INFLUENCE OF INDUSTRIAL REVOLUTION (IR 4.0) TOWARD TOURISM SECTOR IN BANDAR HILIR, MELAKA

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ABSTRACT

The spread of COVID 19 surely affected the technology usage in every sectors especially in tourism industry. Digitization in the tourism industry can contribute to the country's Sustainable Development Goals (SDGs), which were set at the United Nations Summit (UN) in New York in September 2015 and must be achieved by 2030. This conceptual paper aims to investigate the relationship between the technological influence toward the tourist attraction development, transportation system and service sectors in Bandar Hilir, Melaka. Data will be collected from those who had visited Bandar Hilir, Melaka to gather the response from those tourists in order to occupy with the implementation of digitization in the hospitality and tourism industry.

Keywords: *industrial revolution, technology, tourism, IR 4.0, digitization*

INTRODUCTION

Tourism is a temporary movement of people to other destinations outside their home and usual place of work, the facilities that meet their needs, and the activities they engage in during their stay. Tourism is considered one of the aspects of luxury, because not everyone is able to travel. Only a few people who have time and money can do this tourism activity (Rahman, 2013). Due to the spread of COVID-19 throughout the world, it had given the nightmare to the tourism industry as whole include in Malaysia. Many tourism stakeholders were affected due to this pandemic. The implementation of the first Movement Control Order started on March 2020 has brought the tourism industry in Malaysia to a standstill. Many innovative approaches had been adopted by the tourism players in order to keep the visitor's attention toward their tourist attractions (El Said & Aziz, 2021).

Abd Hamid (2021) pointed out that SMART Tourism 4.0 also introduced many digitization initiatives in the tourism industry in 2018. Among them, MOTAC's digitalization relationship through cooperation with the world's largest Internet company, Tencent Holdings, to attract Chinese tourists to this country. Technology revolution in the tourism industry affects all areas of this industry, such as accommodation and transportation. In the accommodation industry, digitalization is used through digital marketing and booking systems, as well as through the use of online payment transactions while for the transportation sector, they used digital marketing, online booking systems, digital check-in kiosks, and the proliferation of e-hailing companies in the country. For travel agencies, the use of websites, digital marketing and the sale of travel packages via online applications are also the means of choice. The use of online booking systems for hotel rooms, searching for customer testimonials, and online payments have become the norm for visitors and tourists in this country.

On January 23, Coronavirus or Covid 19 hit our country, prompting the government to shut down all sectors in Malaysia, including the tourism sector. The Ministry of Tourism, Arts and Culture (MOTAC) estimates that the country's tourism and cultural industries suffered a loss of about RM45 billion in the first six months of the year due to the Covid 19 pandemic. Its minister Datuk Seri Nancy Shukri said tourism is

one of the hardest hit sectors and is expected to recover. According to the Department of Statistics Malaysia (DOSM), the number of employees in April 2020 decreased by one percent to 14.93 million compared to the same period last year. 'The most affected are those employed in the service sector, such as accommodation, catering, arts, entertainment and recreation`. Nancy said that to revitalise the sector, Tourism Malaysia will strengthen domestic tourism initiatives through the `Cuti-cuti Malaysia` campaign and expand promotional activities in addition to working with businesses and influencers.

IR 4.0 or also known as Industrial Revolution 4.0, is an industrial revolution that incorporates the Internet of Things (IOT) or the Internet of Treasures into almost all aspects of daily life and is different from Industrial Revolution 1.0 (the use of powerful machines), Industrial Revolution 2.0 (the use of electricity), and Industrial Revolution 3.0 (the use of information technology). The changes brought about by this industrial revolution are evolving in step with the times, increasing year by year as the technologies become more sophisticated, ensuring the rapid growth of the industrial sector around the world. IR 4.0 is important, especially for the tourism sector. The pandemic COVID -19 that has hit the whole world has had a major impact on all sectors.

PROBLEM STATEMENT

According to (Nurul, 2019), the involvement of all government agencies and departments in the use of information and communication technology (ICT) is able to achieve the goal of making Melaka a smart and high-tech city by 2030. Dealing with the latest ICT developments and technologies not only makes the service culture more effective in various aspects, including administration, but also benefits the people throughout the state. According to Prof. Datuk Dr. Ahmad Ibrahim, professor at UCSI University, he told New Straits Times (NST) that Melaka is capable of becoming the country's biggest technology player, but there are several steps that need to be implemented first, including the need to create an efficient ecosystem to develop advanced technologies capable of attracting investors from around the world.

Prof. Dr. Abdul Samad Ismail (2017) said that Malaysia is expected to lead in the era of Industrial Revolution 4.0. Therefore, certain knowledge and skills are essential. Most graduates will become unemployed because their skills and knowledge are not yet up to current workplace standards. This problem will continue if there is no solution from any side. Therefore, in order to reach the level of Industrial Revolution 4.0, efforts must be intensified (S.T. Rubaneswaran, 2017). However, after Covid-19 hit our country, we can see that our country needs this industrial revolution 4.0 in tourism sector. Covid-19 has caused many sectors in our country to shut down. This includes the tourism sector, because we know that the tourism sector is one of the sectors that can boost the economy in Malaysia.

The world of automation technology such as robots, drones and so on in this highly anticipated sector of the tourism industry. Is it possible for Malaysia to face this revolution? Meanwhile, our tourism industry still relies on human labor. Are we able to ensure that our tourism sector can adapt to the Industrial Revolution 4.0? In order to make Malaysia fit for the Industrial Revolution 4.0, the tourism industry needs to take some concrete steps. This is to ensure that the tourism industry in Malaysia is competitive. Therefore, this study is very important to become one of the study concern for the researchers.

BACKGROUND OF THE STUDY

Evidences from many empirical studies found out that most of researchers highlighted on the impact of the virtual reality technologies on tourist experience yet lack of studies were found when it comes on how the Industrial Revolution (IR 4.0) may affect the tourism sector either directly or indirectly. This research may also be of particular importance to the tourism sector, as it is one of the areas that makes intensive and extensive use of information and communication technology. The importance of the tourism sector is increasing as it changes the traditional marketing and sales methods and offers a different user experience to suppliers and customers. Technological innovation increases the competitiveness of the tourism sector and the production power through delivery services. Tourism businesses that are not able to cope with the change will also face difficulties in carrying out their activities. Travelers equipped with an information system that provides easy access to any topic they are looking for will expect better services, will no longer rely on products or services, but will prefer the products and services offered and will change their holiday habits.
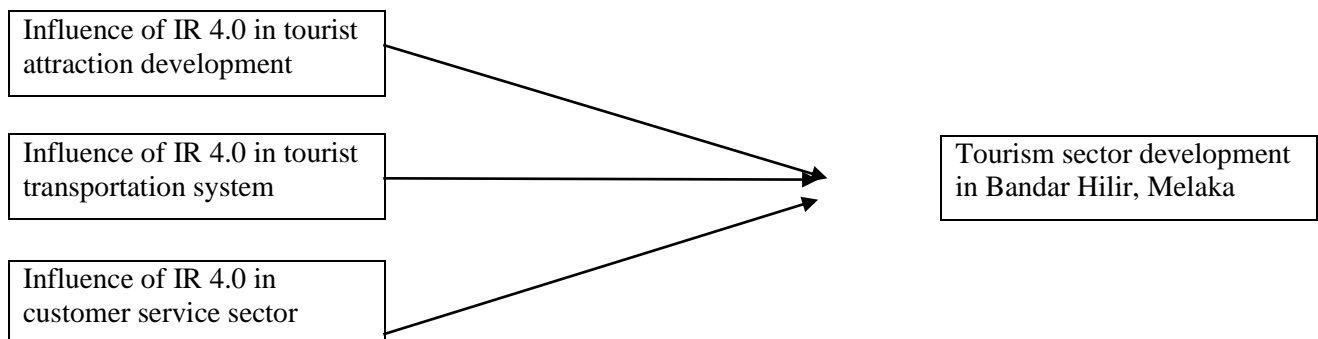
3.1   Tourism

According to Rahman (2013). Tourism is a temporary movement of people to other destinations outside their usual places of residence and work, the facilities that meet their needs, and the activities they engage in during their stay at the destination. According to the definition of the World Tourism Organization, the word 'tourism" includes all travel that lasts more than 24 hours, whether for recreation, business, study, health, etc.

3.2   Industrial Revolution 4.0

According to the founder of the World Economic Forum, Klaus Schwab in his book The Fourth Industrial Revolution explains that the Fourth Industrial Revolution is characterized by the emergence of supercomputers, smart robots, driverless vehicles, genetic edits and the development of neurotechnology that allows humans to further optimize brain function. The industrial revolution 4.0 gives the World the opportunity to innovate. The revolution focused on developing the digital economy is seen as beneficial to the World. The development of the digital economy is a market and a talent, and the World has both.

In this research, the researcher decides to use the TAM (Technology Acceptance Model) theory proposed by Fred Davis (1989) as guideline to address the gap in the literature by examining user's motivation which also influence engagement to the virtual tour experience which in return will motivate them to visit the destination in reality soon. The proposed theoretical framework stated as below:

Influence of IR 4.0 in tourist attraction development

Influence of IR 4.0 in tourist transportation system

Influence of IR 4.0 in customer service sector

Tourism sector development in Bandar Hilir, Melaka

Adaptation from Technology Acceptance Model theory (2016)

3.3   Interrelationship between the influence of IR 4.0 in tourist development toward tourism sector development in Bandar Hilir, Melaka

After a long period of disruption due to the COVID-19 pandemic, the tourism sector including Malaysia is now breathing again. However, the shape of the tourism industry of the post-COVID-19 era is still uncertain. The government and key players in the industry are still looking for solutions, as the tourism industry is an important sector for Malaysia that generates economic growth. Speaking of tourism, it's certain that all the chains related to the sector are also feeling the impact. Among the most affected are the hospitality sector, travel and transport agencies in particular air transport and tour buses. To revitalize the tourism industry, the government, industry and society must work together to redevelop the industry. For travel agencies, with the spread of COVID-19, the demand for travel services especially from outside or to outside destinations has been slow. This means that travel agencies will have to change their targets to domestic tourism.
The increasing use of information and communication technology (ICT) in every government agency including local authorities (PBT) is able to help the state's direction towards Melaka Bandar Pintar 2030.

State Exco of Housing, Local Government, Environment and Green Technology, Datuk Tey Kok Kiew said the widespread use could create the effectiveness of services, besides facilitating and speeding up the public's affairs with a more streamlined and systematic management. According to him, the situation will have a positive impact on the culture of better work, indirectly catalyzing innovation and quality services. To date, various ICT-based innovations can be used by the community such as the installation of detectors at traffic lights from Ayer Keroh to Malacca City which shortens the travel time to about 10 minutes by the Jabatan Kerja Raya (JKR) and tracking devices (sensors) to measure river water quality by the Jabatan Alam Sekitar (JAS) and search for empty parking through applications from related agencies.

The Melaka State Government has started providing internet broadband facilities in the state since 2010. The K-Economy sector is also involved in providing wireless internet broadband infrastructure in areas of population such as the tourist spots especially in Bandar Hilir as well as rural areas to improve the ICT level of the community. The allocation of Melaka Broadband includes Joint Ventures with telecommunication network providers, Telekom Malaysia Berhad, Collaboration with private agencies such as MIMOS, Pernec and Higher Education Institutions such as UTeM., WiFi Lounge Provision.

3.4 Interrelationship between the influence of IR 4.0 in tourist transportation system toward tourism sector development in Bandar Hilir, Melaka

Melaka Tengah is the main city of the state of Melaka. The speciality of being one of the tourist hubs in the state of Melaka is the need for high accessibility to make it easier for tourists to get to their planned destinations. Among the accessibility facilities highlighted are road, rail transport, and aircraft transport. Referring to the Official Portal of the Melaka State Government, there are two methods in using the road to get to this tourist destination, which is to use the North-South Expressway (PLUS) or use the seaside road (if travelling from Kuala Lumpur, it is necessary to pass through Klang, Morib and Port Dickson; if travelling from Singapore, it is necessary to pass through the village and farm area) (Hua, 2015). Despite of the good accessibilities in all forms of transportation, Melaka also need to develop a modern tourist transportation system to meet up the demand from the local and foreigners.

Bernama (2022) briefed out the Melaka state government today introduced the use of e-wallets through the Touch 'n Go app for rickshaw services in the state, said Chief Minister Datuk Seri Sulaiman Md Ali. He said the Tourism Promotion Division (BPP) initiative is in line with the current technology circulation, as well as being user-friendly and as a measure to curb the spread of Covid-19. Furthermore, Albab (2016) stated that an efficient tourist transportation system is one of the key components that will be emphasized by the Melaka government to enhance the tourism sector of the state. In order to realise the intention of providing an efficient public transport system for the people, the state government established the Panorama Melaka Sdn Bhd company where the red bus 'Panorama Melaka' is the preferred choice for tourists visiting the historical state. State Exco of Transport, Project Recovery and International Trade, Datuk Lim Ban Hong said as a tourist state, Melaka needs efficient and modern bus services for the convenience of tourists visiting the state.

Melaka plans to reintroduce electric bus facilities in the state to empower the public transport sector to coincide as the 2020 smart city and green technology state. State Public Works, Transport and Public Utilities Exco Datuk Sofi Wahab said the state government is also looking at using the concept of free or bus stops for electric bus facilities that are planned to operate within the next year or two. He said Melaka once owned two electric buses during the previous government administration under the management of the state subsidiary, Panorama Melaka Sdn Bhd, but could no longer be used. "The electric bus used by Panorama can only be used in a short period of time and can no longer be used due to high maintenance.

3.5 Interrelationship between the influence of IR 4.0 in customer service sector toward tourism sector development in Bandar Hilir, Melaka

The President of the Melaka Tourism Association (MTA), Madeline Kuah Mei Lee, with the current situation especially the COVID-19 pandemic that has hit the world, all changes are no longer impossible. Tourism players in Malacca said they needed to be prepared for the changes, including using robots in service." In some kopitiam now there are some robots used to deliver food items. So customers sit at the table, place orders and the robot will deliver food. It will reduce contact between employees and customers.

So this is among the new norms. With the use of technology in tourism transportation, it will definitely be able to have a change in the impact either on the community there or the tourists who come to Bandar Hilir, Melaka. When tourists come especially from outside, they will see that Bandar Hilir, Melaka is a place with the latest level of technology and it has a beneficial effect especially not only on the state government, but also in Malaysia.

Johor Women and Tourism Development Committee Chairman Liow Cai Tung expressed confidence that the use of technology such as this will change the face of the state's hospitality industry (Bernama, 2019). Robots and artificial intelligence are not only successfully implemented for behind-the-scenes affairs but also take on the role of welcoming guests, providing room service and others therefore Melaka hospitality industry especially in the hotel industry should put on effort to improvise the customer service sector. This kind of transformation is not intended to reduce the human workforce but rather to replace repetitive work so that manpower can be maximized for other tasks so that the goal of providing the best hospitality services can be achieved.

METHODOLOGY

4.1 Methods for collecting literature

This conceptual paper is based solely on a review and analysis of research and data from previous empirical studies. For the literatures, researched reviewed several journals and found out there were few researchers that have done a good write up and producing relevant journals that may be as the main reference for constructing this conceptual paper. Other methods that being used was the google search engine and also the digital books that can be found online.

This section also explains the study methods used by the researchers in obtaining information from the respondents. Each method or technique of study should be appropriate and in line with the context in conducting the study. This is because, in ensuring that the researchers obtain the information or data obtained is accurate and authentic in line with the objectives of this study. In addition, in this study, it also describes the study instruments, the design and framework of the study, the design of the survey and the analysis of the data used.

4.2 Data collection for future research

This study used the design of a collaborative study to see the relationship between the influence of technology on the development, transportation and service sector in Bandar Hilir, Melaka. In addition, in this study, the researchers used the descriptive survey method which can help the researchers obtain data directly from the respondents. Even descriptive methods are used to describe the characteristics of an object, person, group, organization, or environment. It also discusses who, what, when, where, why and how questions. In addition, researchers use questionnaires to collect data containing questions to obtain data or information on survey respondents and factors affecting the IR technology in the tourism sector in Bandar Hilir, Melaka.

To proceed with this research, a qualitative study will be used and the population to be studied would be the respondents that already experience and visited Bandar Hilir, Melaka. Stratified random sampling was used to ensure the background of our sample will be relevant. For ethical reasons, participants will be asked to read and sign a consent form stating that they willingly participated in the study and that any answers provided will be used as data and compiled into a report. The participants will also be informed that participation in the survey is completely confidential and voluntary and they are free to leave at any time.

FINDINGS FROM LITERATURE

Literatures found were very helpful in assisting the researcher to understand this conceptual paper very well and lead the researcher to some meaningful findings. Based on the empirical studies, it was found that its agreeable that the perceived of usefulness and the perceived ease of use are the important factors in influencing the virtual tour users hence turn them to a repeat customer or either only one time customer for the tourism stakeholders.

This chapter provides a detailed explanation in relation to the methodology of the studies that have been applied. It includes a description of the population and place where the study was conducted, how the selection and number of samples, study instruments, the procedure for measuring variables –variables and methods of analyzing the data obtained. In the next chapter, the reviewer will report on the findings of the study in accordance with the objectives outlined

CONCLUSION

The findings above led me to draw a conclusion and make recommendation for future research. It is obvious that the combination of those three factors mentioned in the above framework got positive correlation with the tourist response or behaviors in experiencing the VT (Virtual tour). The tourism industry should no longer hesitate to utilize the virtual tour approach since this is one of the way for the stakeholders to survive and tap new markets with the new norm condition at the moment.

RECOMMENDATIONS FOR FUTURE RESEARCH

Referred to the literatures above, this conceptual paper only discusses a fraction of the influence of IR 4.0 revolutionary industry technology in Bandar Hilir, Melaka. Therefore, it is hoped that this study will benefit future studies using larger samples involving studies on the diversity of technologies that can provide innovation in the Tourism industry in Malaysia. More samples may also result in different results and better results. Apart from that, the collection of data from questionnaires is sometimes ineffective because some respondents do not answer questions transparently or do not meet the requirements of the author. Thus, the researcher can choose qualitative methods, such as observation and interview to make the collected data valid. In this way, the data obtained can provide more accurate and true information. Next, future researchers are also suggested to conduct studies using other variables to examine the impact of technology on the tourism sector in Malaysia. It is hoped that future researchers will be able to expand the scope of this study further.

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