for all the chances, difficulties, and resources that have enabled me to complete the project paper. Throughout this process, I learned a great deal about myself on both an academic and a personality level. I am eternally grateful to the Holy Prophet Muhammad (Peace be upon him), whose style of life has provided me with constant direction.

Next, I want to sincerely thank Associate Professor Dr. Siti Zubaidah bt. Othman, who supervised my master's thesis. Her excellent guidance for my work was vital in its success. It has been a great honor and joy.

Finally, I want to thank everyone who has helped me financially and emotionally, especially my darling father Armanshah Bin Abu Bakar, my mother Zainallia Ain Binti Zainal Abidin, my siblings, and all of my friends. They motivated me, and without their help, this effort would not have been feasible. Their help was essential for the success of this project.

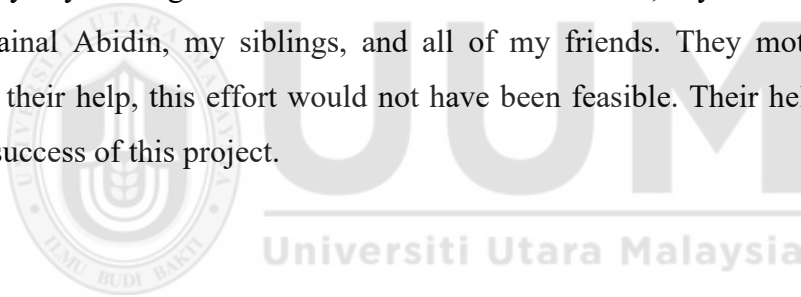


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CHAPTER 1 INTRODUCTION

1.1 Background of Study

Information and Communication Technology (ICT) industry is one of the few sectors that have rapid growth in Malaysia since the pandemic hit around the world. Malaysian Investment Development Authority (2021) stated that ICT industry registered 10.4% growth in year 2020 with the value of RM320 billion. The government and private sectors in Malaysia right now are in the process of embracing digital nation transformation. To support this vision, the Malaysian government has launched a policy known as The Fourth Industrial Revolution Policy (4IR). Through this policy, technology Malaysia industries transformed into a high-income nation status. Economic Planning Unit, Prime Minister Department (2021) stated that their aims are to shape technology and society to contributes to one another. Artificial Intelligence is one of the five core technologies that would be used to enhance Malaysia income and quality of life. The success of the 4IR Policy is depends on how willing all the stakeholders, organization, society, and government to change and implement the policy strategies and initiatives.

Artificial Intelligence is well-known around the globe as a machine intelligence that can mimic human action and provide humans with an easy lifestyle in many aspects. European Parliamentary Research Service (2020) defined AI term as a system that analyses its environment and then shows its intelligent behavior with some technique and context to achieve specific goals. Business Today (2023) stated that despite current global economic challenges, Malaysia is still well positioned as a fast-developing center for digital technology and high-tech manufacturing. It was found that eight of the top ten

emerging jobs in Malaysia require digital technology skills such as data analytics, data science, digital transformation, and cybersecurity.

New Strait Times Online (2023) stated that Malaysia currently is actively encouraging investment in emerging technologies like fintech, e-commerce, and digital health. The government also introduced various incentives program to support tech startup companies and welcomed partnerships with international tech companies, investors, and innovators. As shown in Table 1.1, Xaltius Official (2020) found that Singapore is the world's latest domination on countries that lead in terms of Artificial Intelligence adoption with a score of 9.816. This is followed by United Kingdom, Germany, the United States of America, Finland, Sweden, Canada, France, Denmark, and lastly Japan. But unfortunately, Malaysia's scores were low, and was not even nominated in the top 10 world ranking despite being a neighbor to Singapore.

Table 1.1
Leading Countries in Adopting Artificial Intelligence

Country	Rank	Score
Singapore	1	9.186
United Kingdom	2	9.069
Germany	3	8.810
United States of America	4	8.804
Finland	5	8.772
Sweden	6	8.674
Canada	7	8.674
France	8	8.608
Denmark	9	8.601
Japan	10	8.582

1.2 Problem Statement

Malaysia is one of the great developing countries in the world, but their working industry system still back in time. From Digital News Asia (2019), it was stated that Artificial Intelligence (AI) allowed the Malaysian innovation rate to almost double and increased the productivity of every employee by 60% in the year 2021. It is clearly shown from this report that AI adoption given a big positive impact on Malaysia in many aspects.

New Straits Times (2022) stated that organization nowadays move towards digital acceleration, Malaysian employers currently recruiting more applicant in tech roles in artificial intelligence, e-commerce, and digital transformation. In other words, organization nowadays is looking for people that have digital transformation and right soft skill set. Study shows that 84% of Malaysian employee are more interested partnering with AI in delegating work as much work as possible than fearing AI would be replacing their job (Malaysian Investment Development Authority, 2023). Unfortunately, 89% of Malaysian agree that in order to stay relevant in this new current global, they need to have more training and development in their work skill. (Business Today, 2022)

Similarly, McKinsey (2020) stated that in the year of 2030, 6 million new jobs would be created if Malaysia started adopting artificial intelligence. Therefore, by taking into consideration these factors, Malaysia needs to rapidly build an AI culture in their system for the better future investment of Malaysia. However, information and studies on AI adoption in Malaysian context is still scarce. For example, knowledge in terms of how much Malaysian knows about AI, their perception towards AI and level of AI adoption

are still limited. Therefore, this study is conducted with an intention to explore Malaysian organizations readiness in adopting artificial intelligence.

1.3 Research Questions

As there is limited knowledge and understanding on the readiness of organizations in adopting AI in the Malaysian context, the following research questions are constructed:

1. What are Malaysian organization thoughts on AI?
2. What are Malaysian organizations concern on AI?
3. How do Malaysian organizations adopt AI?

1.4 Research Objectives

The main objective of this study is to explore Malaysian organizations readiness in adopting AI. To answer the above research questions, the following objectives are formulated:

- To explore Malaysian organizations understanding on AI;
- To understand Malaysian organizations perception towards AI; and
- To identify Malaysian organizations readiness in adopting AI

1.5 Significance of the Study

Theoretically, this study is significant, given the empirical findings that emerge from the study could enrich the existing literature on AI adoption. Reviewing past literatures shows that there is limited discussion on the issues of readiness among organizations in adopting AI especially in the Malaysian context. Therefore, the unexplored issues in previous study could be answered through this study especially in understanding the readiness to adopt AI and add new empirical findings to the existing literature on AI.

In fact, with this knowledge perhaps could offer practical solutions to the management in adopting AI in their organization. By understanding readiness level of the organization, an appropriate strategy can be taken to increase the adoption of AI in the organization. Overall, these empirical findings should benefit both scholars and practitioner, and provide broader contribution that extends beyond the Malaysian context.

1.6 Scope of the Study

The current research focused on exploring the readiness of Malaysian organization in adopting AI. Given the need to explore readiness of Malaysian organizations in adopting AI, qualitative approached is utilized. Data were collected through semi-structured in-depth interviews with all participants. The research aimed to explore the understanding of Malaysian organizations towards AI, to thoroughly understand Malaysian organizations perception towards AI, and to explore Malaysian

organizations readiness in adopting AI. Using this interview format, the aim was to gain in-depth understanding of Malaysian organizations readiness to adopt AI. It is important to note that, this open interview method has been considered the most culturally appropriate means of gaining information from Malaysian participants. Ten participants from ten organizations in Kuala Lumpur were participated in this study. The data collected from the interview were analyzed manually using thematic analysis approach.

1.7 Definition of Key Terms

Artificial Intelligence:

A software system that uses techniques like machine learning to solve problems in particular domains without hard coding all possibilities in the software (Igor et al., 2020)

Readiness to change:

Readiness for change is the extent to which an individual or individuals are cognitively inclined to accept, embrace, and adopt a particular plan to purposefully alter the status quo (Rafferty et al., 2012: 6)

Employee Readiness:

Employee readiness is the extent to which workers are willing and prepared to participate in the training with some personal characteristics such as ability, attitudes, beliefs, and motivation. (Nik Sarina et al., 2016)

Organization Readiness:

Organizational readiness determines as the relationship between people, processes, systems, and performance measurement which requires synchronization and good coordination (Greeff & Ghoshal, 2004)

Technological Readiness:

Technological readiness is defined as propensity of people in embracing and using new technologies in their workplace. (Ling & Moi, 2007; Nugroho et al., 2017)

1.8 Organization of Chapters

This chapter is the first of five chapters in this project paper. Chapter 2 gives general review of the literature on artificial intelligence (AI) and readiness to change. The concept of AI and readiness to change are also presented. Discussion in Chapter 2 continues with past empirical findings on factors that might readiness to change especially in the context of AI.

Chapter 3 describes the method for the study namely, the research design and research sampling. The chapter also reports the development of interview protocol and the interview process. Chapter 3 ends with a brief description on the strategies and procedures that were used to analyze data collected from the interview.

Chapter 4 reports results of the study. There are reports of the descriptive analysis of the respondents' profiling and responses of the semi-structured questions were

presented. The chapter also discussed the interpretation of the research findings for the study. The findings were compared to previous studies conducted.

Chapter 5 presents the recommendations and suggestions to improve organizations readiness to adopt AI. The chapter ends with a discussion on limitations of the study, their implications for both researchers and practitioners, and some suggestions for future research.



CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter discusses issues related to adoption of artificial intelligence (AI) as presented in the literatures. These issues are reviewed to provide a theoretical foundation for the research. The chapter begins by describing the concept of AI, and this followed by findings from past empirical studies.

2.2 Concept of Artificial Intelligence (AI)

Artificial Intelligence is regards as human intelligence embedded in machinery that performs intelligent tasks such as learning and problem-solving. Copeland (2020) defined AI as the ability of digital computers or controlling robots to do tasks related to intelligent beings. AI is flexible to learn activities such as rules and behavior and from experience learning and then act based on those initial configurations.

In other writing, Igor et al (2020) regards AI as a software system that uses techniques like machine learning to solve problems in particular domains without hard coding all possibilities in the software. According to CSU Global (2021), AI had been used in the economy in 5 industries such as retail, healthcare, manufacturing, life sciences and finance. Takayar (2021) found that manufacturing is the highest sector that applied AI technology. AI has been used across several layers of operation, all the ways from workforce planning to product design. The algorithm of AI is being used

as a notification that notifies manufacturing units of potential production faults that can lead to product quality issues in the future.

2.3 Artificial Intelligence in Malaysia

Organizations in various industries globally and domestically gain continuous economic growth and development after utilizing machine learning in their system. Study found that the higher level of organizational readiness, the higher success rate of the innovation adoption in the organization. (Weiner, 2009; Jöhn et al, 2021)

Malaysia ranked 36th from 160 countries on government preparedness to use AI in public services (The Edge Market Official Online, 2022, as cited in Oxford Insight's 2021 AI Readiness Index, 2022). Healthcare industry is one of the industries in Malaysia that have utilized AI to reshape faster and give an accurate solution that helps the clinical workflow. One of the AI systems that have been launched by the government is called Stethee, an AI-enabled stethoscope system. The purpose of this Malaysian-made medical system is to be used in remote and rural areas as a traditional stethoscope. These technologies allow the user to listen to the sound of their lungs and heart and transmit it to the smart device like a smartphone or tablet (DG of Health Official, 2018). AI is a technology that is set to replace healthcare workers but provides promise on helping health professionals reach their peak performances.

Second is the retail industry. E-commerce platforms' usage and popularity started to blow up after the Covid-19 pandemic hit the world. These platforms often refer to any kind of goods and services that go through the Internet. Implementing this digital transformation in E-commerce can bring high-profit revenue towards the

Malaysian retail industries. AI's role in this platform is by predicting customer purchase preferences and then recommending products and services to them. One of the famous AI services that have been implemented in retail industries is the Metaverse. This technology gives many kinds of benefits to their consumer such as interacting through touchscreen mirrors in fitting rooms and in-store, visiting other retail locations virtually, and being accessible to touch and feel the product without having to travel physically to the store (Sinar Daily, 2022).

Banking corporation is another example of industry in Malaysia that adopt AI. The artificial intelligence algorithm provides security in the banking transaction by analyzing the pattern of their customers' spending and past transaction. Due to that, any fraudulent transactions can prevent them from happening. In the year 2020, United Overseas Bank (Malaysia) Bhd launched its first artificial intelligence digital banking services mobile banking app in Malaysia. From the application called Mighty Insight, the customer would receive a personalized financial plan based on their banking and spending expenses. In the same bargain, the financial plan also helps the customer to have consolidated view access to their average monthly expenses instead to search multiple card statements.

When talking about artificial intelligence, there are always a common misconception among people that artificial intelligence will replace the human workforce. Rather, AI capability open up many employment opportunities for people to explore and even a job that might not have existed before in the industry market. That is why implementing artificial intelligence in the organization is essential. Another benefit gained from implementing this machine learning in the organization is a smooth streamlined process. Solving myriad problem struggles, providing predictive analysis, or automating the repetitive process in the organization can be

solved by AI. These problems solving based frameworks able to reduce human error and cut back on wastage. Owing to that, the workers in the companies can focus more on other crucial tasks and decision-making.

2.4 Elements Associated Implementing Artificial Intelligence

2.4.1 Readiness to Change

Organizational change is a crucial success to practical implementation in the organization. If the employees in the organization are not ready and resist change, there are more likely difficulties may happen during the new implementation. According to Abdel Ghani (2014) study, employees form their behavior either supported or resist change corresponding to what they perceive of the readiness changes.

Change readiness is a tool that is used to measure and evaluate whether the organization is prepared for specific change. According to Weiner (2009), organizational readiness to change comes in two forms: commitment to change and effectiveness to change as a conceptual interpretation. Apart from that fact, change readiness is incomplete if the employee only wants to implement change without having any confidence in their ability to change.

Readiness to change brings a good impact towards organizational success in terms of employee curiosity, employee openness and willingness in accepting new ideas or important programs. Furthermore, studies found that the higher the organization's readiness towards the change, the more employees are willing to initiate the organizational changes (Weiner, 2009). This is also agreed by Dym and

Hutson (2004), where they argued that organization and its people may change quickly and stronger if all organizational components are ready to change.

2.5 Past Studies on AI and Readiness

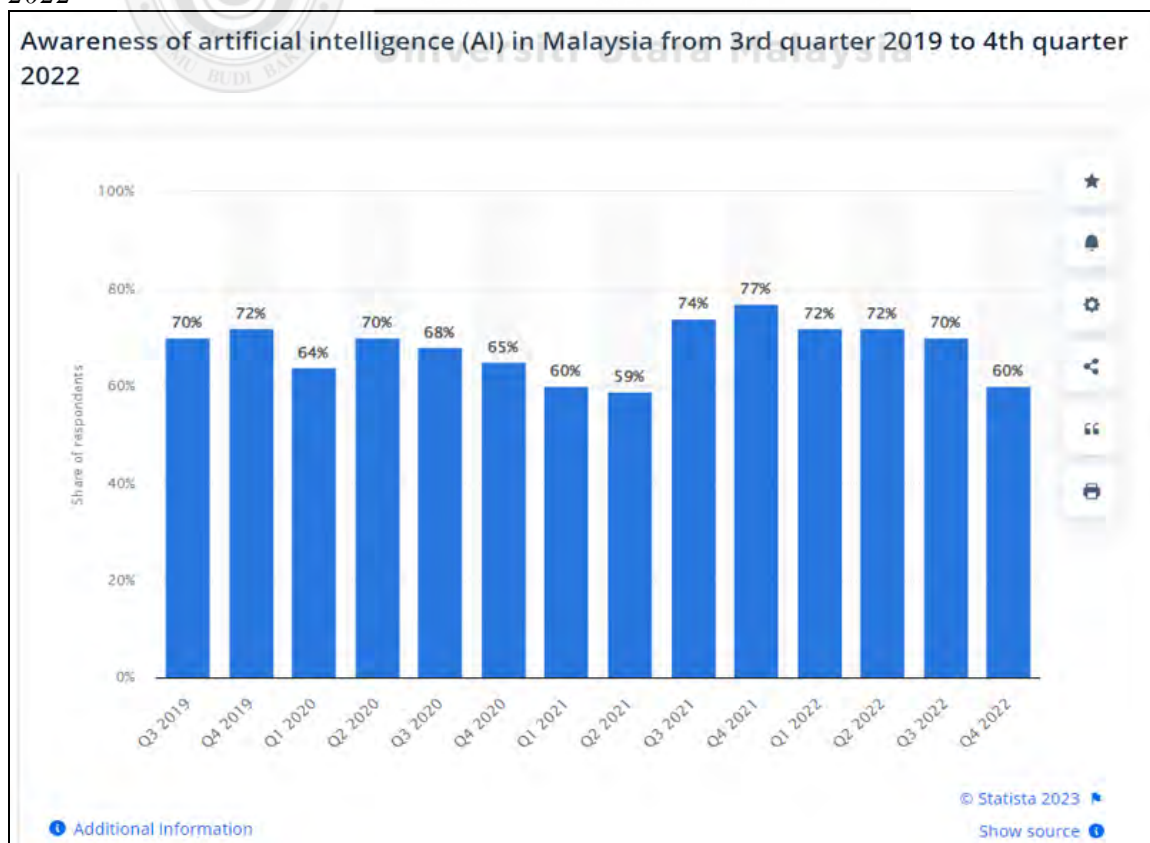
2.5.1 AI and Employee Readiness

Employee readiness refers to beliefs, attitudes, intentions, and employee understanding of organizational changes that are necessary for future business success (Moric et al, 2022). As shown in Figure 2.1, Statista Research Department (2023) survey reported that during the quarter of 2022, only 60% of Malaysia respondents are aware of artificial intelligence technology. This statistic shows that number of percent of Malaysian respondent is decrease from 77% in same period last year, 2021. Therefore, when a new system or technology is adopted in the organization, the employees must always be ready and willing to learn them (QuickStart, 2022). There are studies that showed how low level of readiness, motivation or experience resistance to change may affect the probability of a lower level of success. In terms of AI adoption, employees believe that training programs are needed for them to develop effective skills in using artificial intelligence (David et al, 2022). They need to have knowledge to avoid negative outcomes and to gain great results. In line with this statement, a study shows that employees with a higher level of technology of AI, have more positive attitudes towards the willingness to adapt, engage, and innovate to the new organizational culture of technology adoption (Elk & Strom, 2021).

According to Nik Sarina et al (2016), employee readiness is the extent to which workers are willing and prepared to participate in the training with some personal characteristics such as ability, attitudes, beliefs, and motivation. These types

of characteristics are necessary for the workers to undergo training, learn the content of the training program, and apply them in their work tasks. The obstruction in technology, communication, development, industry competition and reengineering required the organization to properly handle the situation. Hence, the training program is important to the employees to prevent problems from occurring or to handle the issue professionally if they happen in the future (Heathfield, 2008). If they perceive threats and challenges related to the implementation of artificial intelligence, employees will have less interest, high anxiety, and high stress towards the technology itself rather than having a positive emotional attitude. The organization needs to put together their employees by promoting the right mindset of artificial intelligence.

Figure 2.1
Awareness of Artificial Intelligence in Malaysia from 3rd Quarter 2019 to 4th Quarter 2022



2.5.2 AI and Organizational Readiness

Greeff and Goshal (2004) defined organizational readiness as a relationship between people, process, system, and performance measurement which require perfect synchronization and good coordination. The more people involved in the change process, the higher successful rate of changes implementation. Business Today (2023) states that any firm that adopts artificial intelligence in their management, will be embracing a surge workforce of creativity and productivity. But by adopting new technological changes, some basic standards needed to be done for them to have a successful new technologies implementation. The most important rule in the implementation of new changes is the willingness of its organizational member to accept the technological changes and contributes during the implementation process.

Based on Hashim et al (2021) study, there are few factors needed before adopting new technologies in construction industries. They found that to have a higher readiness level, the organization must have the necessary skills and capabilities. These capabilities would later determine whether the organization had enough resources or not to implement new technologies. Their study shows that an organization needs to create new policies, procedures, or practices that are based on this new machine. Six out of ten respondents agreed that these new policies, procedures, and practices would act as key guidelines for the employee to refer to during and after the implementation of the technological changes. In addition, their finding also showed that coordination and communication support are important in technological change readiness. Organizational support could come from many aspects such as in providing fund, training, and knowledge to all their employees.

Adopting new technologies requires the firm to invest a lot of amounts of money and if the organization failed to do so, this process would be failed due to the low readiness level of the organization.

Hradecky et al (2022) had used Technology Organization Environment Framework (TOE) together with Technology Readiness Index (TRI) to better explore artificial intelligence implementation in the exhibition sector. This framework explained in detail factors that might contribute to the organization's decision-making in adopting new technologies. In their study, it was found that the exhibition is mostly behind other industries in digital transformation and their technological foundation is not ready for the AI implementation. Even though the people in that industry acknowledge the benefit of machine learning, they do not have any plans to implement the machine. It is struggling to be innovative in nowadays fast-paced workforce.

2.5.3 AI and Technology Readiness

Technologies readiness can be measured in the aspect of organizational size, financial resources, and organizational strategic plan. In a study conducted by David et al (2022), it was found that organizational size and resources play crucial roles in adopting artificial intelligence in the organization. The reason for this is that larger organizations are inclined to have more embedded structure and less struggle in implementing new cultures and technologies compared to small organizations.

The Welding Institute (TWI), organization world's foremost independent research and technology stated technologies readiness level (TRL) is a measuring method that is used to understand the technical maturity of technology during its

acquisition phase (TWI, 2022). Many organizations in different industry sectors have implemented TRLs for their purpose to allow the technology to evolve in their organization in the terms of research, development, and deployment.

Forbes (2022) stated the reason the failure rate is still high even though the problem had been identified appropriately is due to the lack of attention to the organizational readiness level. This framework level is parallel to the technology readiness level. Yousef et al (2021) affirm that besides people, technology is an equally important factor that can determine whether organizations keep up with the new changes effectively. This level of preparedness is crucial to ensure the organization's protection against its own unwanted competitors.

2.6 Conclusion

This chapter discussed the concept of artificial intelligence and this was followed by reviewing and discovering factors that influence the readiness in adopting AI as reported in past empirical studies.

CHAPTER 3

METHODOLOGY

3.1 Introduction

Chapter 3 describes the method for the study. In this chapter, the research design, the research sampling, the development of interview protocol and the interview process are discussed. The chapter concludes with strategies for analyzing the data.

3.2 Research Design

Qualitative research design is used in this study as it adds richness or thick description to the findings of the study (Faber et al, 2006). When the researcher wants to know how the individuals interpret, construct and attribute meaning to the experience of the participants, qualitative research is more appropriate (Merriam, 2009). She further argued that qualitative research allows researcher to achieve an understanding on how people think about their lives, delineate the process, and can describe how people interpret what they experience before. This approach allows the exploring of attitudes, opinions, beliefs, perceptions, interactions, and behaviors in various settings (Brantlinger et al., 2005; Scruggs et al., 2007). According to Barbour (2014), qualitative approach allows the researchers to understand how people describe and view on concepts, explain the issues from macro to micro scope, help to differentiate between the social world and their own life experience or respondents'

experience on the issues, help to understand apparently illogical behaviors, and help to explain apparent discrepancies from various views.

Qualitative approach comes with many methods such as case study, personal experience, introspective, life story, interview, focus group discussion, observational fieldwork, documentary sources, diaries and visual texts which can describe routine, moment and individuals' life (Creswell, 1998, p.15; Taylor et al., 2016, pp. 104-105). Each of the method allows the researchers to collect and access data from different form of interactions. The choice of method depends on the research interest, the setting or people to be studied and practical constrains faced by the researcher.

Given the need to explore the range of views about readiness of Malaysian organizations in adopting AI, a guided semi-structured interview was employed as a data collection method. Semi-structured interviews act as a guide in interview, with questions and topics that must be covered (Harrell & Bradley, 2009). In semi-structured interview, the researcher has a list of questions or series of topics that they want to discover in the interview namely, an interview guide and there is flexibility on how and when the questions are put and how the interviewee can respond (Edwards & Holland, 2013). The interviewer has the choice about the order in which questions were asked, but the questions are standardized, and probes may be provided to ensure that the researcher covers the right material. All the participants involved were asked the same interview questions and the probes might be different due to different responses. This is useful for exploring readiness to adopt AI. The interview session of each participant from the organizations took about one hour and have been recorded.

3.3 Research Sampling

Sampling selection is the crucial part in methodology where the researcher had to decide the right individual; organizational; people and others to participate in the study. In this study, “maximum diversity sampling” was employed as it is recommended when doing unstructured, semi-structured or in-depth interview (Minichiello et al., 1995; Patton, 2002). Maximum diversity sampling is a data collection method that being used to identify variable data from varied contexts (Benoot et al., 2016; Suri, 2011). These sampling techniques allowed the researcher to evaluate the topics from many different standpoints. This strategy is enhanced through a snowball sampling mechanism. According to Tracy (2013), snowball sampling was when the researcher begun by identifying several participants who fit the study criteria and ask the people to suggest a colleague, a friend, or a family member.

In selection of participant from the organizations, a purposive sampling technique was implemented (Patton, 2015). Purposive sampling is widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest (Gentles et al., 2015; Palinkas et al., 2015). Tracy (2013) argued that by engaging purposive sampling, researcher has purposefully chosen data that fit the parameters of the research questions, goals, and purposes. As for the participants in this study, those who were able to share their organization experience in adopting AI were chose. A total of ten participants who representing their organizations were involved in this study.

Another issue is related to sample size when conducting research. In qualitative research, quality was matter most. Therefore, the question of how many interviews is enough was subjective. Tracy (2013) had argued that in qualitative

research, it depends on the richness of data gathered from other sources, on budget, on timeline, and on the access of software used in transcribing and analyzing the data. For this study, the sampling frame requires sufficient number of participants in order to achieve “saturation point” which is, for it to become evident that any additional participants would be simply repeating what others have reported (Hesse-Biber & Leavy, 2006; Lofland & Lofland, 1984; Richards, 2005; Robson, 2002; Strauss & Corbin, 1998).

3.4 Development of Interview Protocol

According to Jacob and Furgeson (2012), an interview protocol is more than set of interview questions, but also a procedural guide for directing a new qualitative researcher through the interview process. It includes a script of what an interviewer will say before the interview, script for what will be said at the conclusion of the interview, prompts for the interviewer to collect informed consent, and prompts to remind the interviewer the information that she or he is interested in collecting. The questions developed were used as the guideline to the researcher during the interview.

In this study, the interview questions were developed based on previous similar studies and the research objectives. Generally, the questions that were asked during the interview are guided and centered on the readiness of Malaysian organizations in adopting AI. This interview protocol was in English version, but the interviews were conducted in both English and Bahasa Malaysia.

3.5 The Interview Process

Data collection begins by contacting the potential organizations through formal email to explain about the study and to get permission to conduct the study. Interview protocol was also attached together with the letter, and follow up by telephone was conducted as a reminder and to seek for the decision. This would provide the person in-charge on the idea about the interview process and content of discussion.

The interviews were conducted either face-to-face or video call depending on the participants request. It was conducted using either Bahasa Malaysia or English — depending on the preference of the participants. Each participant was assured full confidentiality and the interview lasted approximately one hour. All the face-to-face interviews took place in the participants' workplace. The participants were also asked whether they preferred being audio-taped and were told that both audio-taping and note-taking were acceptable to the researcher. The whole interview process took about 3 weeks in April 2023.

3.6 Data Analysis

Data analysis is the last process and one of the challenges in qualitative research. It is a process of bringing order, structure, and interpretation to the mass of collected data. The data gathered for this study was recorded, transcribed, and analyzed manually by using thematic analysis. The main reason for conducting thematic analysis is to extract information and perceptions on the factors and variables of the study. The thematic analysis technique is the most commonly type of analysis

for qualitative data. Thematic analysis is a method for identifying, analyzing, and reporting patterns of the data which can help to describe the data in detail and help to identify one theme or group theme (Braun & Clarke, 2006).

In this study, data were analyzed manually. The process begins by reviewing the raw data (interview transcript) line by line, while scanning to identify points that related to objective of the study. The points include the participants' knowledge and perception on AI, level of AI adoption and advise in adopting AI in the organization from each interview transcript. The verbatim transcripts were read several times and the audio interviews were reviewed in order to detect any inadequacy or mistake in coding. The process of coding is repeated until all 10 interview transcripts are complete. From the process of reading, listening, and categorizing, the researcher developed list of concepts and categories for the data. After the coding process, the development of themes and categories took place.

3.7 Conclusion

This chapter has explained the research method and strategy for the study. It described how the sample of respondents was obtained, the selection of the respondents, the development of the interview protocol and the interview process. The chapter ends with the process of transcribing the interview.

CHAPTER 4

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter reports and discusses responses captured from the participants during the interview. The chapter begins with an overview of the demographic characteristics of the participants in the study. The discussion ends with the discussion on the responses given by the participants regarding Malaysian organizations readiness to adopt artificial intelligence (AI).

4.2 Demographic Characteristics of the Participants

Detailed descriptive of the participants' demographic characteristics are presented in Table 4.1. It is noted that 90% of the 10 participants in this interview were females. Majority (90%) of the participants were age between 25 to 30 years old. All participants were Malays. Majority of the participants in this survey (80%) had a degree. All participants interviewed were junior executive with 60% of them have hold the position less than a year. In terms of number of years with the organization, 60% of the participants had served their organizations less than a year. Most of the organizations (40%) had employees less than 100 and between 100 and 1500. 70% of the organization interviewed were services.

Table 4.1
Demographic Characteristics of the Participants (n= 10)

Descriptive	Frequencies	(%)
Gender		
Male	1	10
Female	9	90
Age		
20 – 24 years old	1	10
25 – 30 years old	9	90
Race		
Malay	10	100
Chinese	0	0
Indian	0	0
Others	0	0
Highest Education Qualification		
SPM	0	0
STPM	0	0
Diploma	0	0
Degree	8	80
Master Degree	2	20
PhD	0	0
Others	0	0
Current position		
Junior Executive	10	100
Years with Current position		
Below 1 years	6	60
1 – 3 years	3	30

More than 3 years	1	10
Years with Present Organization		
Below 1 years	6	60
1 – 3 years	3	30
More than 3 years	1	10
Total number of employees		
Below 100 employees	4	40
100 – 1500 employees	4	40
More than 1500 employees	2	20
Types of Organization		
Services	7	70
Manufacturing	3	30

4.3 Responses from the Participants

This section discussed the responses gathered from 10 participants regarding their knowledge on AI, the perception towards AI, level of AI adoption in the organization and advise or suggestion for organizations that have intention to adopt AI.

4.3.1 Knowledge on AI

When being asked about their knowledge of artificial intelligence and their familiarity with that machine learning, four of the participants do not really know in detail what artificial intelligence is. They only heard about them through social media,

other people, or television. The most famous artificial intelligence that they are familiar with is the ChatGPT and Tesla car. In their own words,

“... I do not know AI in detail... I only heard about them through reading and watching dramas or movies on the television” [R2]

“... I never really know about AI... only heard other people talking...” [R6]

“... Yeah! I have heard but know slightly about AI...” [R9]

“... I know AI... have heard about them from many places ...” [R10]

Those who shared that they are familiar with AI, do have experience using it at their workplace. As shared by the participants,

“... Yeah! I’m familiar with AI... example that I can share is ChatGPT...” [R3]

“... I would say that I’m familiar with AI ... have heard of them and have experience using it ... my company once had a project that focused on AI ...” [R7]

In short, though AI is a technology that can help to speed up job process and increase the efficiency in the organization, people are still lacking of knowledge about

this. They are aware of the existence of the machine, but they do not know in detail how artificial intelligence works.

4.3.2 Opinion / Perception on AI

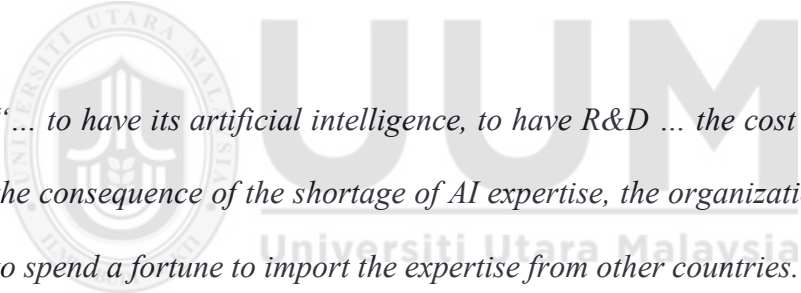
When comes to question whether AI is good or bad for the organization, majority of the participants agreed that AI is good technology that should be adopted in the organization. In their view, AI would help them in saving their time during daily tasks and reduce manpower. Some of the responses shared by the participants,

“... AI should be adopted in every organization ... AI helps in save time and reduce customer service tasks ... once AI have been implemented, manpower may decrease ... AI also gives cost saving impact towards the organization”
[R1]

“... artificial intelligence is a good system that needs to be adopted ... a lot of job tasks that need to be done in a short and long period ... when the organization implements AI in their firm, can cut down some of their daily job tasks and shift their attention to other difficult work tasks ...” [R5]

“... at this current time, AI is a product that should be adopted ... we can reduce the manpower ... this machine learning would not replace the manpower but help them to transcend their limitations ... humans have their limits when doing something, but having these machines can help them to overcome them ...” [R7]

According to Malaysiakini (2022), the adoption rate of AI in Malaysia is still low with only 15% - 20% of organizations. However, the current findings show that most of the respondents have a good perception towards adopting this technology in their organization. So, why is Malaysia still not fully embracing these new technologies? The findings indicate that there are two reasons why majority of the organizations in Malaysia still not adopting AI in business operations. The first reason is related to cost. In the interview, eight participants agreed that cost is the main reason why the most organizations are unable to implement this new technology. The operating cost cover the technology system, research, and development department, hiring AI expertise, data limitation, and providing technology training. As shared by the participants,



“... to have its artificial intelligence, to have R&D ... the cost is quite high ... the consequence of the shortage of AI expertise, the organization itself needed to spend a fortune to import the expertise from other countries.” [R2]

“... my experience working in many types of factories ... only few factories implement AI in their organization ... mostly used in testing and designing ... only big companies use AI in their full operation ... most companies in Malaysia only afford to rent the machine from another country rather than buy it ...” [R4]

“AI can be very expensive ... we need experts who master AI and it is not cheap ... hiring people requires a lot of investment in terms of paying salary ... learning AI itself can also be very expensive” [R9]

The next reason why Malaysian organizations still not adopting artificial intelligence is the mindset of the employer. Forbes (2019) stated lack of vision of the upper management is one of the six reasons why the organization still does not have full AI adoption. If there is no leadership support, how can the employees have access to use machine learning? The top management is not ready to face data lead decision-making and thought their work task is manageable without any new technology. When a leader does not support, it is hard for the adoption to take effect.

“... main reasons why many organizations in Malaysia do not fully adopt AI because their upper management itself thought their work task is manageable without requiring machine learning...” [R5]

“... My company's work scope does not require us to the AI system. So, we don't adopt them ...” [R3]

AI is a tool that improved our ability to think and explored new possibilities that provide many benefits to our new world. However, there are a few anxiety arise when discussing on new changes in the organization. First, is AI anxiety. People are concern about not having any experience when working with the machine. They are worried that they would lose control over their role. Another concern is related to job insecurity when adopting new technology. As shared by the participants,

“... AI may lead to job loss for humans themselves since robotics is taking over the job of humans ... can lead to socioeconomic inequality...”[R8]

Another negative perception of artificial intelligence is that AI can lead to biased decisions. This is because AI algorithms are built by humans. So, if the creator built the algorithm with a bias data, the system could produce biased result. Forbes (2019) argued that artificial intelligence cannot operate fully if the data isn't clean, relevant, organized, and accessible. All these failures may lead to difficulties in adopting new changes to the organization. As participants shared,

“... AI can run smoothly without any problem; they require a lot of data. Most of the companies have insufficient data and some of them also do not give 100% cooperation on sharing their data. Biased input can lead to poor result outcomes of AI...” [R8]

The current study shows that people's viewpoint on artificial intelligence is balance. They understand both good and the bad impact of AI, but they also acknowledge the benefits of adopting artificial intelligence in their business operation.

4.3.3 Level of AI Adoption

Artificial intelligence is a well-known profit tool that can rapidly shape Malaysia's economy and job market if it is implemented in the company. Malaysia Digital Economy Blueprint (2021) made a statement that in the next decade due to artificial intelligence technology, Malaysia's Gross Domestic Product (GDP) may up to 26%. So, what is the maturity level of AI adoption in the Malaysia organization?

When this question was asked during the interview, two categories of answers were given. During the interview, five participants shared that their organization does not adopt AI in their business activity. While two participants shared that their business operation does not require the use of AI technology. In the participants' own words,

“... my organization hasn't adopted AI yet ... we are handling our business with humans. As we came from a manufacturing company, our procurement teams need the human touch. We need human soft skills in terms of negotiating prices and to operate. In terms of robotics, we only have normal machinery.” [R8]

“... we do not adopt AI in our job tasks ... our job focuses on maintenance building, we need human touch to run our business ... a human workforce is required for our firm to run smoothly...” [R9]

There are participants who shared that they have experience adopting AI technology but unfortunately it was stopped halfway because of high cost.

“... our company wanted to implement AI but unfortunately, it was cut halfway ... plan is to implement AI in the CCTV that would be used in the guardhouse ... due to limitations in the aspect of finance, this project plan was put on hold.” [R7]

The finding also found that five participants' organization does implement AI in their business activity. However, it is used in a small scope. As the organization is still small, they are only being used in testing and designing.

“... a start-up company and high cost of technology adoption, ... our AI machine for testing and designing only ... used the technology to test our new product only ... after the product has been tested, another manual machine would take over the production process...” [R4]

Another famous used of AI in the organization is *Power BI*. This software was used in analyzing data. It was designed to be easily used by those that do not have any specialized data knowledge. It's capable of giving data in various forms like graphs, maps, charts, etc from the data given. As shared by the participants,

“We don't have a system like ChatGPT. Oh! Yeah. Power BI is one of the artificial intelligence ... used that software for payroll purposes. This software is so good, all our employee just needs to key in data, then the software will do all the work.” [R3]

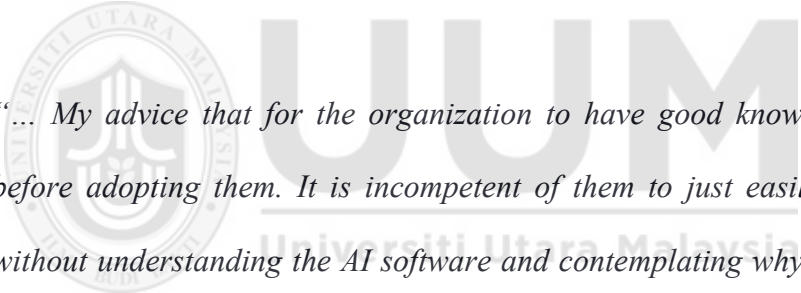
“ ... we used Power BI for our work tasks ... an intelligence software as its ability to analyze data and simplify it ... need to manually key in small data only and then the data would be processed automatically.”[R6]

To thrive in today's world industry market, Malaysia needs to adopt this new machine learning and embrace future developments. Rather worried and doubtful,

Malaysians should welcome AI as a tool that provides positive transformation in their industries.

4.3.4 Advice to Organization that Plan to Adopt AI

Understanding your level of readiness before technological changes is one vital point that needs to be alerted on. So, how the organization can scale up its AI initiatives? From the interview, eight participants agree that knowledge is the main important things need to acknowledge before adopting new technological changes in the organization. Taking steps in embracing knowledge can come from many aspects like being familiar with AI, and the reason for adoption.



“... My advice that for the organization to have good knowledge about AI before adopting them. It is incompetent of them to just easily adapt the AI without understanding the AI software and contemplating why their AI model is not working when it's broken ...” [R5]

“... In the first place, they must try to gain a lot of knowledge of AI technologies before committing to those resources. As AI is complex and expensive it is required a huge investment. It is better for that company to fully understand AI, what they want from AI, and what result they expect from the AI...”

[R8]

The next piece of advice is to be alert when adopting new technologies is to perform a readiness audit. This audit allows the company to examine the size and capabilities of its organization before committing to them. This technical and financial readiness helps the management in finding the company's current data infrastructure and data resources.

“I would advise small companies in Malaysia to not adopt AI because of its high cost. I do not want to put stop them from adopting by technology implementation is very expensive.” [R1]

“When adopting expertise, you need to do a background check on them first. As I experienced this when I was dealing with this European country company as 2nd party to run and create AI for my company. After being paid for about 20 billion pounds, the 2nd party cannot deliver the output as we want. Hence, the government of the overseas company declared them as blacklisted and would be closed if they aren't able to run the AI properly. Just as I mentioned earlier, background check is important. When it is good, then, you can build a relationship with them”[R8]

The current finding shows that nine participants found that it was a good decision to implement AI in the organization. They can give good impacts on the organization. AI is not only reshaping how your business operates but also the services and products that you offer to the customers.

4.4 Conclusion

This chapter has discussed findings from the interview conducted with 10 participants. In next following chapter, theoretical and practical implication of the study, limitation, and direction for future researched are discussed



CHAPTER 5

DISCUSSION AND RECOMMENDATION

5.1 Introduction

This chapter summarized the findings presented in Chapter 4. Implications of the study and limitation and direction for future studies are also discussed.

5.2 Summary of the Findings

The main aim of this study is to explore readiness to adopt AI among organizations in Malaysia. In this qualitative study, 10 participants were interviewed to get their opinions regarding their knowledge on AI, their perception towards AI, explore level of AI adoption in their organization and their advice to organization that plan to adopt AI.

In terms of knowledge on AI, four of the participants shared that they have heard about it but do not really know in detail what artificial intelligence is. When comes to question whether AI is good or bad for the organization, majority of the participants agreed that AI is good technology that should be adopted in the organization. In their view, AI can help save time during daily tasks and reduce manpower. So, what is the maturity level of AI adoption in the Malaysia organization?

Next is about level of AI adoption in their organization. Two categories of answers were given. During the interview, five participants shared that their organization

does not adopt AI in their business activity. While two participants shared that their business operation does not require the use of AI technology. Finally, the participants were asked to share advise to those organizations that plan to adopt AI. Eight participants agree that knowledge is the main important things that need to be acknowledged before adopting new technological changes in the organization. In other words, the organization must first familiar with AI, and know the reason for adoption. Participants also suggest the organizations to perform a readiness audit. This audit allows the company to examine the size and capabilities of its organization before committing to them. This technical and financial readiness helps the management in finding the company's current data infrastructure and data resources.

5.3 Research Contribution

The contribution to knowledge for this study were divided into theoretical, and practical contribution. Each of the contribution was discussed in the next section.

5.3.1 Theoretical Contribution

The current findings make several contributions to the research literature readiness to adopt AI. First, the understanding of organization towards AI was explored. As shown in the study, all participants are aware about AI regardless whether they have used it or not. Apart from that, the present study offers important insight contributed to the body of knowledge on AI and readiness of organizations to adopt AI. Responses

gathered through the interview indicate that participants had positive perception towards the implementation of AI and fully understand its' benefits.

The present findings also contribute to the body of knowledge by exploring things that organization need to prepare before adopting AI into their organization. Responses captured through the interview reveal that the organization need to understand what is AI and why they need it before planning for the implementation. Apart from that, organization also need to have sufficient money to acquire and maintain the system. By presenting these findings, research will provide a greater insight of the readiness of Malaysian organization toward adoption of AI from the perceptions of the participants.

5.3.2 Practical Contribution

Based on the current findings, the following are some of the recommendations to increase readiness of organization in adopting AI. The results demonstrate that lack of knowledge and skill can lead to resistance in adopting and utilizing AI. Thus, organization must provide exposure and training for their employees to fully utilized AI in the work. Apart from that, the current findings also highlighted on the importance of having proper planning which involve policy related to AI, financial, and readiness of employees towards adopting and utilizing AI.

5.4 Limitations of the study and Direction for Future Research

The potential limitations with qualitative research are addressed in much of the contemporary research literature. These limitations are generally associated with factors

such as generalizability of findings. Though these limitations are identified in this study, suggestion for possible research is also be offered.

The sampling frame and procedures employed in this study set some limits on the generalizability of the findings. As the study was exploratory in nature, it was intended to serve as a leading the way for further investigation and future testing on the issue of Malaysian organization readiness to adopt AI. Since it was not possible to get proper list of organization that have adopted AI in their operations, the research is focus on organization that mostly have easy access. Thus, the study only captured the experiences from 10 organizations in Kuala Lumpur. In short, despite the limitations in the approach used and given the exploratory nature of the study, the results provide useful findings that should be of interest both researcher and practitioners.

5.5 Conclusion

The main purpose of this qualitative study is to explore readiness of Malaysian organizations in adopting AI. The data were gathered using semi-structured interview from ten organizations. During the interview, participants were asked about their knowledge and perception towards AI, level of AI adoption in their organization and their advice for those organizations that plan to adopt AI. The results Therefore, this study provides the insight on readiness of organizations in adopting AI in Malaysian context.

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APPENDIX A



A STUDY ON READINESS TO ADOPT AI

Dear Participant,

You have been selected to participate in this study. The purpose of this study is to examine the readiness of your organization in adopting AI. We would appreciate it if you could share your views regarding the matter. Your feedback will be treated with strict confidence and will be used for the purpose of the study only.

If you have any questions regarding this research, you may address them to me at the contact details below.

Thank you for your cooperation and the time taken in this interview.

Yours sincerely,

NURSHAZANA AIMAN BINTI ARMANSHAH

Postgraduate Student

School of Business Management

Universiti Utara Malaysia

HP: 01124269773

INTERVIEW PROTOCOL

NO.	QUESTION
1.	<p>Knowledge on AI:</p> <p>Do you familiar with AI? (e.g., have you heard about AI, can you share some of the example of AI)</p>
2.	<p>Opinion / perception on AI:</p> <p>What do you think about AI? (Is it good, is it bad, organization should adopt AI or not?)</p> <p>If you think that AI is important, why many organizations in Malaysia are not adopting AI in their organization or in their business operation?</p>
3.	<p>Level of AI adoption:</p> <p>Does your organization currently adopt AI?</p> <p>If yes, can you explain about the AI that the organization adopted? (types and usage of AI in the organization, what motivate your organization to adopt AI)</p> <p>If no, what are the reasons for not adopting AI? (does your organization plan to adopt AI in the future? Why? Why not?)</p>
4.	<p>What would your advice to the organizations that plan to adopt AI?</p>

PERSONAL INFORMATION

1. Gender

Male

Female

2. Age: _____ years

3. Race

Malay

Chinese

Indian

Others (Please specify): _____

4. My position: _____

5. My highest qualification

SPM

STPM

Certificate

Diploma

Degree

Master

Phd

Others (Please specify): _____

6. Current position: _____

7. Number of years in current position: _____ years

8. Number of years in current organization: _____ years

9. Total number employees: _____

THANK YOU FOR YOUR COOPERATION