ISRG Journal of Economics, Business & Management (ISRGJEBM)

ISRG PUBLISHERS
Abbreviated Key Title: Isrg J Econ Bus Manag
ISSN: 2584-0916 (Online)
Journal homepage: https://isrgpublishers.com/isrgjebm/
Volume – II Issue - VI (November-December) 2024
Frequency: Bimonthly

A FRAMEWORK TO ASSESS THE EFFECTS OF SMART TOURISM ATTRIBUTES AND TECHNOLOGY ACCEPTANCE MODEL ON TRAVEL EXPERIENCE IN MALAYSIA

Muharis Mohamed[1], Ahmad Edwin Mohamed[2*], Norhanim Abd Razak[3]

[1, 2,3] School of Tourism, Hospitality and Event Management Universiti Utara Malaysia 06010 Sintok, Kedah Malaysia

| **Received:** 17.11.2024 | **Accepted:** 18.11.2024 | **Published:** 21.11.2024

***Corresponding author:** Ahmad Edwin Mohamed

School of Tourism, Hospitality and Event Management Universiti Utara Malaysia 06010 Sintok, Kedah Malaysia

Abstract

Smart tourism has been chosen as one of the key transformation strategies outlined in the National Tourism Policy 2020-2030. Currently, international tourists are very tech-savvy and demand destinations to be equipped with the latest ICT applications that make their travel more convenient. However, little is known about international tourists' experience using smart tourism technologies in Malaysia. Several reports suggest that many problems associated with local ICT systems and infrastructure are still unresolved. Among others are poor internet connectivity, incomplete and outdated information on travel websites, limited interface capability, and cyber security concerns like travel scams that have been troubling tourists for years. The literature has so far suggested several key smart tourism attributes including informativeness, accessibility, interactivity, personalization, security, and credibility that may reflect the quality of smart tourism technology offered. In addition to smart tourism attributes, this study also integrates the Technology Acceptance Model's key dimensions namely perceived usefulness and perceived ease of use as the moderators to further improve the existing body of knowledge. Ultimately, this study proposes a comprehensive smart tourism experience framework comprising several key attributes. The framework will assist in developing robust smart tourism as the key transformation strategy stated in the National Tourism Policy 2020-2030.

Keywords: *Smart tourism attributes, technology acceptance model, travel experience*

DOI: 10.5281/zenodo.14195341

1. Introduction

Smart tourism is the key transformation strategy outlined in the National Tourism Policy 2020-2030 (Ministry of Tourism, Arts and Culture, 2020). The policy was formulated to rejuvenate the industry, especially in the post-COVID-19 era. Smart tourism will be enhanced to another level to strengthen competitiveness, sustainability, and inclusive tourism development in the long run. Today, tourists rely heavily on information and communication technologies (ICTs) for their daily chores including travel. ICTs connect people with the digital world where people interact with other people, business providers, and government agencies. They also retrieve, share, and co-create travel information for the benefit of all. The ultimate aim of smart tourism is to improve resource management efficiency, enhance tourism experiences, maximize competitiveness, and enhance sustainability through technological innovation and practices (Kapiki, 2021; Wise & Heidari, 2019). This transformation strategy is also represented in the 12th Malaysia Plan 2021-2025 under Policy Enabler 2 - Accelerating Technology Adoption and Innovation (Ministry of Economy, 2021). For this purpose, the digitalization process will be accelerated and the adoption of advanced technology, particularly the Fourth Industrial Revolution (IR 4.0) technologies, will be promoted to achieve a high technology-based economy across all sectors. The policy will greatly affect the tourism industry as one of the nation's key economic sectors.

Today, the tourism industry has significantly changed and looks very different from the past. Technological advancement, especially in the era of the Fourth Industrial Revolution (IR 4.0) has been the primary driver for these changes (Kapiki, 2021; Mehraliyev & Koseoglu, 2019; Ye et al., 2021). Such changes require a paradigm shift among tourism destinations to satisfy the needs of modern tourists. Failure to adapt to the technological changes will lead to disastrous results as tourists are becoming more sophisticated over the years. In fact, one of the criteria needed to strengthen competitiveness is adaptability to technological changes (Lui et al., 2020; Wise & Heidari, 2019). Traditionally, there were six A's in the tourism destinations success framework including attraction, accessibility, amenities, availability, activities, and ancillaries (Buhalis & Amaranggana, 2015). However, all these components are inadequate without the presence of ICTs. Ideally, ICT should provide easy access and interaction with a variety of information-encompassing services like transportation, attractions, tours, shopping, and hotels (Pai et al., 2021; Wise & Heidari, 2019)

Thus far, there have been many complaints by both international tourists and local people alike about the quality of ICTs offered in Malaysia. For example, the unresolved issues relating to internet network coverage at certain tourist destinations, especially the ones located outside major cities (Ahmad, 2022; The Borneo Post, 2021). This issue is very fundamental as without internet coverage, smart tourism technology will not be able to operate at all. Besides that, tourists were also not satisfied with the information available on the tourism websites which claimed to be incomplete, outdated, lack of interaction, poor multimedia display, and sometimes inaccurate (Ismail et al., 2022; Long et al., 2018). There have also been several cases of tourists being scammed via social media selling discounted tour packages (Sivanesa, 2023). This is a security concern that may affect the trust among tourists to use smart tourism technology in the future if not addressed properly.

Currently, studies on smart tourism are largely conceptual. Existing studies have been in disagreement about what attributes or dimensions constitute a smart tourism experience (Amir et al. 2020; Gretzel et al., 2015; Kapiki, 2021; Lee & Jan, 2022; Liu et al., 2020; Pai et al., 2021; Ye at al., 2021; Yoo et al., 2017). Based on existing literature, six key attributes are associated with smart tourism technology including informativeness, accessibility, interactivity, personalization, security, and credibility (Lee & Jan, 2022; Pai et al., 2021; Yoo et al., 2017). Identifying specific smart tourism attributes will contribute to the development of a comprehensive framework that will become a point of reference for both scholars and practitioners.

On top of smart tourism attributes, this study will also integrate the Technology Acceptance Model (TAM). This model has two main components, perceived usefulness and perceived ease of use as the moderators (Davis, 1989; Zamani 2022). Previous studies on smart tourism experience did not include TAM as part of their research framework. The integration of perceived usefulness and perceived ease of use as moderators is important as it gauges the likelihood among tourists to use smart tourism technology. Scholars consistently argue that regardless of how sophisticated a technology is, people are unlikely to use it if they believe it to be unhelpful and challenging to operate (Marikyan & Papagiannidis, 2023). Several studies also suggest that perceived usefulness and perceived ease of use in consequence can determine users' experience (Legramante et al., 2023; Isaac et al., 2018). In supporting the research framework above, flow theory will be integrated with TAM to explain how smart tourism attributes may influence tourists' experiences. Flow theory was proposed by a psychologist named Mihaly Csikszentmihalyi, which describes a state of optimal experience where users are fully immersed and engaged in an activity (Wang & Wang, 2020). In conclusion, this study aims to develop a comprehensive smart tourism experience framework that highlights key attributes, and their associated instruments.

2. Literature Review

The tourism industry is the third-largest contributor to Malaysia's GDP after the manufacturing and commodities sectors. This industry was reported to contribute about 15.9 percent of the national GDP in 2019 prior to Covid-19 (Malaysia Investment Development Agency, 2020). However, the COVID-19 outbreak has adversely affected the tourism industry worldwide including in Malaysia. The proposed "Visit Truly Malaysia 2020" with the aim to bring in 30 million visitors and RM100 billion in revenue was unceremoniously cancelled (Tourism Malaysia, 2020). This was a major setback for the industry that has become the backbone of the national economy for many decades. In order to revitalize the industry, the government has recently initiated the new National Tourism Policy for the year 2020-2030 (Ministry of Tourism, Arts and Culture, 2020). The policy which was launched on 23 December 2020 formulated to rejuvenate the industry, especially in the post-COVID-19 era. Several agendas were put forward under this policy including strengthening competitiveness, sustainable and inclusive tourism development, and disaster management. The COVID-19 pandemic has somehow triggered the government and industry to come up with new strategies to improve its resilience.

Among the key transformation strategies outlined in the National Tourism Policy was to embrace "Smart Tourism" (Ministry of Tourism, Arts and Culture, 2020). Today's Industrial Revolution 4.0 which is based on advanced digital technology has significantly

DOI: 10.5281/zenodo.14195341

changed the way people travel. These changes force the industry to modify its nature of operations to continue satisfying modern tourists. One of the advantages of smart tourism as quoted from the policy is "embracing the whole spectrum of digitalization will provide necessary tools for the tourism industry to be internationally connected, perform rigorous data analytic of tourism future and shorten the supply chain" (Ministry of Tourism, Arts and Culture, 2020). In other words, it transforms the tourism experience by bringing together related information, social networking, and mobility-related functionalities with the widespread use of mobile technology, just at the fingertips of tourists (Amir et al., 2020).

Before launching the National Tourism Policy, Tourism Malaysia had launched the 'Smart Tourism 4.0" back in 2018. This initiative was in line with the increasing trend of digital technology usage among tourists (Malaysia Investment Development Agency, 2020). It will also become the game-changer that will transform Malaysia's tourism industry to another level. In a study conducted by Monitor Deloitte, smart tourism was identified as the key thrust that can significantly increase the number of tourist arrivals and tourism receipts for Malaysia's tourism industry (Tourism Malaysia, 2018). Smart tourism has the potential to grow the local tourism industry from USD 25 billion annually to USD 100 billion by 2030. In particular, a growing trend among tourists particularly from European countries and China who are very tech-savvy demanding destinations that offer highly advanced ICT infrastructures and services (Kapiki 2021; Liu et al., 2020). Before the pandemic, there were 3.114 million Chinese tourists who visited Malaysia which ranked third place in terms of tourists' country of origin after Singapore and Indonesia (Tourism Malaysia, 2019). By developing smart tourism technologies, the number of inbound tourists from China is expected to increase significantly after COVID-19. An example of a smart tourism initiative that has been implemented successfully was the introduction of Alipay in various shopping premises in Langkawi and Kuala Lumpur (The Edge Market, 2017). It makes it very convenient for them to shop without the hassle of exchanging their currency during their holiday in Malaysia. This study also believed that tourists from other countries will equally appreciate the services provided by smart tourism technologies.

Smart Tourism

The term 'smart tourism' was borrowed from the term 'smart city' which was first coined in 1994 (Dameri & Cocchia, 2013). Many scholars also argue that smart tourism originated from the concept of a 'smart city' (Albino et al., 2015; Jucevicius et al., 2014; Kapiki, 2021; Shafiee et al., 2019). Although this is true, not all attributes or dimensions in smart cities apply to smart tourism. In a study by Gretzel (2011), the main differences between smart cities and smart tourism are geographical boundary, the addressed target, their main objectives, the governance, and their main priorities. For a smart city, the priority is dedicated to the enhancement of the city's performance as a place of living for residents. A smart city possesses six major attributes including smart governance, smart economy, smart mobility, smart living, smart people, and smart environment (Albino et al., 2015; Lombardi et al., 2012). Meanwhile, the concept of smart tourism focuses on developing a competitive tourist destination. The destination is not necessarily a city or urban area but also includes rural and natural areas.

In simplest terms, smart tourism is defined as "the technological capabilities of a destination, attraction, or the tourists themselves" (Malaysia Investment Development Agency, 2020). According to Lopez de Avial (2015, n.p.), smart tourism is defined as "an innovative tourist destination, built on an infrastructure of state-of-the-art technology guaranteeing the sustainable development of tourist areas, accessible to everyone, which facilitates the visitor's interaction with and integration into his or her surroundings, increases the quality of the experience at the destination, and improves residents' quality of life." One of the basic examples of this intelligence system is direct booking engines using online travel intermediaries such as agoda.com, booking.com, airasia.com, and so forth. Today, more and more tourism attractions employ various ICT applications such as ticketless entrances using QR codes, touch-screen systems for information search, and even 3D virtual tours to provide added value to tourists' experiences (Benckendorff et al., 2019). Similarly, there is an increasing trend among hotels adopting energy management systems that reduce energy costs by up to 65 percent and eventually save the environment and at the same time increase profits (Mak & Chang, 2019). Social media has also become one of the platforms for information creation, sharing, and networking that is useful for tourists (Liu et al., 2020). All these are only a few examples of ICT applications available in smart tourism destinations.

European Commission stated that smart tourism is "a destination facilitating access to tourism and hospitality products, services, spaces and experiences through ICT-based tools. It is a healthy social and cultural environment, which can be found through a focus on the city's social and human capital. It also implements innovative, intelligent solutions and fosters the development of entrepreneurial businesses and their interconnectedness". Under the European capitals for smart tourism initiatives, four key components were introduced including sustainability, accessibility, digitalization as well as cultural heritage and creativity for the sake of destination competitiveness (European Commission, 2020). Meanwhile in Malaysia, the government has also officially adopted the term 'smart tourism' in various administrative documents such as the National Tourism Policy 2020-2030 and the Malaysia Investment Development Agency e-newsletter. In the National Tourism Policy, smart tourism is one of the key transformation strategies outlined specifically. The policy outlines 5 methods to achieve smart tourism including smart tourism accessibility options, smart tourism sustainability initiatives, smart tourism information sharing, smart tourism research and management tools, and last but not least smart tourism tourist experience. Some of the methods are in line with the components highlighted by the European Commission.

Smart Tourism Attributes

According the previous studies, there have been some discussions on smart tourism attributes (Pai et al., 2021; Lee & Jan, 2022; Yoo et al. 2017). Yoo et al (2017) described that there are 4 important attributes linked to smart tourism including information quality, credibility, interactivity, and accessibility. Meanwhile, in a recent study by Pai et al. (2021), a total of 5 attributes were proposed namely informativeness, accessibility, interactivity, personalization, and security. On the other hand, a study by Lee and Jan (2022) managed to suggest 3 more attributes that are not specifically mentioned by both Pai et al, (2021) and Yoo et al. (2017), which include virtual reality presence, hedonic experience, and learning experience. However, these 3 attributes can be embedded within the existing 5 attributes developed by Pai et al. (2021). For example, virtual reality can be part of interactivity,

DOI: 10.5281/zenodo.14195341

meanwhile hedonic experience and learning experience can be part of personalization. In total, this study will integrate 6 key attributes that represent the quality of smart tourism technologies, namely informativeness, accessibility, interactivity, personalization, security, and credibility (Lee and Jan, 2022; Pai et al., 2021; Yoo et al., 2017). Informativeness refers to the combination of the quantity, frequency, and up-to-dateness of information provided in the smart tourism platforms. Accessibility, on the other hand, refers to the degree to which online travel information sources and services can be easily obtained and used. Meanwhile, interactivity is defined as attributes that enable two-way communication such as real-time feedback and active communication. Personalization refers to the ability of users to obtain specific or perfect information to meet their needs. Security in particular refers to important privacy features for a secure online transaction. Lastly, source credibility is defined as how communicators in the area of interest are trusted by the individual who receives the information.

On top of these smart tourist attributes, this study will also integrate the Technology Acceptance Model (TAM) originally introduced by Davis (1989). In the early years, TAM was used to measure to what extent people would use computers. This model has its roots in the Theory of Reasoned Action (Davis, 1989). However, the applications of TAM have been expanded to include studies on people's intention to use other information and communication technologies like smartphones, social media, online shopping, and so forth. Basically, TAM has two main components known as perceived usefulness and perceived ease of use as the determinant of attitudes and use intention towards technologies (Zamani, 2022). Perceived usefulness refers to tourists' use of a particular technology and the outcomes (e.g. service quality or satisfaction) of the consumer experience in terms of inducing favourable feelings and interest. Meanwhile, perceived ease of use refers to tourists' perception that using a smart system at the destination will be effortless. Both of the constructs will be integrated into the current research framework for assessing smart tourism experience. Perceived usefulness and perceived ease of use are crucial moderators to incorporate as they indicate how likely tourists are to employ smart tourism technologies. Researchers have long maintained that if people think technology is not helpful and difficult to use, they will not be inclined to adopt it, no matter how advanced it is (Marikyan & Papagiannidis, 2023).

Travel Experience

Tourists' experience when travelling to holiday destinations is often influenced by many factors including economics, safety, service quality, hedonic experience, culture and history, and so forth. However, recent studies are more interested in seeing how technologies such as smart tourism influence their travel experience (Benckendorff et al., 2019; Liu et al., 2020; Mak & Chang, 2019). Tourist experience in this context refers to the "technology-enhance experience" while travelling (Pai et al. 2021). Several studies have suggested that technology-enhance experience can be broken into 3 main dimensions including travel confidence benefits, travel enjoyment, and travel satisfaction (Bogicevica et al. 2016; Gremler & Gwinner, 2013; Pai et al., 2021). Travel confidence benefits refer to the psychological comfort brought by the increase of tourists' trust in the services provided by tourist destinations. Travel enjoyment, on the other hand, is the tourists' positive emotional evaluation and responses to tourist destinations. Lastly, travel satisfaction is defined as the overall emotional evaluation of tourists' experience of a tourist destination. A good travel experience has also been found to lead to destination loyalty and revisit intention (Ruslan et al., 2022).

Flow Theory

The underpinning theory for this research is the flow theory. Flow theory was proposed by a psychologist named Mihaly Csikszentmihalyi who described it as a state of optimal experience where individuals are fully immersed and engaged in an activity (Wang & Wang, 2020). In the context of ICTs, understanding flow is crucial for designing interfaces and applications that provide a positive and absorbing user experience. The key to success is to design ICT systems with flow theory in mind involves adopting a user-centred design approach. This includes understanding the target users, their skill levels, and preferences, and designing interfaces that align with their needs and goals. Users in a flow state often experience a high level of enjoyment and intrinsic motivation.

3. Proposed Hypotheses

The following hypotheses were derived from the above comprehensive literature review. These hypotheses represent the smart tourism experience framework. The first part lists the hypotheses between smart tourism attributes and overall tourist experience.

H1: Smart tourism attributes influence the overall tourist experience.

H1a: Informativeness influences the overall tourist experience.

H1b: Accessibility influences the overall tourist experience

H1c: Interactivity influences the overall tourist experience.

H1d: Personalization influences the overall tourist experience.

H1e: Security influences the overall tourist experience.

H1f: Credibility influences the overall tourist experience.

The second part lists the hypotheses that explain the moderating effects of perceived usefulness on the relationships between smart tourism attributes and tourist experience.

H2: Perceived usefulness will moderate the relationship between smart tourism attributes and overall tourist experience.

H2a: Perceived usefulness will moderate the relationship between Informativeness and overall tourist experience.

H2b: Perceived usefulness will moderate the relationship between accessibility and overall tourist experience.

H2c: Perceived usefulness will moderate the relationship between interactivity and overall tourist experience.

H2d: Perceived usefulness will moderate the relationship between personalization and overall tourist experience.

H2e: Perceived usefulness will moderate the relationship between security and overall tourist experience.

H2f: Perceived usefulness will moderate the relationship between credibility and overall tourist experience.

The third part lists the hypotheses that explain the moderating effects of perceived ease of use on the relationships between smart tourism attributes and tourist experience.

DOI: 10.5281/zenodo.14195341

H3: H3: Perceived ease of use will moderate the relationship between smart tourism attributes and tourists' experience.

H3a: Perceived ease of use will moderate the relationship between Informativeness and overall tourist experience.

H3b: Perceived ease of use will moderate the relationship between accessibility and overall tourist experience.

H3c: Perceived ease of use will moderate the relationship between interactivity and overall tourist experience.

H3d: Perceived ease of use will moderate the relationship between personalization and overall tourist experience.

H3e: Perceived ease of use will moderate the relationship between security and overall tourist experience.

H3f: Perceived ease of use will moderate the relationship between credibility and overall tourist experience.

The following is the framework of smart tourism experience.

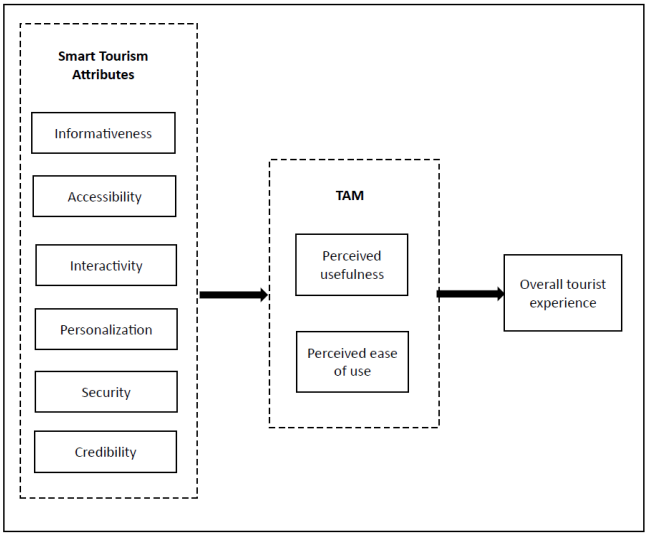

Figure 1: Research Framework

4. Conclusion

The end outcome of this study is the development of a framework that assesses the smart tourism experience in the context of Malaysia. The proposed framework consists of smart tourism attributes as the independent variables and the technology acceptance model as the moderator. This framework can become a point of reference to destination managers both the government and industry to determine the 'smartness' of local destinations. This study will also enable the development of a smart tourism experience framework that integrates important constructs.

References

1. Ahmad, F. (2022, June 6) Keep improving internet coverage. News Strait Times. https://www.nst.com.my/opinion/letters/2022/07/811325/keep-improving-internet-coverage.
2. Albino, V., Berardi, U. & Dangelico, R. (2015). Smart cities: Definitions, dimensions, performance, and initiatives. *Journal of Urban Technology*, *22*(1), 3-21.
3. Amir, S., Dura, N, Yusof, M, Nakamura, H., & Nong, R. (2020). Challenges of smart tourism in Malaysia eco-tourism destinations. *Journal of Malaysian Institute of Planners, 18(4), 442-451.*
4. Baggio, R., Micera, R., & Del Chiappa, G. (2020). Smart tourism destinations: A critical reflection. *Journal of Hospitality and Tourism Technology*. DOI: 10.1108/JHTT-01-2019-0011
5. Benckendorff, P.J., Xiang, Z., & Sheldon, P.J. (2019). Tourism information technology 3rd Ed. Wallingford: CABI.
6. Boes, K., Buhalis, D. & Inversini, A. (2015). Conceptualising smart tourism destination. In Tussyadiah, I & Inversini A. (Ed.*), Information and communication technologies in tourism* (pp.391-403). DOI 10.1007/978-3-319-14343-9_29
7. Boes, K., Buhalis, D. & Inversini, A. (2016). Smart tourism destinations: ecosystems for tourism destination competitiveness. *International Journal of Tourism Cities*, *2*(2), 08-124.
8. Bogicevic, V.; Yang, W.; Cobanoglu, C.; Bilgihan, A.; Bujisic, M. (2016). Traveler anxiety and enjoyment: The effect of airport environment on traveler's emotions. *J. Air Transp. Manag. 57*, 122–129.
9. Buhalis, D. & Amaranggana, A. (2014). Smart tourism destination. In Xiang, Z. & Tussyadiah, I. (Eds.), *Information and communication technologies in tourism*. DOI: 10.1007/978-3-319-03973-2_40.
10. Buhalis, D. & Amaranggana, A. (2015). Smart tourism destinations enhancing tourism experience through personalisation of services. In Tussyadiah, I. & Inversini, A. (Eds), *Information and communication technologies in tourism* (pp. 377-390). Springer. DOI: 10.1007/978-3-319-14343-9_28.
11. Cai, S.; Xu, Y. (2007). Effects of outcome, process and shopping enjoyment on online consumer behavior. *Electron Commer. Res. Appl. 5*, 272-281.
12. Chen, C. C., & Lin, Y. C. (2018). What drives live-stream usage intention? The perspectives of flow, entertainment, social interaction, and endorsement. *Telematics and Informatics*, *35*(1), 293-303.
13. Dameri, R.P. & Cocchia, A. (2013). Smart city and digital city: Twenty years of terminology evolution, X Conference of the Italian Chapter of AIS, ITAIS 2013, Università Commerciale Luigi, Bocconi, Milan (Italy), 1-8.
14. Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance. *MIS Quarterly 13*(3), 319-340.
15. European Commission (2020). European capitals of smart tourism: An initiative to reward innovative and smart tourism practices in European cities. Retrieved from An EU initiative to reward, innovative and smart tourism in European Cities (Europa.eu).
16. Ghaderi, Z., Hatamifar, P., & Ghahramani, L. (2019). How smartphones enhance local tourism experiences? *Asia Pacific Journal of Tourism Research 24*, 778–788. https://doi.org/10.1080/10941665.2019.1630456
17. Gremler, D.D.; Gwinner, K.P. (2013). Relational Benefits Research: A Synthesis. Handbook on Research in Relationship Marketing; Edward Elgar Publishing Limited: Cheltenham, UK. pp. 32–74.

DOI: 10.5281/zenodo.14195341

18. Gretzel, U., Sigala, M., Xiang, Z. & Koo, C. (2015). Smart tourism: foundations and developments. *Electronic Markets, 25*(3), 179-188.
19. Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2009). Multivariate Data Analysis (7th ed.). New York: Pearson.
20. Isaac, O., Abdullah, Z., Ramayah, T. & Mutahar, A.M. (2018). Factors determining user satisfaction of internet usage among public sector employees in Yemen. *Int. J. Technological Learning, Innovation and Development, 10*(1), pp. 37-68.
21. Ismail, N.F., Suid, S.Z., Rashid, M.Z.A, Boon, Q.W. (2022). Digital tourism: A content analysis of Southeast Asia Tourism Websites. *TEAM Journal of Hospitality and Tourism, 19*(1), 43-54.
22. Jucevi"č" ius, R., Patasien, I, & Patasius, M. (2014). Digital dimensions of smart city: Critical analysis. *19th International Scientific Conference: Economic and Management 2014*, ICEM, 23-25.
23. Kapiki, S. (2021). Smart city and IoT technologies enabling smart tourism: The case of Greece. In book; Higher education in smart city technologies: European, Kazakh, Mongolian, Russian Universities approach (pp. 80-112). Saratov State Technical University.
24. LADA (2023)/ Statistic. Retrieved from https://www.lada.gov.my/en/statistics/
25. Lee, T.-H.; Jan, F.-H. (2022). Development and Validation of the Smart Tourism Experience Scale. *Sustainability, 14*. 16421. https://doi.org/10.3390/su142416421
26. Legramante, D., Azevedo, A. & Azevedo, J. M. (2023). Integration of the technology acceptance mode and information systems success model in the analysis of Moodle's satisfaction and continuity of use. International Journal of Information and Learning Technology, 40(5), pp. 467-484. https://doi.org/10.1108/IJILT-12-2022-023
27. Liu, X., Mehraliyev, F., Liu C., & Schuckert, M. (2020). The roles of social media in tourists' choice of travel components. *Tourist Studies, 20*(1), 27-48.
28. Long, C.S., Hii, J.W.S., Kowang, T.O., Fei, G. C., & Rashid, N.R.A (2018). Website quality of travel agencies in Malaysia. *Business Management and Strategy, 9*(1), 114-135.
29. Lopez de Avila, A (2015). Smart destinations: XXI Century tourism. Presented at the ENTER2015 *Conference on Information and Communication Technologies in Tourism*, Lugani, Switzerland, February 4-6, 2015.
30. Mak, A. H., & Chang, R. C. (2019). The driving and restraining forces for environmental strategy adoption in the hotel Industry: A force field analysis approach. *Tourism Management, 73*, 48-60.
31. Malaysia Investment Development Agency (2020). Smart tourism: The future of tourism in Malaysia. Retrieved from https://www.mida.gov.my/wp-content/uploads/2021/06/MIDA-Newsletter-May-2021-2.pdf
32. Marikyan, D. & Papagiannidis, S. (2023) Technology Acceptance Model: A review. In S. Papagiannidis (Ed), TheoryHub Book. Available at https://open.ncl.ac.uk / ISBN: 9781739604400
33. Mark Anthony Camilleri, (2018). The SMEs' technology acceptance of digital media for stakeholder engagement. *Journal of Small Business and Enterprise Development*, https://doi.org/10.1108/JSBED-02-2018-0042
34. Mehraliyev, F., Choi, Y., & Koseoglu, A. (2019). Progress on smart tourism research. *Journal of Hospitality and Tourism Technology*, *10*(4), 522-538.
35. Ministry of Economy (2021). The 12th Malaysia Plan 2021-2025. Kuala Lumpur: Percetakan Nasional Berhad.
36. Ministry of Tourism, Arts and Culture (2020). National tourism policy 2020-2030: An executive summary. Retrieved from https://www.tourism.gov.my/files/uploads/Executive_Summary.pdf
37. Pai, C., Kang, S., Liu, Y., & Zheng, Y. (2017). An Examination of Revisit Intention Based on Perceived Smart Tourism Technology Experience. *Sustainability*, *13*, 1007. https://doi.org/10.3390/su13021007
38. Palumbo, F. (2015). Developing a new service for the digital traveller satisfaction: the smart tourist app", *The International Journal of Digital Accounting Research*, *15*, pp. 33-67, Doi: 10.4192/1577-8517-v15_2.
39. Ruslan, N., Ying, K.P., Hassan, F.A, Halim, A.M.A., Arba'ain, A.F. et al. (2022). Does The Smart Tourism Experience in Malaysia Increase Local Tourists' Happiness and Revisit Intentions? *Journal of Sustainable Natural Resources, 3(*2), pp. 41-49.
40. Sabah Government (2023). Tourism Statistics. Accessed from https://mysabah.com/sabah-tourism-statistics/
41. Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. American Psychologist, 55(1), 5-14. https://doi.org/10.1037/0003-066X.55.1.5
42. Shafiee, S., Ghatari, A. R., Hasanzadeh, A., Jahanyan, S. (2019). Developing a model of sustainable smart tourism destination: A systematic review. *Tourism Management Perspectives*, *31*, 287-300.
43. Sivanesa, J. (2023, Sept 29). Opt for trusted travel agencies to avoid being scammed – Tourism Malaysia. The Borneo Post. https://www.theborneopost.com/2023/09/29/opt-for-trusted-travel-agencies-to-avoid-being-scammed-tourism-malaysia/
44. Skadberg, Y. X., & Kimmel, J. R. (2004). Visitors' flow experience while browsing a Web site: its measurement, contributing factors and consequences. *Computers In Human Behavior*, *20*(3), 403-422.
45. Suhr, D. (2006). Exploratory or confirmatory factor analysis? Proceedings of the 31st Annual SAS User Group International Conference. Cary, NC: SAS Institute Inc., Paper Number: 200-31
46. The Borneo Post (2021, July 7). MCMC: Internet complaints in Sabah to be resolved. https://www.theborneopost.com/2021/07/07/internet-complaints-in-sabah-to-be-resolved-mcmc/
47. The Edge Market (2017). Malaysia airports: Alipay adoption a major step for retail, F&B transactions.
48. Tourism Malaysia (2023). Hotel Guest Statistics by State. Retrieved from https://mytourismdata.tourism.gov.my/?page_id=362#!from=2020&to=2021

DOI: 10.5281/zenodo.14195341

49. Tran, H, Huertas, A, & Morena, A. (2017). A new framework for the analysis of smart tourism destinations. In book: *Congresos - Seminario Destinos Turisticos Inteligentes 2017 - Libro de Actas (pp. 190-214).* DOI: 10.14198/Destinos-Turisticos-Inteligentes.2017.09
50. Wang, L. & Wang, S. (2020). The influence of flow experience on online consumers' information searching behavior: An empirical study of Chinese college students. *Data and Information Management 4*(4), 250-257.
51. Wise, N, & Heidari, H. (2019). Developing smart tourism destinations with the internet of things. In Sigala, M., Rahimi, S., & Thelwall, M. (Eds.), *Big data and innovation in tourism, travel, and hospitality: Managerial approach, techniques and applications* (pp. 21-29). Springer.
52. Ye, H., Zhang, K., & Law, R. (2021). A framework of implications for smart tourism development in Hong Kong. *Journal of Smart Tourism, 1*(1), 31-39.
53. Yoo, C.W., Goo, J., Huang, C.D., Nam, K. & Woo, M. (2017). Improving travel decision support satisfaction with smart tourism technologies: A framework of tourist elaboration likelihood and self-efficacy. *Technological Forecasting & Social Change*, 123, 330-341.
54. Zamani, S.Z. (2022). Small and Medium Enterprises (SMEs) facing an evolving technological era: A systematic literature review on the adoption of technologies in SMEs. *European Journal of Innovation Management, 25*(6), pp. 735-757, DOI 10.1108/EJIM-07-2021-0360

DOI: 10.5281/zenodo.14195341