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INVESTIGATING OVERTOURISM IMPACTS, PERCEIVED MAN-MADE RISK AND TOURIST REVISIT INTENTION

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Abstract

This research explores the interrelationships between overtourism impacts, perceived man-made risk and revisit intention among tourists visiting Melaka UNESCO World Heritage Site (WHS). The aim of the study is to illustrate the overutilization of destination resources and subsequent human risk that shape tourist behavioural from the outlooks of sustainable and tourism impacts. Five hundred and ninety-three responses were quantitatively collected through an online data collection. Partial least square structural equation modelling (PLS-SEM) is employed to investigate the research hypotheses. It can be reported overtourism impacts have positive and significant influence on the perceived man-made risks. However, this is not the case for the relationship between overtourism impacts on revisit intention, and the perceived man-made risk on the latter construct. This renders the potential mediation role of perceived man-made risk as insignificant. The findings heighten the unique dynamics of overtourism within developing WHS planning in shaping tourist revisit intention.

Keywords: Overtourism Impacts, Man-made Risk, Revisit Intention, Sustainability, World Heritage Site

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INTRODUCTION

The growth of global middle class over the last decade has seen more people spend a portion of their disposable income to travel. Along with the improved interconnectedness in the shape of digital and physical connectivity especially in the advanced and developing countries, the global tourism industry has subsequently grown to be one of the bedrocks of the global economy in terms of gross domestic products (GDP) and job creations. With the industry viewed by many countries as a primary economic driver, it has been deemed as one of the prominent density-contributing elements toward cultural institutions and urban attractions (Adie et al., 2019; United Nations World Tourism Organization (UNWTO), 2018; World Travel & Tourism Council (WTTC), 2019). This is due to the nature of tourism activities where they have become further intertwined with the local community's spheres which include the utilisations of public transportation, facilities, paths, museums, attractions, and other services (Koens, Postma & Papp, 2018).

As the industry is also reliant on the environmental quality, scholars have also raised their concerns on the impacts of tourism towards the natural ecosystem (Avcikurt et al., 2015; Bhuiyan et al., 2018; Rääkkönen et al., 2019). The impacts would range from the exhaustion of natural assets, air contamination, physical harm to ecologies, logging, and loss of scenery (Bhuiyan et al., 2018). Furthermore, overtourism has several negative consequences, including traffic and parking concerns, community dissatisfaction from misbehaving tourists as well as increased living expenses for locals and tourists (Adie et al., 2019; Rasoolimanesh et al., 2019). These impacts are severely felt since the leading tourism destinations have reached overload point as cities from Europe, Asia, and Pacific experiencing overcrowding in terms of the tourism market size and global overnight stays (WTTC, 2019). Evidently, this phenomenon can be observed in Melaka of Malaysia since the destination was recognized as a World Heritage Site (WHS) by United Nations Educational, Scientific and Cultural Organisation (UNESCO) (Santa-Cruz & Lopez-Guzman, 2017).

This recognition generated significant impacts in terms of economic growth, employment, and poverty reduction despite the serious impacts of the phenomenon on tourism sustainability (Goodwin, 2017; Oklevik et al., 2019; UNWTO, 2018). Therefore, achieving the right balance between the fiscal return and preservation of sociocultural and environment has become a challenge amongst the tourism stakeholders. The unconstrained tourism growth which leads to excessive negative impacts will be a threat to the long-term survival of a tourist destination despite the economic gains by the commercial and service sectors (Koens et al., 2018; Pinke-Sziva et al., 2019; Seraphin et al., 2018). This can be attributed to the deterioration of experiential quality among the tourists as they compete with the permanent residents for space, amenities and services (Dodds

& Butler, 2019; Singh, 2018). This is worsened by the reduction of the perceived security of tourists as they feel uncomfortable by the overtourism phenomenon. In fact, potential tourists perceived overcrowding as the highest rated risk which may lead to lower tourists' decision to revisit a destination (Tasci & Sönmez, 2019).

As highlighted by Viet et al. (2020), tourists evaluate the risks they are likely to face throughout the trips before making tourism decisions. Since tourists strive to avoid visiting a risky destination, it reflects the prominent role of perceived risk in shaping their travel choices and behavioural intentions (Ritchie et al., 2017; Ruan et al., 2017). These situations enable the classification of the tourism risk as natural and man-made disasters (Sönmez & Graefe, 1998a), not only have an impact on the tourist sector and tourism security, but they also jeopardise a country's economic structure (Berdychevsky & Gibson, 2015). According to Ritchie et al. (2017), man-made tourism risk increases the chances and intensity of a natural disaster and this subsequently have an impact on tourism sectors and sub-industries.

Overall, the current study posited man-made risk (MMR) as a potential mediating factor on overtourism impacts (OVT) and tourist revisit intention. This relationship is underpinned by the theoretical framework of overtourism through the lenses of sustainability and tourism impacts. Investigation on these interrelationships is crucial given the dearth of empirical works that explicitly linked the MMR with OVT with most of them focused on the dynamics between perceived risk and revisit intention (Yin et al., 2020; Liang & Xue, 2021). Furthermore, empirical evidence generated in the context of a developing UNESCO WHS such as Melaka provides a niche contribution to the tourism body of knowledge. This is because it can be used as a meaningful comparator to other overtourism empirical works in other conventional and developed settings. With this in mind, the next section explicates the literature on overtourism, MMR and revisit intention with hypotheses development. This is followed by methodology, results and ends with theoretical and practical implications.

LITERATURE REVIEW

Overtourism

Overtourism is another term for tourist intensification within and around urban areas (Jover & Díaz-Parra, 2020). Used frequently to characterise an overutilisation of the assets, infrastructure, facilities and other components of a place, it is important to highlight that there is yet to be a universal consensus on the overtourism's definition and typology. This can be attributed to the recent entry of the concept in the tourism lexicon in 2017 where there is yet to be a sufficient body of knowledge to be synthesised by the scholars and industry practitioners (Singh, 2018; Veríssimo et al., 2020). Despite still in its infancy

stage, the phenomenon has become the main signifier for extreme adverse tourism impacts within a very short time. Furthermore, the phenomenon can be considered as dynamic trend that has a substantial impact on a destination's appeal, as well as the interactions of tourism stakeholders such as residents, tourists, and a variety of agents (Bellini & Pasquinelli, 2017; Milano et al., 2018).

It is documented in the literature that environmental, economic, and socio-cultural can be considered as the impacts of overtourism (Cheer et al., 2019; Peeters et al., 2018; Wall, 2019). Atzori (2020) noted that despite the improved economy through employment and increasing tourism income, overtourism also leads to high economic dependency on the sector, inflation, and increases in property prices and living expenses. As for the socio-cultural impacts, it includes unpleasant tourist behaviour, distress and frustration of hosts, host/tourist animosity, criminal behaviour, lifestyle modifications, reduction of cultural distinctiveness, deficient involvement of stakeholders in tourism development, overtourism during high season, and negative view and discontentment of visitors (Peeters et al., 2018; Wall, 2019). While contamination of water, air, land, and noise are among the general denominators of environmental impacts reported in the overtourism literature (Atzori, 2020).

Given the impacts of overtourism are commonly delineated based on tripartite pillars of sustainability, this study adopted the three elements of economy, environment and socioculture to measure the construct of OVT as per Berselli et al. (2022) and Mihalic (2020).

Man-made Risk

According to Mansfeld and Pizam (2006), tourism risk can be derived from plethora of crises that comes in numerous forms. It can range from extremism to sexual provocation, non-violent financial crime to public disorders, corruption to swindling, noise to vandalism, visitor mistreatment of facilities to technological change. Based on this premise, Sönmez & Graefe, (1998a) classified these crises as either man-made or natural disaster. Tourism has been hit by several of the natural disasters in recent years, which were caused by man-made disasters (Ruan et al., 2017). Extreme traffic, sewage, garbage, oil seepage, and water pollution are all examples of man-made disasters (Huan, 2007). All of these can potentially result in long-term and severe damage (Ruan et al., 2017).

Thus, tourists' assessments of the MMR disasters are more probable to influence their travel decisions and behaviour (Kozak et al., 2007). This is because MMR may even have a negative impact on tourists value discernment (George & Swart, 2012). In fact, there has been an increase in anxiety about man-made disasters while tourists decide where to go and make trip plans with friends or family (Kozak et al., 2007). This illustrates the typical direct impact of man-

made disasters on travel decisions and benefits as tourists are generally more concerned about them (Berdychevsky & Gibson, 2015).

Revisit Intention

Tourists' intent to revisit is seen as a critical predictor of the travel industry's long-term financial performance especially within the tourism body of knowledge (Mat Som et al., 2012; Wang et al., 2012). Many studies discovered repeat tourists will spend more nights at a destination, involve in further undertakings, and create constructive word of mouth which eventually leads to reduction of spending by the tourism stakeholders in marketing than first-time visitors (Zhang et al., 2018). Revisit intention refers to visitors' inclination to return to a specific area or country and to encourage it to others (Yoon & Uysal, 2005). According to Cheng et al. (2019), the expenditure on tourism products and services is dependent on the total figure of visitors which is influenced by the destination revisit intention. Considered as a post-consumption behaviour to a certain extent, it refers to the tourist's evaluation of the possibilities of returning to the place or tendency to suggest the destination to others (Cole & Scott, 2004; Khasawneh & Alfandi, 2019; Stylos et al., 2016).

STUDY HYPOTHESES

The intention to revisit, which is a significant representation of tourism, might be considered as a precursor of tourist behaviour (Yin et al., 2020). Tourists may become confused and frustrated in packed and overcrowded situations, resulting in a negative experience and perceived insecurity (Hyun & Kim, 2015; Tasci & Sönmez, 2019). Tourism services may not operate efficiently in congested surroundings (Yin et al., 2019a, 2019b), compromising the quality of tourists' experiences with tourist locations. In the same vein, past literature also demonstrated that natural disasters, politics, and performance all have an impact on whether tourists return (An et al., 2010). Similarly, Cetinsoz and Ege (2013) suggested that tourists shunned returning to Asia and South America owing to MMR such as political instability. Taken altogether, the current study proposed the following hypotheses:

H1 - OVT influence MMR

H2 – OVT influence tourist revisit intention

H3 - MMR influences tourist revisit intention

H4 - MMR mediates the relationship between OVT and tourist revisit intention

METHODOLOGY

The purpose of this paper is to evaluate the mediating influences of MMR on OVT and tourist revisit intention in Melaka UNESCO WHS. Figure 1 illustrates

the research framework and hypothesis. To execute the study, quantitative research design and cross-sectional approach is employed to collect the data from the study population of tourists visiting Melaka. They were approached through online platform and were purposively sampled.

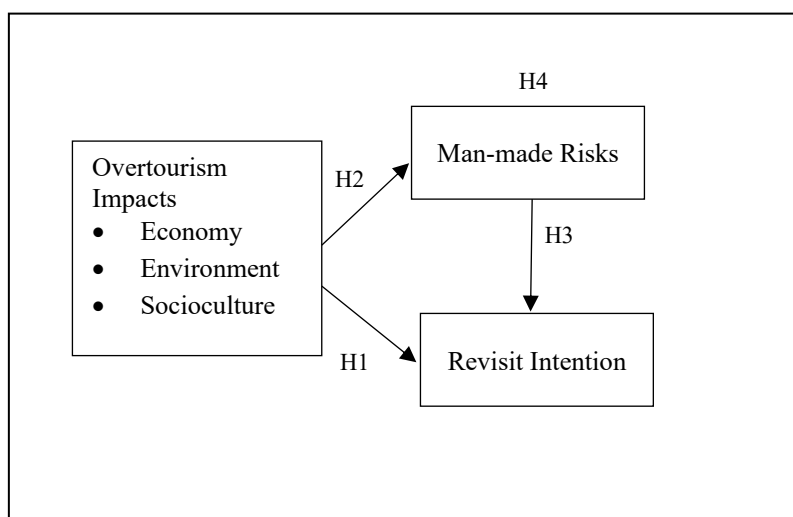


Figure 1: Research Framework
Source: Author

First section of the questionnaire consists of respondents' demographic profile along with their travel pattern and behaviour. The ensuing sections measure OVT (Tsai et al., 2016; Kuščer & Mihalič, 2019) MMR (Ruan et al., 2017) and revisit intention (Park et al., 2019). A 5-point Likert scale with the range from 1 (strongly disagree) to 5 (strongly agree) were used to measure the constructs (see **Appendix 1**). As recommended by Hair et al. (2018), the minimum sample size is set at 185 respondents based on formulae of to have at least five times observations as the number of variables to be analysed (5:1 of observation-to-variable ratio). Five hundred and ninety-three completed responses were collected as majority of the tourists (75.4%) were females. The result is similar to other contemporary research who obtained majority figure of female tourists at Georgetown UNESCO WHS (e.g Noraffendi & Rahman, 2020; See & Goh, 2018). The demographic biasness can be attributed to the global trend of female travellers as the dominant market in leisure and business travel (Singh & Gupta, 2021; Zhang & Hitchcock, 2017). In fact, Asian solo female travel market is growing exponentially in many Asian countries such as in Malaysia (Awang & Toh, 2018). Finally, around 85.3% of the tourists in this study were between 18 and 30 years old as most of them travelled for leisure purposes (68.3%).

This paper employed the Partial-least Square-Structural Equation Modeling (PLS-SEM) to analyse the study model and hypotheses. PLS-SEM is used owing to the study's exploratory nature and non-normal data distribution (Hanafiah, 2020; Hair et al., 2011). Furthermore, PLS-SEM is also considered as effective in assessing complex interrelationships between the constructs given its strong and robust nature in estimating structural model (Henseler et al., 2009).

RESULTS

Since the second-order formative construct was present and unequal number of indicators in lower-order reflective constructs, this study adopted the disjoint two-stage approach of hierarchical models for analysis purposes (Becker et al., 2012; Ali et al., 2018). Following the procedures, the first step of this approach required the estimation of measurement model minus the second-order construct. After the lower-order constructs are integrated as the indicators of second-order construct, the reliability and validity were again need to be tested before the final structural model assessment (Sarstedt et al., 2019; Hair et al., 2019).

Evaluation of Measurement Model

The criterion for assessing reflective measurement model is the evaluation of reliability, convergence validity and discriminative validity of the constructs (Hair et al., 2019). The reliability of the constructs can be referred to factor loadings, composite reliability (CR), Cronbach's alpha and average variance extraction (AVE). All constructs were reliable since the reliability values exceed the minimum limit of 0.7 (Hair et al., 2019). The item loadings and AVE statistics of each reflective indicator were higher than the recommended threshold (Hair et al., 2011; Hanafiah et al., 2021), illustrating achieved convergent validity for all variables. To examine discriminant validity, Heterotrait-Monotrait (HTMT) ratio of the correlation was used. All HTMT values of latent variables were clearly lower than the threshold value of 0.90 (Henseler et al., 2015).

Stage-two examines the second-order formative construct for its measurement model and the structural model analysis (Hair et al., 2019; Sarstedt et al., 2019). In this stage, the formative measurement model was evaluated by estimates of indicator weights, significance of weight and multicollinearity of indicators (Loureiro & Jesus, 2019). The overall result of VIF values demonstrates no issues of multicollinearity with the weight of all indicators and respective loadings of OVT and MMR were significant as per Hanafiah (2020).

Assessment of Structural Model and Hypotheses Testing

As the measurement model evaluation was adequate, the statistical significance of path coefficients, R^2 value (coefficient of determination), and Q^2 (blindfolding-based cross validated redundancy measure) of the structural model were

evaluated (Hair et al., 2019). It can be reported that predictive power of OVT on MMR ($R^2 = 0.06$) and the former construct on revisit intention ($R^2 = 0.01$) is very weak. Furthermore, the Q^2 values presented in Table 1 were close to zero, indicating that the model has no sample predictive relevance for both variables in the path model.

Table 1: Structural model assessment

Construct	R^2	Q^2
Man Made Risk	0.06	0.053
Revisit Intention	0.01	-0.006

Afterward, the hypothesis testing between the constructs in structural model were measured based on the values of path coefficients (β) and significance levels (P) as per Hair et al. (2011). The estimation of the structural model's path coefficient results in Table 2 reported that both OVT (H1: $\beta = -0.057$; $t = 1.107$; $P = 0.268$) and MMR (H3: $\beta = -0.043$; $t = 0.990$; $P = 0.322$) were not significantly affecting the revisit intention. However, OVT had a significant impact on MMR (H2: $\beta = 0.249$; $t = 6.058$; $P = 0.000$) at 0.001 confidence level. This means that H2 is supported. In terms of indirect effect of OVT on revisit intention through MMR as a mediator variable; the result is statistically insignificant ($\beta = -0.011$; $P = 0.349$).

Table 2: Hypotheses testing

	Path Coefficient, β	T Statistics	P Values	Remarks
H1: OVT -> Revisit Intention	-0.057	1.107	0.268	Not Supported
H2: OVT -> MMR	0.249***	6.058	0.000	Supported
H3: MMR -> Revisit Intention	-0.043	0.990	0.322	Not Supported
H4: OVT -> MMR -> Revisit Intention	-0.011	0.936	0.349	Not Supported

Note: *** $p < 0.001$

DISCUSSION

Plethora of past studies denote the tourism crowding as a vital antecedent of intention to revisit (Seetanah et al., 2018; Wu et al., 2018) and would reduce tourist satisfaction (Luque-Gil et al., 2018; Sanz-Blas et al., 2019). This reflects how the crowding phenomenon is reported to have crucial influence on revisit intention, indicating aversion among the tourists to the overtourism destination (Yin et al., 2020). In contrast, overtourism is also considered as an important

indicator among the tourists to gauge the popularity of tourist destinations (see Petr, 2009). Therefore, contrasting evidence and opposing views are found in the literature in assessing OVT. In line with this notion, it needs to be established that the present study found overtourism in a UNESCO WHS of a developing country had an insignificant impact on revisit intention. The nature of the findings illustrate that even though tourists are troubled by the phenomenon, it might not play any pivotal role in shaping their revisit intent. This may be attributed to the lack of emphasis among the tourists on the OVT towards experiential values in their travel decision making.

Importantly, the sustainable growth, success and competitiveness of any destination is contributed by the integrated values perceived and experienced by tourists. Such values especially in overtourism context can only be delivered through strong collaboration and networking activities among key destination stakeholders (see the works of Azinuddin et al., 2020; 2022; Mior Shariffuddin et al., 2020; 2022). On top of that, it is also posited these activities also shape how the risks are managed by the destination management organizations (DMOs) and perceived by tourists. This is notable considering the dynamics between OVT and MMR reported in the current study. In the same vein, MMR is also found to have insignificant impacts on the revisit intention. This is interesting to note especially in the context of Malaysia, where Ahn (2019) emphasises that the risk perception is not important for tourists traveling in the country. This proved in the context of a destination which is beleaguered by various issues that lead to eventual risk discernments, it appears that such dynamics would not have significant bearings on the revisit intention.

CONCLUSION

The current research proposed an analysis on revisit intention through the lenses of overtourism phenomenon, where the subsequent results provide a peculiar picture of the tourism industry. There are three theoretical implications of this study. First, this research can be considered as one of the early empirical initiatives that conceptualize and operationalize overtourism phenomenon through sustainability and tourism impacts perspectives. Second, the paper extended the tourism knowledge by exploring the mediating impacts of MMR on OVT and revisit intention, which are rarely studied in the existing studies. Third, the analysis of interrelationships between the abovementioned variables in the context of UNESCO WHS in a developing setting offers a unique and valuable insight in understanding the overtourism phenomenon.

In terms of the managerial implications, DMOs should strive to solidify the networks between the public, private and hybrid entities to offer a safe environment for visitors, allowing them to have positive travelling experiences. Improvements of service quality, public infrastructure, and environmental

comforts would be favourable for tourists' relaxation. In the same vein, the findings also heightened the need for WHS policymakers to emphasised tactical measures to combat MMR in order to increase the perceived safety and security of the tourists. Therefore, the importance of evaluating the tourist risk perception cannot be understated from the managerial point of view given stronger tourism attractions were insufficient to entice tourists and survived in the competitive tourism markets. This can be achieved through risk minimization and tactical measures which aim to solidify the standing of the destination amongst the tourists, and subsequently shapes a better and sustainable future for overtourism UNESCO WHS.

Despite the significant contributions and issues raised in this study, it is important to consider its limitations. First, the results should be treated with caution, as different outcomes are possible if the analysis on environmental and contextual factors are conducted in other settings, where it can potentially lead to new empirical and practical insights. Future reconnoitring and differentiation of the various effects of OVT for different research settings or other historic centres would be valuable for validating these findings and improving the replicability of the suggested research model.

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DISCLOSURE STATEMENT

Following international publication policy and our ethical obligation as a researcher, we report that we have no conflict of interest.

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Appendix 1: Survey Instruments

Code	Items
<i>Overtourism (Economic Impacts)</i>	
EC1	Local tourist products and services are expensive
EC2	The price of accommodation is high
EC3	Restaurants are always overcrowded in Melaka
EC4	Choices of tourist products (handicrafts, souvenirs) are insufficient due to overtourism
EC5	Overtourism leads to poor quality of goods and services
EC6	I feel overtourism benefits the economic well-being of local communities
EC7	I feel overtourism brings positive development to Melaka's tourism
<i>Overtourism (Sociocultural Impacts)</i>	
SC1	The increased tourists' flow makes me feel uncomfortable
SC2	Overtourism leads to moral degradation due to cultural differences
SC3	Overtourism causes changes in local cultures and traditions
SC4	Overtourism leads to increasing crimes rates
SC5	Overtourism increases the conflict between residents and tourists
SC6	Overtourism makes me feel unsafe
<i>Overtourism (Environmental Impacts)</i>	
ENV1	Overtourism increases the damage of natural environment
ENV2	Overtourism contributes to coastal erosion in Melaka
ENV3	Overtourism leads to excessive land reclamation of coastal areas in Melaka
ENV4	Overtourism causes air pollution
ENV5	Overtourism contributes to seawater pollution
ENV6	Overtourism contributes to river pollution
ENV7	Overtourism contributes to noise pollution
ENV8	Cleanliness is a serious issue in Melaka due to overtourism
ENV9	Overtourism leads to traffic congestion in Melaka
ENV10	Overtourism decreases the ambient quality of tourist attractions in Melaka
ENV11	The distribution of tourist attractions is concentrated in a few areas
ENV12	Overtourism leads to the degradation of heritage buildings
ENV13	Overtourism leads to oversupply of hotels in Melaka
ENV14	Overtourism leads to oversupply of tourist attractions in Melaka
<i>Man-Made Risks</i>	
MM1	I feel worried about my safety in Melaka
MM2	Overtourism makes me feel insecure during the trip
MM3	I will avoid traveling to crime-risk areas
MM4	Controlling diseases may affect the attractiveness of tourist destination
MM5	The travel risk would negatively affect my satisfaction and experience in Melaka
<i>Revisit Intention</i>	
IR1	I will visit Melaka in future
IR2	It is more interesting to visit Melaka than any other destinations
IR3	I am loyal to Melaka
IR4	I will tell other people positive things about Melaka
IR5	I will recommend Melaka to others as a travel destination