TITLE: Assessing Explicit and Implicit Stereotypes in Tourism: Self-Reports and Implicit Association Test

ABSTRACT

Stereotyping is a dichotomy system of cognitive information processes reflecting explicit and implicit biases. While existing studies have studied tourist stereotypes with a wide range of approaches, ranging from face-to-face interviews to numerical scale ratings via self-reports, these studies measured only one type of stereotypes: explicit stereotypes, while neglecting the other: implicit stereotypes. The nature of explicit stereotypes allows individuals to access their cognitions, which could increase the chance of socially desirable responses and thus offer incomplete knowledge in tourist stereotyping. Drawing from existing literature on explicit and implicit stereotypes, this study seeks to identify implicit tourist stereotypes via implicit association test (IAT) and measure them against explicit biases from residents of four popular destinations, covering Hong Kong, Malaysia, Singapore, and Thailand. This study contributes by presenting a detailed development of the IAT and demonstrates the applicability of this method for future cognitive-related studies in the tourism literature. Overall, this study provides a timely and impactful methodology for measuring tourist stereotypes, an important cognitive component that could shape residents' attitudes towards sustainable tourism development, and harmonious host-guest relationships.

KEYWORDS: Implicit; Stereotypes; Measurements; Implicit Association Test (IAT)

WORD COUNT: 10,907 words

INTRODUCTION

There is an increasing focus in the recent tourism literature on the positive and negative stereotypes that residents hold towards tourists (Hsu & Chen, 2019; Monterrubio, 2018; Shen et al., 2019; Tung, King, & Tse, 2020). Stereotypes, like other cognitive information processes, consist of two distinct types that mainly differ between conscious and unconscious (Kihlstrom, 1990) that reflects explicit and implicit biases, respectively. The nature of explicit stereotypes allows individuals to access their cognitions, which could increase the chance of socially desirable responses during the research process when individuals are asked to evaluate their biases. Consequently, research findings that focus solely on the explicit stereotype via self-reports would fail to account for underlying (i.e., implicit) biases, and thus offer incomplete insights for policymakers in managing intergroup stereotyping and host-guest relationships.

Different from explicit stereotypes, implicit stereotypes are unconscious attributes that could be measured using an indirect approach, such as the Implicit Association Test (IAT) (Fazio & Olson, 2003). IAT is a computerized program that involves automatic associations between the target (i.e., tourist) and the attributes (i.e., stereotypes) held by an individual (i.e., resident) (Greenwald & Banaji, 1995). While previous studies in psychology have demonstrated the success of IAT in capturing unconscious evaluations from individuals, it has not been employed in the tourism field to identify residents' stereotypical views towards tourists. Drawing from the literature on explicit and implicit stereotypes and IAT measurement, the objective of this study is to examine the differences in residents' implicit and explicit tourist stereotypes. For instance, would residents' implicit tourist stereotypes be consistent or different from their explicit tourist stereotypes?

To answer the proposed research question, this study aims to measure the implicit and explicit tourist stereotypes as perceived by residents from four different destinations. More specifically, this study identifies the implicit tourist stereotypes through the use of IAT while explicit tourist stereotypes are captured using a self-report scale rating. Furthermore, this study investigates the degree of association between implicit and explicit tourist stereotypes. In this study, the examined target is the Mainland Chinese tourist, an influential tourist market in the international travel, while the respondents are residents from four Asian destinations, Hong Kong, Malaysia, Singapore, and Thailand. The findings of this study will reveal residents' perceptions towards the Mainland Chinese tourist that are theoretically and practically valuable for the area of host-guest relations.

This study contributes by uncovering the dual-information processes in tourist stereotyping research, which would not be possible by measuring only one of the stereotypes. The sole reliance on either explicit or implicit measurements could provide a bias in understanding tourist stereotypes, uncovering the incomplete insights shown in the existing literature. Furthermore, this study presents a detailed development of the IAT and demonstrates the applicability of this method for future cognitive-related studies in the tourism literature. A comprehensive demonstration of the IAT in this study could serve as a template for subsequent studies on implicit cognitive measurements. Overall, this study provides a timely and impactful methodology for measuring tourist stereotypes, an important cognitive component that could shape residents' attitudes towards sustainable tourism development, and harmonious host-guest relations.

Practically, this paper provides insights for destination management organizations (DMOs) and tourism officials, focusing on host-guest relations to evaluate residents' implicit and explicit stereotypes toward tourists. For instance, Woosnam, Maruyama, Boley, and Erul (2018) found that ethnic stereotypes could affect the emotional solidarity between the majority group (i.e., Japanese residents) and minority groups (i.e., Brazilian resident) in terms of welcoming nature, emotional closeness, and sympathetic understanding. As such, there is a need for destination managers to address implicit and explicit stereotypes perceived by the majority on the minority to increase host-guest interactions and thus improve their emotional solidarities. In this regard, this research also contributes to knowledge focusing on stereotypes and host-guest relations. DMOs could manage both implicit and explicit stereotypes as existing studies suggests conscious and unconscious activation of information categorization to produce associated attitudes accordingly (Dovidio, Kawakami, & Beach, 2001). The convergence or divergence between implicit and explicit stereotypes could allow policymakers to implement internal marketing communication to address the representation of stereotypes among residents.

LITERATURE REVIEW

Stereotypes and Tourist Stereotypes

Stereotypes refer to the cognitive function of information processing about the characteristics of individuals belonging to social groups, allowing the categorization of individuals into members of ingroups and outgroups (Taylor, Ruggiero, & Louis, 1996). Pieces of information are formulated based on the attributes, characteristics, and conducts accumulated from personal interactions and unsubstantiated gossip from other ingroup members or media reports that may be true, false, or even mixed that are homogenized across all individuals within the same category (Pickering, 2001). Furthermore, stereotypes are associated with discriminatory values (good or bad) and destroy the actual image of individuals (Pickering, 2001), resulting in de-individualization.

More recently, with increasing attention on stereotyping, tourist stereotypes are regarded as a resident's preconceptions of tourists within a destination setting (Tung et al., 2020) that could elicit discrimination and harassment of tourists (van Veelen et al., 2016). The examination of stereotypes is an essential concept in tourism studies where an individual's cognitive evaluation could lead to subsequent emotions and behaviours that are important for sustainable tourism development (Anderson, Hildreth, & Howland, 2015; Rozin & Royzman, 2001). Within tourism studies, the examination of stereotypes has focused on the tourists' and locals' perspectives in various areas such as destination image (Chen et al., 2016), education (Tung & King, 2016), prosocial behaviours (Tung, 2019), product branding (Diamantopoulos et al., 2017), and towards each other (Hsu & Chen, 2019).

Tourist stereotypes refer to the local residents' perceived cognitive evaluation of a particular tourists origin in a tourism setting (Tung et al., 2020), affecting locals behaviours towards the tourist, thereby affecting host-guest relations and destination image. Early tourism studies describe tourist stereotypes following the ethnic characteristics of tourists (Pi-Sunyer, 1977; Boissevain & Inglott, 1979; Sheldon & Var, 1984). Subsequent studies have suggested that tourist stereotyping extends beyond ethnic stereotypes; tourist stereotypes include attributes from physical, temperamental, attitudinal, and behaviours (Hsu & Chen, 2019).

Previous studies have revealed tourist stereotype attributes using different examination pairs of locals and tourists, such as Israeli resident-Egyptian tourists (Milman, Reichel, & Pizam, 1990) and Jordanian tourists (Pizam, Fleischer, & Mansfeld, 2002); Dutch resident-German and East Asian tourists (Moufakkir, 2011); Hong Kong resident-Mainland Chinese tourists (Chen, Hsu, & Li, 2018; Shen, Luo, & Zhao, 2017). Furthermore, these stereotype attributes are categorized along with the valence of positive and negative biases (Chen et al., 2019; Tung et al., 2020).

While existing studies have revealed tourist stereotype attributes, more attention should be given to investigate the activation of tourist stereotypes. Although psychology studies suggested that stereotypes are activated along two dichotomy streams of explicit and implicit, tourism studies often only focus on the explicit activation of tourist stereotypes and conclude the results as the overall tourist stereotype held by the locals.

Dichotomy System of Stereotypes

Over the past few decades, stereotyping has been studied as a process of categorization that affects an individual's perception, evaluation as well as subsequent emotions and behaviours (Allport, 1954; Tajfel, 1969). Previous research has emphasized dichotomy in stereotypical categorization between the intended and unintended (Uleman & Bargh, 1989), uncontrolled versus controlled (Devine, 1989), unconsciousness versus consciousness (Kihlstrom, 1990), and mindful versus mindless (Langer, 1989). Recently studies showed that information processes are different between these two stereotypes (Plaza et al., 2017; Rubinstein, Jussim, & Stevens, 2018), which affect the influences of external stimuli acting on them (Clement-Guillotin et al., 2018). They are dichotomous and separated into "explicit" and "implicit" stereotypes (Greenwald & Banaji, 2017). Explicit stereotypes are formed by the conscious awareness where individuals self-report their preconceptions and beliefs of other social groups (Brown & Gaertner, 2008). Conversely, implicit stereotypes are activated unconsciously and indirectly, and thus individuals may not be conscious of the existence of these perceptions (Greenwald & Banaji, 1995). The existence of a dichotomous system of stereotypes was identified in various contexts, ranging from gendered oriented stereotypes (Franceschini et al., 2014; Nowicki & Lopata, 2017), product-origin (Diamantopoulos et al., 2017), to ethnic majority-minority (Glock, Kovaca, & Pit-ten Cate, 2019).

Explicit Stereotypes

An explicit stereotype is the result of conscious and controlled evaluation towards individuals who are considered as outgroup members of a social group. Existing tourism research has primarily focused on explicit stereotypes using self-reports; for instance, Ming (2018) suggested that Mainland Chinese tourists are categorized into the quadrants of high competence but low warmth in the Stereotype Content Model. Similarly, Prendergast, Lam, and Ki (2016) adopted the same methodological approach and concluded negative stereotypes held by Hong Kong residents towards Mainland Chinese tourists. A similar conclusion was supported in research by Shen, Luo, and Zhan (2017).

There are several challenges, however, when relying solely on self-reports of explicit stereotypes. When individuals are explicitly asked about their biases, they are consciously aware

of their stereotypical content, attitudes, and beliefs, which could bias their responses given the presence of opportunities (e.g., time allowances) and extrinsic motivations (Greenwald & Banaji, 1995). Additionally, when respondents are mindful of their decision-making processes, they can become cautious when they answer questions, which could affect their expressions, underlying intentions, or evaluations due to social norms (Nosek, Greenwald, & Banaji, 2005).

Previous studies have also noted issues with using numerical scales to evaluate one's views (e.g., the extent of warmth and competence towards outgroup members: Fiske et al., 2002; Cuddy et al., 2009; Cuddy, Glick, & Fiske, 2007) due to the presence of self-presentational effects as well as social desirability bias (Fazio & Olson, 2003; Greenwald & Banaji, 1995; Herz & Diamantopoulos, 2013). Individuals may over-state or under-evaluate the target to enhance or reduce discriminations (Dunham et al., 2014; Rohmer & Louvet, 2018). For instance, individuals may evaluate women as high in warmth to compensate for lower ratings in competence (Kervyn, Yzerbyt, & Judd, 2010).

Relying on just explicit measurements of stereotypes may fail to capture the automatic perceptions of an individual about a social group. Social perceptions are often unconscious or automatic (Bargh, Chen, & Burrows, 1996), especially on sensitive issues such as stereotyping. The presence of stereotypes towards an outgroup may be done subconsciously without awareness and intentions (Bargh, 1989; Greenwald & Banaji, 1995); hence, it is crucial to measure both explicit and implicit views in social cognition research.

Implicit Stereotypes

Implicit stereotypes refer to the unconscious beliefs that an individual holds towards members of outgroups (Greenwald & Banaji, 1995). Unlike explicit stereotypes, implicit stereotypes operate without conscious and controlled intentions (Devine, 1989; Kihlstrom, 1990). The concept of implicit stereotypes is based on two critical theoretical understandings: the associative network in semantic memories and automatic activation.

Semantic memories assumed items are linked with each other in terms of their associative network where related items post stronger links than unrelated items (Collins & Loftus, 1975). These memories are long-term general knowledge of ideas and concepts (Tulving, 2002). For example, "tourists" are more closely associated with "guides" than to dissociate items such as "flowers" or "newspapers". A local network is formed when related concepts are clustered together (Payne & Cameron, 2013), such as tourists, guides, airlines, hotels, and attractions. The activation of one concept leads to the connection to other concepts within the same local network, and the degree of association among concepts could be measured by an individual's reaction time. Reaction time is shorter when the concepts are highly connected (Neely, 1977).

The association of one concept to another is seen as automatic or happening without conscious processing of information (Schneider & Shiffrin, 1997). Information processing happens outside of one's attention and does not require motivation (Cunningham, Preacher, & Banaji, 2001; Greenwald & Banaji, 1995; Hinton, 2017). In terms of stereotyping, the rate of automatic association could be dependent on the frequency of exposure as well as the extent of biased associations with the target; the higher the exposure and strength of subjective linkages,

the easier it is for an individual to activate a stereotype (Devine, 1989; Lepore & Brown, 1997). Once this association is learned, it is extremely difficult to unlearn.

As implicit stereotypes reflect the unconscious beliefs of an individual, they could be measured using an indirect approach (Greenwald & Banaji, 1995; Greenwald, McGhee, & Schwartz, 1998). There are some approaches to capture implicit stereotypes, such as affective priming task (Fazio et al., 1986), the Go/No Go association task (Nosek & Banaji, 2001), the Sorting Paired Featured task (Bar-Anan, Bosek, & Vianello, 2009) and the Implicit Association Test (IAT) (Carpenter et al., 2018; Fazio & Olson, 2003). Among them, the IAT is preferred to capture the implicit tourist stereotypes. It is a computerized programme where individuals have to classify stimuli (e.g., stereotypes) into categories rapidly.

Implicit Association Test (IAT)

The Implicit Association Test (IAT) is an indirect measure to examine an individual's implicit social cognitions (Greenwald et al., 1998). IAT reflects the strength of automatic associations of concepts held by an individual. The main objective of IAT is to evaluate the association between the targets (e.g., tourist) and attribute dimensions (e.g., stereotypes). It requires a respondent to pair the target to an attribute rapidly, and the reaction time is a reflection of the respondent's implicit view. IAT helps to minimize social desirability bias that may arise from self-reported responses (Greenwald et al., 1998; King & Bruner, 2000).

The use of implicit measurement to study the automatic activation of stereotypes started in the 1980s when sequential priming tasks developed from cognitive psychology (Fazio et al., 1986; Gaertner & McLaughlin, 1983). There are many types, among them, Evaluative Priming tasks, and Semantic Priming tasks are the more frequently used measurements. Evaluative Priming task assesses the evaluative responses where respondents are first briefly presented with a prime target and a positive or negative attribute (Fazio et al., 1986). Then, respondents are asked to determine if the attributes belong to the positive or the negative by pressing one of the two responses critical as fast as possible — a faster response to positive words is associated with positive stereotypes and vice versa. For Semantic Priming task, it is analogous to Evaluative Priming, except that respondents are presented with a set of meaningful or meaningless letter strings as attributes. It is testing the association of the prime target with the semantic meaning of the attributes. Although sequential priming tasks have provided significant findings in understanding the cognitive-behavior relationship (Fazio, 2007), they are vulnerable to measurement errors, such as distraction, which lower its reliabilities as demonstrated by Cronbach's Alpha values rarely exceeding 0.50 (Fazio, 2007).

Building on the foundation of the cognitive priming task, the Implicit Association Test (IAT) was developed by Greenwald et al. (1998), and it has been one of the most widely adopted instruments in studying cognitive psychology in recent decades (Gawronski & De Houwer, 2014). IAT consists of congruent and incongruent tasks where the duration for associating target and attributes are recorded. Given the advancement of information technology, online data collection has been the platform for large and high powered samples (Buhrmester, Talaifar, & Gosling, 2018; Paolacci & Chandler, 2014). IAT has an interface with online surveys and allows for the merging of data. Given the above discussion, IAT is adopted in this study as the implicit measurement of tourist stereotypes.

The IAT has been employed in various studies, such as gender preferences (Koranyi et al., 2017), political attitudes (Ryan, 2017), consumer preferences (Maison, Greenwald, & Bruin, 2004), as well as in the area of intergroup conflicts (Greenwald et al., 1998; Greenwald et al., 2009). Given its popularity and credibility, continuous improvements have been made to the IAT through various studies. For example, McFarland and Crouch (2002) suggested that an artificially strong association between target and attributes could be achieved by longer reaction time from the disassociated links, thus affecting the calculated scores. To address this confounding effect, a new scoring algorithm was introduced by Greenwald, Nosek, and Banaji (2003). This scoring algorithm employs a *D* measure to account for contamination from response speed differences. Furthermore, attempts to fake an IAT score is difficult as it could be identifiable by such analysis.

IAT has been used in previous research to examine implicit views of destination image (Chen et al., 2016; Choi, Liu, & Kim, 2015; Kim & Chen, 2010; Kim, Chen, & Hwang, 2011; Yang, He, & Gu, 2012) and restaurant brands (Lee & Kim, 2013). However, it has not been used to examine tourist stereotypes, an important cognitive component that could affect intergroup relations and shape residents' attitudes towards tourism development. In this regard, this study seeks to provide a detailed development of IAT specifically tailored for tourism stereotype research; demonstrate the applicability of the IAT for assessing implicit stereotypes; and compare the implicit results with explicit stereotype measures via self-reports against Mainland Chinese visitors from residents in Hong Kong, Malaysia, Singapore, and Thailand.

Relationship between Mainland China and Hong Kong, Malaysia, Singapore, and Thailand

With the unprecedented growth of China's economy and the associated relaxation of outbound travel restrictions, international travel has become a significant activity of Mainland Chinese residents. A double-digit percentage annual growth of Mainland Chinese outbound travel was recorded in many international destinations, such as Thailand, Singapore, Malaysia, and the Special Administrative Regions of Hong Kong and Macau (Yan, 2018). Apart from the significant economic contributions, the sudden increase of Mainland Chinese tourists have sparked social tensions with the local residents (Piuchan, Chan, & Kaale, 2018; Tse & Qiu, 2016).

Given its close proximity and ethnic affiliations, Hong Kong has become one of the most visited destinations by Mainland Chinese tourists. From the implementation of the Visiting Friends and Relatives (VFR) scheme in 1983 to the Individual Visit Scheme (IVS) in 2003, a series of policy relaxations has fostered a multifold increase in visitation to Hong Kong (Tourism Commission, 2019). However, this has intensified tensions with increasing conflicts with Hong Kong residents (Rowen, 2016), constructing the residents' stereotypes of Mainland Chinese tourists (Chen et al., 2018; Shen et al., 2017). Despite the vast investigations on Hong Kong residents' perceptions towards the Mainland Chinese tourists, they adopted explicit measurements that encourage the manipulation of stereotypes as a result of self-effect or social desirability. As such, the results may not reflect the underlying stereotypes of Hong Kong residents and thus provide an incomplete understanding. The examination of the implicit stereotypes can potentially aid tourism officials in formulating strategies for the host-guest relationship.

The conflicts between Mainland Chinese tourists and residents have spread to Malaysia, Singapore, and Thailand. Mainland Chinese tourists comprise the largest source of international tourist arrivals and tourism expenditures within the Association of Southeast Asian Nations (ASEAN) region (ASEANBusiness Staff, 2019a; 2019b). Disputes between residents have induced negative images of Mainland Chinese tourists, affecting residents' stereotypes. Examining these three destinations may assist tourism officials in understanding residents' stereotypes that contribute to the management of host-guest relationships (Gong, Detchkhajorniaroensri, & Kinight, 2019). Also, Malaysia, Singapore, and Thailand are the first three foreign countries that were stamped with the Approved Destination Status (ADS); a bilateral tourism agreement with China that allows Chinese citizens to travel in organized tour groups with approved travel agencies in China on visitor visas (Arita et al., 2011). Their long partnerships with China have served as references for other ASEAN countries in formulating their tourism strategies. With a predicted 45%–166% growth in Mainland Chinese tourists visiting ASEAN countries (China Tourism Academy, 2016), investigation on both implicit and explicit stereotypes will allow tourism officials to review their tourism marketing strategies whilst preparing other ASEAN countries for hosting a single large source of the tourism market.

METHODOLOGY

This research aims to examine the implicit and explicit tourist stereotypes of Mainland Chinese tourists as perceived by residents from four different Asian destinations. In this section, the components of examination for this research are first discussed. This includes identification of the stereotype target (i.e., Mainland Chinese tourists) and stereotype attributes (i.e., the contents by which Mainland Chinese tourists are labelled) as well as a detailed presentation of the measurement approaches for collecting the explicit and implicit tourist stereotypes of Mainland Chinese tourists. The second section presents the online survey instrument. Finally, the sample and procedure for data collection are discussed.

Components of Examination

Stereotype Target

Stereotype target, also known as the target of stereotyping, is important in measuring an individual's stereotypes as it ensures the correct identification and association of beliefs or expectations (Dunn & Spellman, 2003; Vescio & Biernat, 1999). The target could be a person, object, or place that allows for the evaluations of its attributes, characteristics as well as conduct. In this study, the stereotype target for measurement is Mainland Chinese tourists. This is an influential and emerging tourist market that receives numerous discussions or even criticism within the news and social media (Hsu & Chen, 2019; Qiu Zhang et al., 2017; Shen et al., 2017).

Stereotype Attributes

Stereotype attributes refer to the contents associated with the stereotype target. Despite a variety of attributes available to describe individuals from Mainland China, little effort has been applied in examining the specific stereotype attributes that label Mainland Chinese tourists. Until recently, Tung et al. (2020) developed a tourist stereotype model (TSM) to assess the stereotypical attributes of Mainland Chinese tourists. Using an exploratory study on the

stereotyping of Mainland Chinese tourists through a free response tasked by Hong Kong residents, 12 stereotype attributes were identified across four dimensions. Approachable – friendly, sincere, and good; Competent – intelligent, industrious, and competent; Boastful – materialistic and loud; Rude – unreasonable, immoral, rude, and uncivilized. Approachable and Competent were regarded as positive stereotypes, while Boastful and Rude were considered negative stereotypes. The use of adjectives to describe tourists has also been used in previous research, such as Maruyama and Woosnam (2015) and Pizam, Fleischer, and Mansfeld (2002), in their Ethic Attitude Scale. In the scales, words such as Immoral-Moral, Boastful-Modest, and Stupid-Intelligent were used to capture residents' perceptions of social acceptance or exclusions towards the tourists, reflecting the inter-relations between the two major tourism social groups.

Table 1 – Dimensions and attributes of Tourist Stereotype Model

Dimension	Attributes
Approachable	Friendly, Sincere, Good
Competent	Intelligent, Industrious, Competent
Boastful	Materialistic, Loud
Rude	Unreasonable, Immoral, Rude, Uncivilized

Source: Tung, King and Tse (2020)

Explicit Measure of Tourist Stereotype

The attributes from the TSM were employed to measured explicit stereotypes. Consistent with existing studies on explicit measurements (Cuddy et al., 2009; Fiske et al., 2002; Tung et al., 2020), a 7-point Likert-scale ranging from 1 = Strong Disagree to 7 = Strong Agree, was adopted in this study.

Implicit Measure of Tourist Stereotypes

IAT has been used in previous research. For example, Choi, Liu, and Kim (2015) assessed destination-related top-of-mind awareness by examining respondent reaction time to specific destination icons. This is based on the proposition that shorter reaction time implies a stronger implicit preference. Using self-report surveys and computer-based implicit association tests (IAT) for 87 college students, the authors found that participants' responses vary depending on the two measures. Through a data fuzzification method, the study demonstrated that the IAT could enhance familiarity issues of tourist top-of-mind awareness. Lee and Kim (2013) examined response patterns in explicit and implicit measures toward two known fast food restaurant brands through a self-report survey and IAT, respectively. Furthermore, Lee and Kim (2017) measured the image attributes of destinations using both explicit (i.e., self-report surveys) and implicit cognitions (i.e., reaction times) to understand the nature of destination images. The authors used Single-Target Implicit Association Test (ST-IAT) to measure individuals' explicit and implicit cognitions of image attributes across three countries: China, England, and France.

In this research, respondents completed a full version IAT which adopts two target categories. The first target represents Mainland Chinese tourists, while the second target reflects non-Mainland Chinese tourists. These targets serve to differentiate between the focal and non-focal categories. The IAT consists of seven blocks of target and attributes sorting trials. The

target (e.g., *Mainland Chinese tourist* versus *non-Mainland Chinese tourists*) is represented in an image while the attribute (e.g., *positive* versus *negative stereotype content*) is represented in word. In each trial, an image or word appears on the computer screen representing a target or attribute. The respondents sort the target or attributes by pressing a computer key with the assigned hand (e.g., left hand, *Mainland Chinese tourist* or *positive stereotype content*; right hand, *non-Mainland Chinese tourist* or *negative stereotype contents*). In this study, the computer keys of "E" and "I" are employed for the left and right hand, respectively. During the sorting, target trials and attributes are alternating across the seven blocks.

The first and second blocks assigned are the practice blocks with 20 trials each. The purpose of the practice blocks is to allow respondents to become familiar with the computer system. The first block displays only targets (left hand, *Mainland Chinese tourist*, right hand, *non-Mainland Chinese tourists*) while the second block presents only attributes (left hand, *positive stereotype contents*, right hand, *negative stereotype contents*). Next, the third and fourth blocks are a combined block of using both targets and attributes (left hand, *Mainland Chinese tourist* or *positive stereotype content*; right hand, *non-Mainland Chinese tourist* or *negative stereotype contents*) where the computer keys are the same as the initial assignments in the previous two blocks. The third block consists of 20 practice trials, while the fourth block consists of 40 critical trials.

The fifth block presents only attributes with the side switched (left hand, *negative stereotype contents*, right hand, *positive stereotype contents*). This block consists of 40 practice trials in order to eliminate the left/right association learned in the previous blocks (Nosek et al., 2005). Finally, the sixth and seventh blocks are combined blocks with the attributes switched (left hand, *Mainland Chinese tourist* or *negative stereotype content*; right hand, *non-Mainland Chinese tourist* or *positive stereotype contents)*. Similarly, the sixth block consists of 20 practice trials, while the seventh block consists of 40 critical trials. Table 2 summarized the sorting trials of the full version IAT used in this study.

In the case of an incorrect association, for instance, respondents pressed the wrong computer key from the assigned key, a red cross "X" is shown. It is mandatory for respondents to correct the errors by pressing the assigned key before proceeding with the IAT test.

Table 2 – Procedure of Implicit Association Test (IAT)

Block	Task Description	Assigned to LEFT key	Assigned to RIGHT key
1	Target Practice	Mainland Chinese tourists	Non-Mainland Chinese Tourists
2	Attribute **Congruent** Practice	Positive tourist stereotypes	Negative tourist stereotypes
3	Target-Attribute **Congruent** Practice	Mainland Chinese tourists or Positive tourist stereotypes	Non-Mainland Chinese tourists or Negative tourist stereotypes
4	Target-Attribute **Congruen**t Test	Same as Block 3	
5	Attribute ***Incongruent*** Practice	Negative tourist stereotypes	Positive tourist stereotypes

6	Target-Attribute ***Incongruent*** Practice	Mainland Chinese tourist or Negative tourist stereotypes	Non-Mainland Chinese tourists or Positive tourist stereotypes
7	Target-Attribute ***Incongruent*** Practice	Same as Block 6	

Source: Carpenter et al. (2018)

Table 3 – Stereotype contents and target photos used in the Implicit Association Test (IAT)

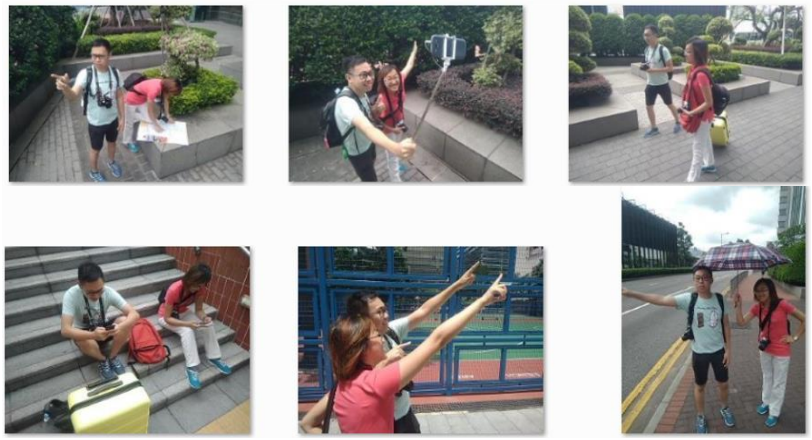
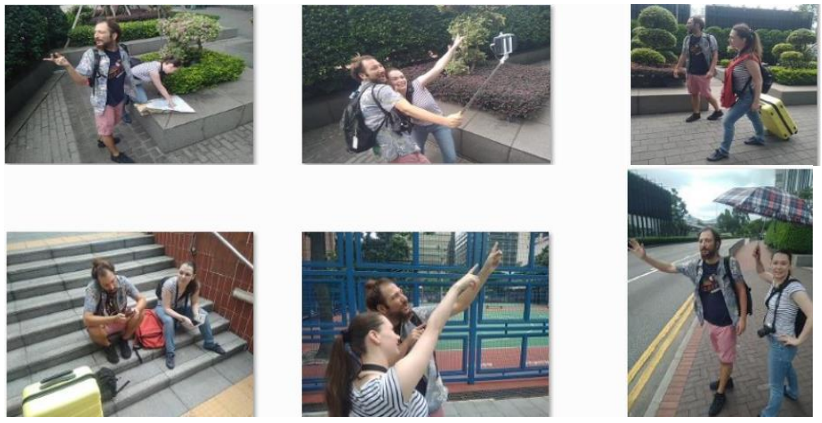
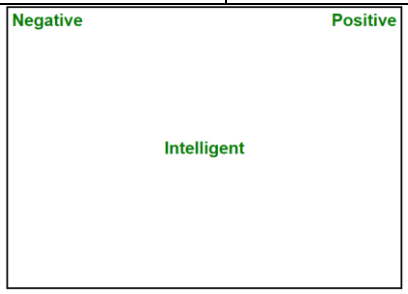
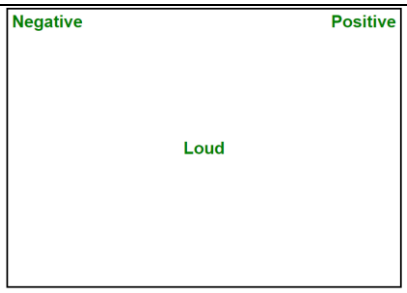
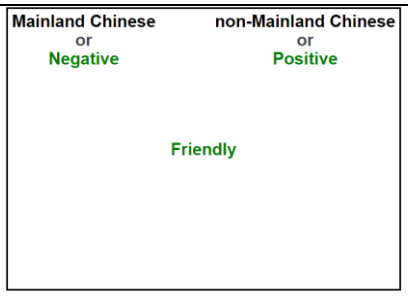
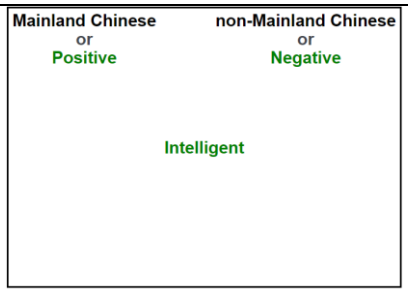
Dimensions	**Attributes**
Stereotypes Contents	
Positive	Friendly, Sincere, Good, Intelligent, Industrious, Competent
Negative	Materialistic, Loud, Unreasonable, Rude, Immoral, Uncivilized
Target	
Mainland Chinese Tourist	
Non-Mainland Chinese Tourist	

Figure 1 - Visual Illustration of Implicit Association Test (IAT)

Block 1 Instructions	If the picture is Mainland Chinese, press the "E" key. If the picture is a Non-Mainland Chinese, press the "I" key Press SPACE BAR to start
	
Block 2 and 5 Instructions * E and I position are switched in Block 5	If the word is positive, press the "E" key. If the word is negative, press the "I" key. Press SPACE BAR to start
	
Block 3 and 6 Instructions Block 4 and 7 Instructions * E and I position are switched in Block 6	If the picture is Mainland Chinese or words is positive, press the "E" key. If the picture is a Non-Mainland Chinese or word is negative, press the "I" key. Press SPACE BAR to start
	
	

The strength of stereotype association is based on the value of the *D* score (Greenwald et al., 2003; Haider et al., 2011) that is depending on the differences in reaction times between the combine blocks (third versus sixth; fourth versus seventh). Hence, the data in the combined, non-practice blocks are recorded for the analysis. The value *D* score is calculated for each respondent indicating in which condition (*Mainland Chinese tourist* or *positive stereotype contents* versus *Mainland Chinese tourist* or *negative stereotype contents)* they reacted faster. It is achieved in three steps. First, the reaction times of the sixth block are subtracted from the third block and then divided by the inclusive standard deviation of them, which is named as D_1. Second, the computation for seventh and fourth blocks is repeated, and is named as D_2. Finally, the value of *D* score is achieved by averaging D_1 and D_2.

To ensure the validity of the sorting, data cleaning procedures were performed to reveal unusual respondents of extremely fast and extremely slow trials. Based on the recommendation by Greenwald et al. (2003), respondents who employed more than 10,000 milliseconds in any trials and any respondents with more than 10% of trials responded in less than 300 milliseconds were excluded from the calculation.

The calculated *D* score should be within the possible range of -2 to +2, where negative denotes Mainland Chinese tourists with negative stereotype contents, while positive denotes Mainland Chinese tourists with positive stereotype contents (Chevance, Heraud, Guerrieri, Rebar, & Boiche, 2017; Klein, 2020). Based on the psychological conventions for effect size, the value of *D* scores categorized respondents into groups of stereotype associations: 0 to 0.14 indicating the absence of conclusive negative or positive tourist stereotypes; 0.15–0.34, slight positive tourist stereotypes; 0.35–0.64, moderate positive tourist stereotypes; and >0.65, strong positive tourist stereotypes. Negative scores of the same degree indicate similar categories of negative tourist stereotypes. Table 4 summarized the groups of stereotype associations with the corresponding *D* scores.

Table 4 – IAT Break Range and its Stereotype Associations

Break Range	Stereotype Associations
$-0.65 \leq x \leq -2$	Strong Negative Association
$-0.35 \leq x < -0.65$	Moderate Negative Association
$-0.15 \leq x < -0.35$	Slight Negative Association
$-0.15 < x < 0.15$	Neither Negative nor Positive Association
$0.15 \leq x < 0.35$	Slight Positive Association
$0.35 \leq x < 0.65$	Moderate Positive Association
$0.65 \leq x \leq 2$	Strong Positive Association

Source: Haider et al., 2011

Research Instrument

Respondents were instructed to complete three sections of the survey: (1) IAT for implicit stereotypes, (2) explicit stereotypes, and (3) demographics. The IAT was edited, and pilot-tested through Iatgen (Carpenter et al., 2018; https://iatgen.wordpress.com/materials/). Iatgen is an online web applet assists in structuralizing survey-based IAT with editable code on the Open Science Framework (OSF) page for various kinds of projects. Furthermore, it allows the customization of the features, for instance, the number of trials, to suit different research needs. In addition, the HTML/JavaScript code was compatible in the Qualtrics survey along with other sections of the instrument. Explicit stereotypes were measured using a 12-item tourist stereotypes scale developed by Tung et al. (2020) using a 7-point Likert (1 – Strongly disagree; 7 – Strongly agree) scale. Demographics in terms of age, gender, education level, working experiences were collected.

Sample and procedures

Data for this study was collected using Qualtrics software in June 2019 in Hong Kong, Malaysia, Singapore, and Thailand. Qualtrics is a United States online survey company that allows international recruitment of respondents and its capability of executing the Implicit Association Test (IAT). Previous tourism studies have employed Qualtrics for data collection (Sciarini, Beck, & Seaman, 2012; So, King, & Sparks, 2014; Kubickova & Campbell, 2020; Suess, Woosnam, & Erul, 2020). A gender quota sampling approach was adopted to improve the gender representation of the collected sample in accordance with the population census of the selected destinations. Furthermore, to ensure that the collected responses were suitable for the study, we included a screening question, "Are you a permanent resident (citizen) of Hong Kong (Malaysia, Singapore or Thailand)?". Respondents who disagreed with the question were terminated immediately from the main survey. Only those who agreed with the question were invited to complete the survey. After seven days of distribution, 1,040 completed responses were collected, 260 from each destination. Since no new responses were received over the next two days, the survey link was deactivated. Forty respondents were removed due to their invalid *D* score from the IAT. They were either too fast or too slow in sorting the trials; thus, calculating the *D* score was impossible. In addition, 10 outliers were detected and removed. Finally, a total of 990 (Hong Kong – 247; Malaysia – 249; Singapore – 246; Thailand – 248) valid responses were used for analysis. The response rate was 95.19%.

RESULTS

Respondent profile

Of the 990 respondents, 247 were from Hong Kong; 249 from Malaysia; 246 from Singapore; 248 from Thailand. The percentage of male respondents was 46.15%, 51.81%, 49.59% and 49.19% in Hong Kong, Malaysia, Singapore, and Thailand respectively, which corresponds closely to the official census provided by the respective governments; in 2018, the proportion of male was 45.77% in Hong Kong, 51.69% in Malaysia, 48.97% in Singapore, and 49.13% in Thailand. The samples covered a broad range of age groups and education levels, with 68.02% of Hong Kong residents, 64.26% of Malaysians, 63.82% of Singaporeans, and 88.61% of Thais holding at least a bachelor degree. Furthermore, 80.57% of the Hong Kong residents,

69.88% of the Malaysians, 78.45% of the Singaporeans, and 67.74% of the Thais have not worked in the Hospitality and Tourism industry. This is important because the results reflect the majority views of residents outside of the industry who would have relatively lower economic dependence on Mainland Chinese tourists.

Table 5 – Demographics of the respondents across the four destinations

Variable	Hong Kong (n = 247) Frequency (%)	Malaysia (n = 249) Frequency (%)	Singapore (n = 246) Frequency (%)	Thailand (n = 248) Frequency (%)
Gender				
Female	133 (53.85)	120 (48.19)	124 (50.41)	126 (50.81)
Male	114 (46.15)	129 (51.80)	122 (49.59)	122 (49.19)
Age				
18 - 24	55 (19.86)	57 (22.89)	48 (19.51)	37 (14.92)
25 - 29	36 (13.00)	49 (19.68)	51 (20.73)	48 (19.36)
30 -34	50 (18.05)	43 (17.27)	43 (17.48)	47 (18.95)
35 - 39	51 (18.41)	49 (19.68)	38 (15.45)	48 (19.36)
40 - 44	59 (21.30)	23 (9.24)	28 (11.38)	31 (12.50)
45 - 49	9 (3.25)	16 (6.43)	18 (7.32)	16 (6.45)
50 - 54	8 (2.89)	5 (2.00)	7 (2.85)	10 (4.03)
55 - 59	8 (2.89)	2 (0.80)	8 (3.25)	8 (3.23)
60 and Above	1 (0.36)	5 (2.00)	5 (2.03)	3 (1.21)
Education				
Up to Secondary	27 (10.93)	21 (5.43)	20 (8.13)	11 (4.64)
Post-Secondary	52 (21.05)	68 (27.31)	69 (28.05)	27 (11.39)
Bachelor degree	131 (53.03)	99 (39.76)	115 (46.75)	183 (77.22)
Master degree	34 (13.77)	51 (20.48)	40 (16.26)	26 (10.97)
Doctorate degree	3 (0.12)	10 (4.02)	2 (0.81)	1 (0.42)
Working Experience in Hospitality and Tourism				
Yes	48 (19.43)	75 (30.1)	53 (21.55)	80 (32.26)
No	199 (80.57)	174 (69.88)	193 (78.45)	168 (67.74)

Table 6 shows the Cronbach's alphas of the four stereotype dimensions: Approachable, Competence, Boastful, and Rude were within the range of 0.74 to 0.92 across Hong Kong, Malaysia, Singapore, and Thailand. All the values were greater than the threshold value of 0.7, which represented good internal consistency of the items in each dimension of the tourist stereotype model (Nunnally, 1978).

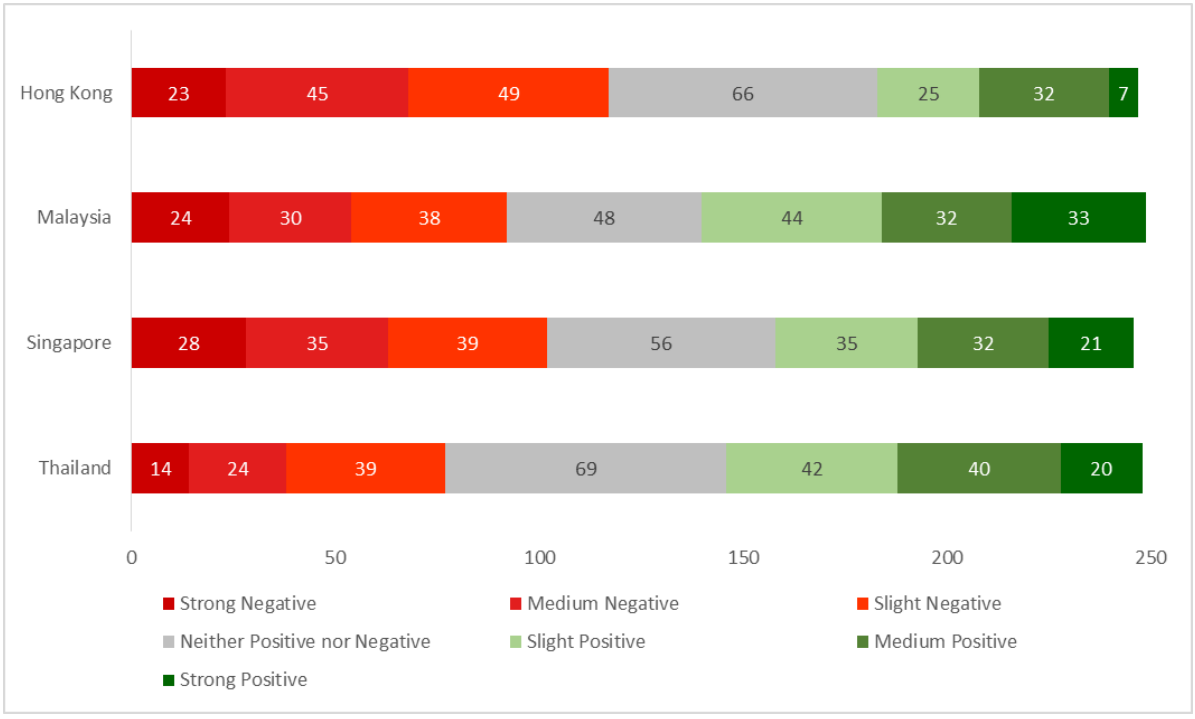
Table 6 – Internal consistency of stereotype dimensions across four destinations

Variables	Hong Kong	Malaysia	Singapore	Thailand
Approachable	0.76	0.83	0.86	0.89
Competent	0.80	0.79	0.81	0.82
Boastful	0.82	0.82	0.74	0.84
Rude	0.87	0.92	0.90	0.90

Implicit Tourist Stereotypes

Using IAT, the speed of association between targets and attributes were recorded and transformed into the IAT effect score, *D* score. This represented the relative preference for the congruent and incongruent associations. Based on the value of the *D* score, respondents were categorized into six groups of stereotype effects towards the target: Neither Negative nor Positive, Slightly Positive, Medium Positive, Strong Positive, Slightly Negative, Medium Negative, and Strong Negative. The result indicated that a larger proportion of Hong Kong respondents (47.4%) and Singaporeans (41.5%) reported a negative rather than positive association. In contrast, a larger proportion of Malaysians (43.8%) and Thais (41.1%) reported a positive skew over a negative association towards Mainland Chinese tourists. These results suggest that only a small proportion of respondents displayed neither positive nor negative stereotype effects (see Figure 2).

Figure 2 – Distribution of implicit tourist stereotype across the four destinations



Explicit Tourist Stereotypes

The composite means and standard deviations are the averages of all items within each of the four dimensions of explicit tourist stereotypes (see Table 7). Across the four dimensions, the results showed that Mainland Chinese tourists were more strongly viewed as Boastful in Hong Kong (M = 5.42, SD = 1.31) and Singapore (M = 5.30, SD = 1.27), as well as the least Approachable ($M_{Hong\ Kong}$ = 3.83, $SD_{Hong\ Kong}$ = 1.21; $M_{Singapore}$ = 4.36, $SD_{Singapore}$ = 1.19). On the contrary, Thais rated Mainland Chinese tourists higher on Approachable (M = 4.91, SD = 1.27)

and Competence (M = 5.15, SD = 1.07). Malaysians also rated Chinese tourists as generally Approachable (M = 4.59, SD = 1.13) and Competent as well (M = 4.68, SD = 1.05).

Table 7 – Means and standard deviations of explicit tourist stereotypes

Stereotype	**Hong Kong**	**Malaysia**	**Singapore**	**Thailand**
Approachable	3.83 (1.21)	4.59 (1.13)	4.36 (1.19)	4.91 (1.27)
Competence	4.02 (1.21)	4.68 (1.05)	4.88 (1.04)	5.15 (1.07)
Boastful	5.42 (1.31)	4.61 (1.51)	5.30 (1.27)	4.41 (1.83)
Rude	4.89 (1.26)	4.23 (1.44)	4.68 (1.26)	3.70 (1.48)

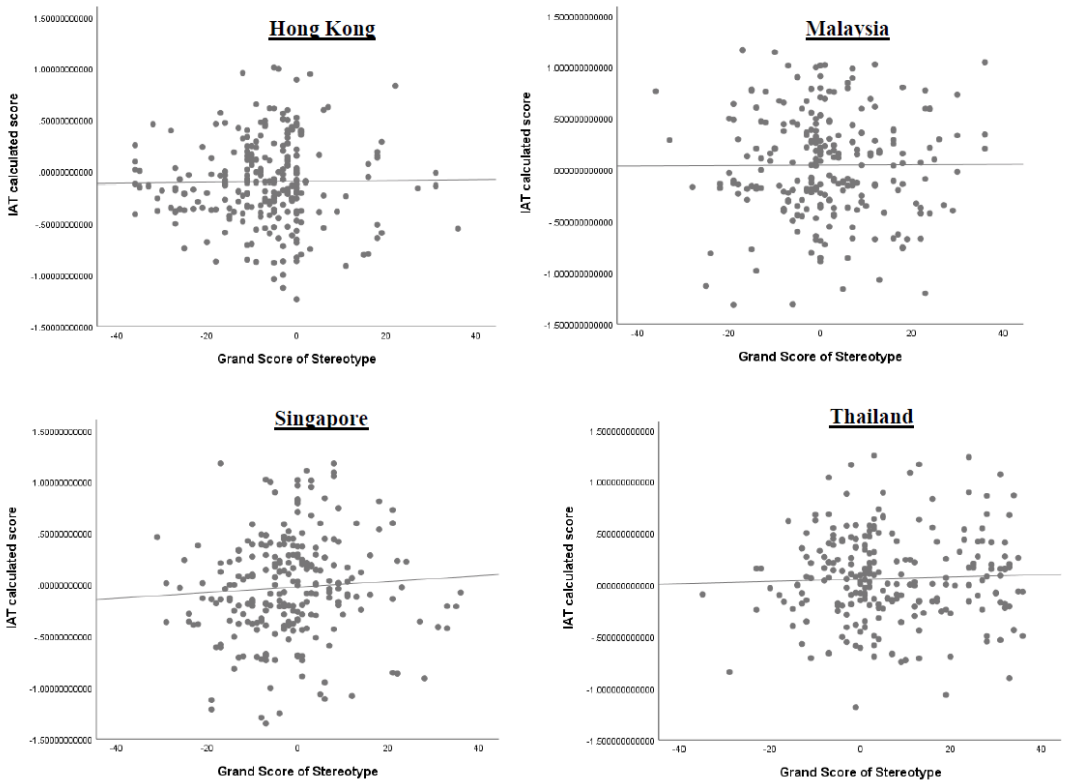
Note: numbers in brackets refer to standard deviation

Correlation between Implicit and Explicit Tourist Stereotypes

Pearson's correlation analysis was performed to determine the correlation between implicit and explicit tourist stereotypes. The IAT score was the calculated value of *D*. The explicit stereotype score was the difference between positive (Approachable and Competence) and negative dimensions (Boastful and Rude). A respondent with a positive score suggested positive associations with Mainland Chinese tourists and vice versa. For example, the calculated explicit stereotype score for a respondent who reported Approachable = 5, Competent = 4, Boastful = 6, Rude = 6, would be [(5+4) - (6+6)] = -3, indicating a negative association.

Across the four destinations, the correlations were positive, yet weak and nonsignificant [$r_{\text{Hong Kong}} = 0.01$, n = 247, p = 0.84; $r_{\text{Malaysia}} = 0.00$, n = 249, p = 0.94; $r_{\text{Singapore}} = 0.07$, n = 246, p = 0.31; $r_{\text{Thailand}} = 0.04$, n = 248, p = 0.57]. The scatterplots of the implicit-explicit tourist stereotype correlations for Hong Kong, Malaysia, Singapore and Thailand are shown in Figure 3. Overall, the results suggest nonsignificant relationships between explicit and implicit stereotypes for all four destinations.

Figure 3 - Scatterplots of implicit-explicit tourist stereotype across four destinations



Predictor of Residents' Actions towards Tourists

A follow-up study was conducted with a new sample of Singaporean residents through an online questionnaire in April 2020 to measure implicit and explicit tourist stereotypes as predictors of residents' facilitative or harmful actions towards Mainland Chinese tourists. Facilitative or harmful behaviours reflect dimensions in the Behaviour from Intergroup Affect and Stereotypes (BIAS) Map, which has been used to assess behavioral actions against outgroups members (Cuddy, Fiske, & Glick, 2007). In the context of tourism, facilitative actions refer to a resident's pro-social behaviors, such as socializing or starting a conversation with a tourist, while harmful actions represent anti-social behaviors, such as being unfriendly or mocking a tourist. This study measures six facilitative and six harmful actions on 7-point Likert scale, ranging from 1 = Strongly disagree to 7 = Strongly agree (Tse & Tung, 2020).

A 50-50 gendered, non-student, purposive sampling approach was employed. Two hundred and sixteen valid questionnaires were collected (49.1% female, 50.9% male; 41.7% between 25 to 34 years of age; 59.7% with bachelor degree). The results indicated good internal consistencies across all dimensions of tourist stereotypes and residents' facilitative or harmful behaviours, with values greater than the threshold value of 0.7 (Nunnally, 1978) (see Table 8).

Table 8 – Singaporeans' facilitative or harmful actions against Mainland Chinese tourists

Items*	**Composite Reliability**	**Mean**	**SD**
Facilitation	0.89	3.33	1.35
Start a conversation with tourist		3.14	1.70
Socialize with tourist		3.12	1.69
Interact with tourist		3.38	1.68
Tolerate a tourist		3.38	1.66
Accept a tourist		3.56	1.71
Endure a tourist		3.38	1.66
Harm	0.92	2.76	1.40
Be unfriendly to tourist		2.27	1.56
Mock a tourist		2.84	1.68
Perform threatening actions to tourist		2.42	1.56
Resist to help tourist in need		3.09	1.71
Reluctant to help tourist in need		3.04	1.75
Refrain from helping tourist in need		2.88	1.75

*Measured on a 7-point scale from 1 = strongly disagree to 7 = strongly agree

Simple linear regression analysis was performed to model the relationship between implicit and explicit tourist stereotypes, and residents' facilitative or harmful actions towards Mainland Chinese tourists. The results indicated that explicit tourist stereotypes were more predictive than implicit stereotypes with regards to residents' actions. More specifically, explicit stereotypes better predicted facilitative than harmful behaviours. The results also showed that facilitative actions were induced by positive stereotypes of approachable and competence while reduced by negative stereotypes of boastful and uncivilized. On the other hand, harmful actions were elicited by negative stereotypes of uncivilized but unaffected by the others (see Table 9).

Table 9 – Linear Regression of Tourist Stereotypes and Residents' Actions (Follow-up Study)

	Facilitative Actions					**Harmful Actions**				
	Unstandardized Coefficients		Standardized Coefficients			Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sign	B	Std. Error	Beta	T	Sign
Implicit Tourist Stereotypes										
IAT Score	0.12	0.18	0.04	0.64	0.53	-0.09	0.19	-0.03	-0.48	0.63
Explicit Tourists Stereotypes										
Approachable	0.72	0.06	0.64	12.10	$p < 0.001$	-0.00	0.08	-0.00	-0.05	0.96
Competence	0.58	0.07	0.48	8.00	$p < 0.001$	-0.12	0.09	-0.09	-1.36	0.18
Boastful	-0.33	0.06	-0.35	-5.48	$p < 0.001$	0.08	0.07	0.09	1.27	0.21
Uncivilized	-0.36	0.06	-0.39	-6.10	$p < 0.001$	0.25	0.06	0.26	4.00	$p < 0.001$

DISCUSSION

Drawing from the social psychology and tourism literature on stereotypes, this study investigated implicit biases against Mainland Chinese tourists and measured them against explicit stereotypes from residents across four major Asian destinations: Hong Kong, Malaysia, Singapore, and Thailand. The study investigated the dual-information processes in tourist stereotyping and presented a detailed methodological development of an IAT tailored for implicit tourism stereotype research that could be useful for future cognitive-related studies in this area.

The findings of Implicit Association Test (IAT) indicated that neutral stereotype association about the Mainland Chinese tourist is the highest across the four destinations. The results of this IAT suggest that one's semantic memory of Mainland Chinese tourists is neither negative nor positive because such memories do not correspond to any event, personal experience, or time (Fazio, 2007; Tulving, 1972). The results suggest that harmful views between residents and Mainland Chinese tourists due to social conflicts, for example, may not be necessarily as negative as expected from an implicit perspective.

The results of explicit and implicit tourist stereotypes towards Mainland Chinese tourists were disassociated across the four destinations. These results are similar to the existing intergroup relation literature on measured explicit–implicit stereotypes, especially on highly sensitive topics, where the differences are influenced by one's conscious intention to evaluate (Dovidio, Kawakami, & Beach, 2001; Greenwald et al., 2009; Olson & Dunham, 2010). The domain of stereotyping is a socially sensitive topic as it is closely related to one's identity as well as group polarization, which could arouse socially desirable results when measured explicitly due to perceived social consensus in facilitating the preconceptions of a particular social group. In the current study, negative impressions of Mainland Chinese tourists, for example, may have been shared amongst residents in Singapore through social media and online forums; hence, explicit self-reports of negative stereotypes may be considered as socially desirable (Siswandio, 2019; Jacobs, 2012). Implicitly, however, residents in Singapore were more positive. Their automatic IAT responses were unlikely influenced by tendencies to conform, contemplations of social beliefs and values, or motivations to achieve approval in the eyes of the public (Hu et al., 2017).

Theoretical Contributions

The research provides significant insights into the knowledge of tourist stereotypes. From an explicit stereotype measurement perspective, this study provided large-scale and cross-cultural support for the Tourist Stereotype Model (Tung et al., 2020). Previous studies have shown the applicability of the model in examining tourist stereotypes in Hong Kong. The present research validates the model in Malaysia, Singapore, and Thailand, holding different cultural and historical backgrounds than Hong Kong. The results indicate that stereotyping Mainland Chinese tourists is not a sole phenomenon in Hong Kong. Still, it could be a worldwide situation, especially with the increasing waves of Mainland Chinese tourists.

This research elevates the understanding of tourist stereotypes through the integration of the Implicit Association Test (IAT) to extract the implicit tourist stereotypes of residents. While previously applied, IAT in other tourist areas such as destination image and restaurant brands

(Jang, 2016; Lee & Kim, 2013; Yang, He, & Gu, 2012), is nevertheless, scarcely applied in tourism research related to social and intergroup relations. The adoption of IAT enhances tourism literature focusing on tourist stereotypes by comprehending the information process of the residents towards tourists. It reveals the residents' unconscious perceptions towards tourists, offering new knowledge about intergroup stereotypes between residents and tourists in a tourism setting. The finding of this study indicates the disassociation between implicit and explicit stereotypes, signifying the existence of the dichotomy system of stereotypes that should be captured separately. Previous studies offer incomplete understandings of tourist stereotypes due to the sole reliance on explicit measurements, failing to capture the unconscious biases of residents towards tourists. As such, this study signifies the needs to incorporate both implicit and explicit measurements that could facilitate the knowledge development of tourist stereotyping.

This research also demonstrated the development of IAT, which can be useful in the tourism literature examining tourist stereotypes. This research has proposed a promising implicit measurement to capture implicit tourist stereotypes of residents, human-human evaluation, which still warrants more attention in tourism studies. Previous studies employed IAT for the association with objects (e.g., destination image) but not in the area of intergroup relations, which is essential for host-guest relations and the sustainable development of tourism. This study provided a detailed explanation of the IAT, including the selection criteria of targets and attributes, descriptions of each block task, choices of analyzed blocks, procedures of data cleaning, calculations of stereotype effects, and associations of stereotype category. The study depicted each step of the IAT to allow for its replication in future studies related to individuals' perception and cognition investigation, serving as an alternative measurement in assessing comparative information processes towards two targets (e.g., two tourist markets).

Additionally, this research also adds value to the literature by demonstrating the predictive association of the Tourist Stereotype Model (Tung et al., 2020) on residents' facilitative or harmful actions. Interestingly, the findings show that tourist stereotypes may be stronger predictors of facilitative actions than harmful actions. Furthermore, explicit stereotypes were found to be better associated with residents' actions than implicit measures, which differs from existing socio-psychology literature. Previous literature suggested that implicit stereotypes could predict social actions and interactions among members of social groups, such as duration of conversation, and sitting distances between individuals (Amodio & Devine, 2006; Kurdi et al., 2019). The predictive association of IAT on residents' actions, in contrast compared to explicit measurements, remains strong in particular for socially sensitive topics (Greenwald et al., 2009). It is possible that tourist stereotyping is no longer a sensitive topic amidst COVID-19, given the unfortunate number of reports of harassment against tourists. As a result, it is important to note that although this study did not find significant predictions of IAT on residents' actions from one Singaporean sample, it should not be definitively concluded that such association does not exist.

Practical Implications

As social impacts from tourist concern increases, DMOs and public policymakers should understand their residents' implicit tourist stereotypes. Managing intergroup relations between residents and tourists is one of the most critical challenges faced by destination managers as they need to balance the economic benefits and social conflicts from tourism. The understanding of

residents' attitudes helps to formulate responsive strategies that are important for building a harmonious host-guest relation for sustainable tourism development. This research demonstrated the disassociation between implicit and explicit measurements, suggesting the mental discrepancies between implicit and explicit tourist stereotypes. While these differences do not represent the actual one over the other (Kim, Chen, & Hwang, 2010), it proposes the importance of managing both stereotypes in order to formulate accurate strategies.

Furthermore, the thoughtful mapping of IAT can be efficiently and readily employed as a practical application for destination managers to capture the implicit tourist stereotypes of their residents. This IAT is an online mental sorting test that can be served as a "virtual laboratory" for residents to participate and understand their implicit tourist stereotypes. For instance, Project Implicit initiated by a group of social scientists to measure implicit social cognition on various social issues (Project Implicit, 2020). Destination managers could adopt a similar approach, such as cooperating with experts in host-guest relations, to replicate an IAT that is suitable for residents to access and measure their own implicit tourist stereotypes. Beyond the capturing of implicit tourist stereotypes, destination managers could initiate subsequent courses to educate residents on their implicit tourist stereotypes. The IAT facilitates residents to face their implicit tourist stereotypes, hence creating self-awareness of the external stimuli that affect their explicit views.

The "virtual laboratory" should not be a one-time pop-up platform for residents. It should be a long-term assessment of tourist stereotypes where the results could be stored as longitudinal data. This could allow destination managers to track the changes in residents' implicit stereotypes against tourists over time. For example, Singapore has experienced an unprecedented influx of Mainland Chinese tourists since July 2019 and is predicted to grow in the next few years (China Tourism Academy, 2016; Sim, 2019). A one-time implicit assessment would only provide cross-sectional evaluations and hence, limited information for DMOs and decision-makers for policy refinement. Instead, implicit evaluations over time could map changes in negativity (or positivity) amongst Singaporeans towards Mainland Chinese as this market segment continues to contribute to Singapore's tourism development in the near future. The long-term assessment also allows destination managers to review their internal marketing communication and revise them according to the residents' implicit tourist stereotypes.

Limitations and Directions for Future Research

There are limitations in this study and opportunities for future research. Firstly, this study collected data from Hong Kong, Malaysia, Singapore, and Thailand, which addressed the limitation of a single location study (Tung et al., 2020). While this study provided empirical support for the Tourist Stereotype Model by examining it with other Southeast Asian destinations, the examined target was still focusing on Mainland Chinese tourists. Additionally, different destinations may have different stereotypes toward Mainland Chinese tourists, and the Tourist Stereotype Model may not cover the full range of stereotypes on an implicit-explicit dichotomy. It would have been best to assess stereotypes for each destination, derive a set of explicit and implicit measurements, and then tailor the IAT for each destination specifically. Nevertheless, doing so was beyond the scope of this study. Future studies should examine the model beyond the Mainland Chinese market, such as emerging markets of Indians and Indonesians, which could determine the applicability of the identified stereotype attributes

beyond a specific market. Examining tourist stereotypes in different contexts may provide additional insights and stereotype attributes.

Future studies could also examine the circle of friends that respondents often interact with. As noted from the contact hypothesis, it is stated that the increasing positive interaction could affect the stereotype held by an individual. It is suggested by Maruyama and Woosnam (2015) that minority will be accepted, acknowledged, and acquainted if the majority has positive attitudes towards them. Hence, future research could investigate the residents' interpersonal connections and attachment through the number of Mainland Chinese friends they have, how often they meet and socialize with one another, and the perceived closeness. The results could suggest potential connectivity between actual interactions as a possible antecedent on implicit and explicit tourist stereotyping.

Future researchers may further assess the influence of implicit and explicit stereotypes on alternative outcomes, such as emotions. Future studies might examine residents' welcoming nature, emotional closeness, and sympathetic understanding (Woosnam & Norman, 2010) as one of the possible outcomes that shape their emotional solidarity towards the tourists, indicating the residents' attitude and support for tourism development (Woosnam et al., 2018). Besides that, future research could examine the mediating effect of emotions on stereotypes and behaviours. The examination of stereotype-emotion-behaviour is a significant topic for the understanding and managing of host-guest relations.

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