The multi-method approach to analyzing motivations and perceived travel risks: Impacts on domestic tourists' adaptive behaviors and tourism destination advocacy

Abstract

The study investigated factors influencing tourists' adaptive behaviors and advocacy for domestic destinations during COVID-19 using a combination of integrated generalized structured component analysis and fuzzy set qualitative comparative analysis. One thousand tourists from Thailand, South Korea, and China participated in the study. The results revealed that fsQCA's multiple configurations provided valuable insights into the antecedents affecting adaptive behavior and destination advocacy, which complemented IGSCA's symmetric results. The study affirmed the complexity of antecedents that impact outcomes and supported the notion of complexity theory in explaining tourists' destination supporting behavior. The study provided implications for future research in this area.

Keywords: Domestic tourism, motivation, risk, COVID-19, adaptive behavior, destination advocacy, fsQCA

1. Introduction

In recent years, domestic tourism has progressively developed in many destinations, especially as the COVID-19 pandemic has stagnated international tourist markets, making domestic tourism a target for economic recovery (UNWTO, 2020; Wu, Cao, Liu, & Chen, 2022). According to UNWTO (2021), the number of domestic tourist arrivals worldwide has shown a strong increase in many markets because people tend to travel closer during COVID-19 (see Wen et al., 2020). In those markets, domestic tourism contributes significantly to the tourism industry. For instance, in Thailand, the Tourism Authority of Thailand reported an increase in tourists traveling across provinces beyond the original targets set during the COVID-19 situation, with 222 million domestic trips and USD 26.60 million in revenue generated, compared with the expected target of 160 million trips and USD 21.86 million (The Nation Thailand, 2023). Although the growing interest in domestic tourism was highly associated with international travel restrictions during the crisis, the ripple effect of domestic travel growth can still be expected and observed during COVID-19 recovery (Saxon, Sodprasert, & Sucharitakul, November 30, 2021). Therefore, scholars and practitioners recognize the value of domestic tourism as a crucial market for national economies (Altuntas & Gok, 2021).

During the pandemic, several countries initiated financial incentives and aggressive marketing campaigns to persuade residents to visit domestic destinations. For example, the Italian government offered EUR 500 to domestic tourists who stay in local farmhouses, campsites, and hotels, while the Greek government provided 250,000 travel coupons for people to travel to domestic destinations. The Danish government also arranged 53 free ferry journeys as part of a travel promotion to boost domestic tourism. Similar promotional schemes have been observed in other regions, such as Asia, North America, and South America (UNWTO, 2020). In light of the

potential of domestic travel, many destinations worldwide have devoted efforts to the domestic tourist market.

The concept of tourists' motivations and behavior has also been investigated in domestic tourism contexts within the essence of domestic travel to a destination (see, for example, Moya Calderón et al., 2022; Fakfare et al., 2020a). However, unlike before the crisis, domestic travel during the COVID-19 situation and recovery period has created higher levels of travel risk and concerns for tourists, and factors related to safety and security appear to be key drivers affecting travel decisions (Moya Calderón et al., 2022), rather than other common risk types or travel motivation factors. Traveling to a destination requires domestic tourists to be more vigilant and take more precautionary actions, following health safety situations announced by the government or health authorities (see, for example, Centers for Disease Control and Prevention [CDC], 2022). This precautionary action (so-called adaptive behavior—ADB in this study) is the individual's change in behaviors to effectively adjust or cope with situations (Karanika-Murray & Biron, 2020) during and after the COVID-19 crisis, to appropriately respond to and/or meet the hygiene standards of personal needs and social responsibilities (Price, Morris, & Costello, 2018). From the general perspective, ADB has been widely recognized in environmental and disaster studies, where ADB from authorities and/or residents is perceived as a crucial aspect of risk prevention and management (Harries, 2012; Haer, Botzen, & Aerts, 2019). However, the mainstream tourism psychology research on tourists' motivation and behavior has barely recognized changes in travel behavior and their effect on desirable outcome variables, such as tourists' decision choices, intention to travel, or support for the destination, especially in the uncommon situation of the pandemic outbreak, where health risks have posed a crucial concern for travelers. The paucity of research on tourists' ADB and its effect on desirable outcomes only receives trivial attention from scholars (Altuntas & Gok, 2021; Wen et al., 2020) and is worth investigating.

A flow of research has recently questioned the sole application of symmetric-based dominant logic using statistical tools such as regression analysis or structural equation modeling (SEM), and their net effect in explaining the way that potential factors affect the tested outcome(s) (see Pappas & Woodside, 2021; Russo et al., 2016; Rasoolimanesh et al., 2021; Woodside, 2014). There are theoretical reasons, such as complexity theory and prospect theory, to suggest that the effects among variables may be more intricate and asymmetric than what the symmetric-based logic can explain, including in the study relating to motivation and risk on tourist intention. Thus, Mehran et al. (2020) adopted cumulative prospect theory to comprehend how combinations of travel motivation and perceived risk elements lead to the behavioral outcomes of tourists in the context of boat tours. They found that psychological and safety risks are two factors that must be managed to improve tourists' behavioral intention.

The concept of travel motivation has received considerable attention in the tourism literature because it helps determine various dimensions of tourism activities, such as the reasons for traveling (why) and certain places to visit (where) (Devesa et al., 2010). Although travel motivation has emerged as a critical element influencing tourists' post-consumption behaviors, its

effect is not consistent (Mehran et al., 2020), considering the heterogeneity of destinations and tourism activities (Fakfare & Wattanacharoensil, 2020; Lee et al., 2020). In addition, among other travel risks, COVID-19 risks (C19R) associated with travel inherent to tourism have increasingly become a concern for people, especially vulnerable groups such as the elderly or children. Evidence shows that people have started to respond to the pandemic by adapting their lifestyles and behaviors, such as cautiously preparing necessary equipment and downloading applications that indicate risky areas for precautions. It remains unknown whether there could be a complex relationship between travel motivation and perceived risk that can affect the intention of tourists to undertake precautionary action, along with their destination support (referred to as tourism destination advocacy – TA in this study). This new phenomenon calls for a new and compelling research agenda in domestic tourism.

To our best knowledge, studies that combine motivations and risks to predict behavioral changes (i.e., ADB) and desirable outcomes (TA) are still scarce, and other important subsequent aspects have been left unexplored. Recent research (Mehran et al., 2020; Pappas & Woodside, 2021) also suggests the potential for a nonlinear relationship in identifying tourists' motivation, perceived risks, and possible behavioral responses. Therefore, this research aims to fulfill these gaps and proposes the following research objectives:

1. To investigate the main effect of motivation and risk factors on adaptive behavior and, as a consequence, on tourism destination advocacy.

2. To examine whether complex realities exist that counter the result of a positive or negative main effect of a symmetric relationship; and

3. To investigate the psychological factor resulting from the complex interaction between risk and motivation in formulating tourists' post-purchase travel behaviors.

This study aims to contribute contextually and theoretically to the current knowledge of domestic tourism and tourists' behavioral changes, complementing the limited literature that applies the configural asymmetric approach to explain a complex phenomenon in social science. The results of this research also provide practical knowledge by identifying essential factors that stimulate tourists' behavioral changes, particularly during and/or after the COVID-19 crisis.

2. Literature review

2.1 COVID-19 and its effect on domestic tourism

The COVID-19 pandemic has had a significant impact on the global economy, particularly on the tourism industry, which has been widely acknowledged by scholars and practitioners (Gossling, Scott, & Hall, 2020; Im, Kim, & Choeh, 2021). Many countries around the world have had to introduce drastic changes to their travel policies, such as new health and safety measures, to reduce the spread of the virus (Nussbaumer-Streit et al., 2020; CDC, 2022). As a result, the tourism economy, especially the international tourism sector, has been severely affected. Destination

lockdowns have caused economic distress, leading hospitality and tourism businesses to reconsider their operations and strategies, and redesign their services to target alternative customer groups, particularly domestic tourists (Wen et al., 2020; Moya Calderón et al., 2022). Even in the current tourism recovery period, where international borders have been opened, domestic tourists remain a key target group that helps stimulate the economic growth of the tourism industry.

Despite the paradoxical fact that mobility within travel can still contribute to disease spread (Gossling et al., 2020), domestic tourism is expected to be a crucial mechanism for the tourism sector to recover earlier and faster from the crisis. Several countries, including China, Romania, South Korea, and Thailand, have encouraged residents to visit local destinations and participate in local activities by offering travel incentives, such as financial support and holiday vouchers (UNWTO, 2020). The demand for domestic travel has been soaring as travelers seek close-to-home, lower-risk holiday alternatives (Guillot, 2021; UNWTO, 2021; The Nation Thailand, 2023). As the role of domestic travel is increasingly being acknowledged in the tourism industry, domestic tourism has gradually been examined in diverse aspects of tourism literature. For example, Božić et al. (2017) have studied tourists' motivation for domestic vacations, Bel et al. (2015) have examined domestic tourism demand in rural areas, and Singh and Krakover (2015) have explored tourists' sense of belonging. Previous studies, such as Altuntas & Gok (2020) and Wen et al. (2005, 2020), have also investigated the effect of the pandemic on tourists' behavior and served as useful references for understanding domestic tourists. However, travelers also express concerns about safety and public hygiene during the pandemic, which increase their sensitivity and awareness when making decisions concerning leisure travel (Moya Calderón et al., 2022).

This study proposes the concept of precautionary behavior (so-called adaptive behavior or ADB) under the cost-benefit decision-making principles, as suggested in the Protection Motivation Theory (Maddux & Robers, 1983). These theories assume that people weigh the expected benefits of a precaution against its costs and adopt the precaution if the balance appears favorable. Their principles focus on the perception of threat (risk) and the perception of the precaution under consideration. The individual's perceived susceptibility or likelihood of being harmed if no action is taken, the perceived severity of the threat or the degree of harm if the actions are not taken, and the perceived effectiveness and cost of the precaution or preventive actions have been key reasons or predictors for preventive health behavior (Weinstein, 1988). Taking these principles of health-protective behavior into the current research framework, this study proposes ADB as the precautionary action that reduces the health risk caused by the COVID-19 pandemic in the context of domestic tourism.

2.2 Linkage among motivation, perceived risk, tourists' ADB and TA

2.2.1 Tourist motivation and perceived risk on adaptive behavior

Sociopsychological motivators have a critical role in stimulating people to travel and participate in certain tourism activities (Dann, 1977; Iso-Ahola, 1983). Social motivation (SM) refers to individuals' need for affiliation or the ways in which individuals interact and engage with others

(Wentzel, 1996). The social aspect of domestic tourism includes socialising/bonding with friends and family, meeting other people with similar interests and interacting with local residents (Fakfare et al., 2020a). The social engagement dimension also provides social values, because many domestic destinations offer unique experiences and opportunities to engage in local activities, such as home-grown cuisine and local festivals and events (Božić et al., 2017; Shen et al., 2018). For example, in Phuket, Thailand, tourists are encouraged to walk around the Old Town to experience the localities, such as community market and local people's hospitality.

In addition to social motivation, individuals seek for affective experiences (Voss et al., 2003). The functions of hedonic motivation (HM) can be simply described as people's desire to gain pleasure. In a domestic tourism context, individuals travel to a domestic destination because they want to search for excitement, have fun and be in a better mood (Fakfare et al., 2020a). Beyond the hedonic need for a pleasurable travel experience and relaxation, domestic tourism typically involves cultural and historical tours, as well as environmental preservation activities, thereby satisfying tourists' utilitarian motivation (UM) regarding knowledge seeking about the heritage of their own country (Božić et al., 2017). Given that individuals also desire to develop personal capacity, gain awareness of their own foibles and change their characters to become a better person while travelling (Chen et al., 2014), taking a journey to domestic destinations can lead to the development of self-actualisation (SA). Therefore, visiting a domestic place where people can spend quality time and learn about themselves can possibly form a good basis for SA.

The association between travel motivation and tourists' behavioral responses has been recognised in previous research. Ryu et al. (2010) explored the effect of hedonic and utilitarian values on behavioral intentions. Although both aspects exert a significant effect on behavioral intentions, the utilitarian value has a greater influence. In Alexandris and Kaplanidou's (2014) study, Social motivation was found to significantly affect tourists' spending behaviors. In a different travel context, such as backpacking, Chen et al. (2014) investigated travel motivation and found that tourists intend to take a backpack trip because they have an inherent desire of self-actualization. Based on the aforementioned discussion, motivation is likely to have an effect on tourists' behavioral intentions.

During the COVID-19 pandemic and subsequent recovery period, tourists are required to take precautionary measures voluntarily or under external pressures, such as social pressure or government regulations. These precautionary actions include various adaptive behaviors being undertaken by tourists to maintain health safety; and their willingness to take these actions can be directly proportional to their motivation to visit. In a recent study on restaurant visits during the pandemic, Ryu et al. (2023) revealed that different aspects of motivation for people visiting restaurants during COVID-19 can influence self-protective intentions. Specifically, their study hypothesized that individuals who perceive more benefits or rewards from visiting restaurants are more likely to comply with COVID-19 preventive measures and increase their self-protective intentions. Following this logic, our study proposes the following hypothesis regarding the four types of tourist motivation (UM, SM, HM, and SA):

H1: The higher the level of tourist motivation to visit a domestic destination, the more willing they will be to take adaptive behaviors.

H1a: The higher the level of *utilitarian motivation* to visit a domestic destination, the more willing they will be to take adaptive behaviors.

H1b: The higher the level of *social motivation* to visit a domestic destination, the more willing they will be to take adaptive behaviors.

H1c: The higher the level of *hedonic motivation* to visit a domestic destination, the more willing they will be to take adaptive behaviors.

H1d: The higher the level of *self-actualization* that motivates tourists to visit a domestic destination, the more willing they will be to take adaptive behaviors.

Nowsday, greater attention has been given to risk and hygienic issues, which have critical roles in tourists' decision making, experiences and changing behaviors when travelling to a destination (Mehran et al., 2020). Risk has psychologically been conceived to comprise the two components: 1) the likelihood and 2) the severity of a negative outcome (van der Pligt, 1998). In decision making, risk refers to the probability of consequences occurring and the negative consequences (Mitchell, 1992). Perceived risk has been studied in a wide range of contexts, including tourism, as risk can influence travel decision. Due to the increasing travel mobility, as well as the recent COVID-19 crisis, ample attention from scholars and practitioners has been paid to travel risk and health and safety issues. According to Reichel et al. (2009), perceived risks can be highly subjective because risk perceptions normally appear at a different degree to different people. In tourism studies, perceived risks are mostly discussed on its negative effects on tourists' behavioral responses, such as intention to revisit or recommend (Mehran et al., 2020).

Safety risks related to various tourism activities have been investigated in several tourism contexts, such as marine tourism, cruise activities, holiday destinations, tourists' decision-making process and tourists' future travel behaviors (Han & Hyun, 2018). Service failure risk (SFR) reflects the anxiety that a tourism product or service will not be properly functional as expected (Mehran et al., 2020). Psychological risk is associated with the concern or mental discomfort anticipated from emotional/affective reaction after making a purchase (e.g. worry and regret; Simpson & Siguaw, 2008).

In fact, the study of risks and behaviors has been well-documented since the 1990s. The study by van der Pligt (1999) revealed that perceived risk, specifically susceptibility, is a critical determinant of preventive actions and precautionary behaviors. In health risk studies, precautionary behavior is assumed to be most likely when perceived severity and vulnerability are high, and previous studies have demonstrated that the benefits of these behaviors are substantial while the cost of behavior change is low. According to Weinstein's (1988) precaution adoption

process, people must first realize that specific risks exist and that they are vulnerable to those risks. The decision to change behaviors will depend on the perceived severity of the consequences for one's health and the efficacy and costs of preventive behaviors.

Lu and Wei's (2019) on the overcrowding risk in China looked at perceived risks and precautionary actions. They used the protective motivation theory, which shows how fear affects health attitudes and behaviors. In addition, the recent COVID-19 pandemic has caused anxiety to people when making decision to travel (Moya Calderón et al., 2022). People are likely to adapt their behaviors by preparing to deal with issues on health safety, transport safety and whatever challenges that may arise during the trip. Although the idea of risk perception has been studied in tourism, no common agreement exists regarding the role of risks and its effects on travel intentions. Based on the aforementioned, we set our hypotheses as followings:

H2: The higher the level of perceived risk to visit a domestic destination, the more willing they will be to take adaptive behaviors.

H2a: The higher the level of *travel safety risk* to visit a domestic destination, the more willing they will be to take adaptive behaviors.

H2b: The higher the level of *service failure risk* to visit a domestic destination, the more willing they will be to take adaptive behaviors.

H2c: The higher the level of *Covid-19 risk* to visit a domestic destination, the more willing they will be to take adaptive behaviors.

2.2.2 Adaptive behavior and support (advocacy) to a destination

Adaptive behavior (ADB) refers to an individual's ability to effectively adjust and cope with different situations, challenges, and demands; it involves flexibility and resilience in adapting to changing circumstances (Karanika-Murray & Biron, 2020). ADB is generally viewed as the effectiveness and degree to which an individual meets the standards of personal independence and social responsibilities, requiring skills that meet personal needs and social demands within one's environment (Grossman, 1977). Although criticism remains regarding the lack of a clear construct and underlying theoretical framework to support ADB (Price, Morris, & Costello, 2018), previous health-related research has focused on two predominant aspects: caring for one's personal health and safety and behaving in a socially acceptable manner (Ditterline et al., 2008).

Previous research has examined the ADB concept in different aspects of health risk. For example, Spitzer, Shaikh, and Weber (2022) studied older Europeans' health perception and ADB during the COVID-19 pandemic, finding that older adults who underestimate their health are more likely to engage in ADBs (e.g., reducing mobility and staying home). Women and older adults with higher education levels are more likely to adopt protection measures in public spaces and hygiene practices. Woodruff (2019) examined a model of ADB in medicine, addressing that ADB involves cognitive, emotional, and social skills and attitudes that allow problem solvers to accommodate

change. When it comes to domestic travel, the motivation to travel may decrease due to the perceived risk of tourists. However, ADBs (coming from individual health responses to the situation) can mediate the combined motivation and risk factors and influence trust in a destination. By contrast, TA originates from the concept of brand advocacy, which is a crucial variable in the consumer–brand relationship (Sen et al., 2015). Previous research has shown a strong connection between brand identification and brand advocacy, including in the tourism context (see Kumar & Kaushik, 2017; Lever, Elliot, & Joppe, 2021, for example). In the tourism literature, destination advocacy can result from positive tourist experiences and favorable perceptions of the destination (Kesgin, Murthy, & Pohland, 2018; Kumar & Kaushik, 2017). During the current or post-COVID-19 situations, tourists' positive motivation to travel and low-perceived risk of the destination can lead to a high degree of destination support, with tourists' willingness to take ADB. Accordingly, we set the following hypothesis:

H3: Adaptive behavior has a positive-significant effect on tourism destination advocacy.

2.3 Research framework: Structural and configuration models

This study applies two types of conceptual models, the structural model for the symmetric analysis and the configuration models for the asymmetric analysis. By employing both the structural and configuration models, this study aims to capture both symmetric and asymmetric effects in the data, providing a more nuanced understanding of the phenomenon under investigation.

For the structural model, the main effects between travel motivation and risk factors on travel behaviors (ADB), are initially verified using integrated generalized structured component analysis (IGSCA) which is the improved statistical method from other component–based structural equation modelling (SEM) such as Partial least square SEM or PLS-SEM (Hwang et al., 2020; 2022). The symmetric perspective builds from the assumption of sufficiency and necessity of the relationship between X and Y, that is, for Y to be high, X must be high; for Y to be low, X must be low (Hsiao et al., 2014). The result of the structural model using IGSCA reveals the symmetric relationship amongst variables and can identify total net effect of components towards outcome variables, as indicated in the set hypotheses of the conceptual model.

Nevertheless, statistical testing using symmetric approach has been argued by later studies (Woodside, 2014; Hsiao et al., 2014; Pappas et al., 2016) on their limited ability to respond to real-life contexts, and that they have failed to recognise or account for the opposite/contrarian cases that may exist. As symmetric tests generally present only overidentified estimation models but are unable to report tests for the predictive validity of these estimation models (Hsiao et al., 2014), therefore, after IGSCA, the potential possibilities of the contrarian cases are further investigated to reveal alternative or opposite cases that did not follow the sufficiency logic of the symmetric analysis. Moreover, the analysis of the contrarian case has been mostly ignored by many researchers adopting symmetric analyses (Russo et al., 2016; Woodside, 2014). For this step, Woodside's (2014) multiple realities, which address that the same antecedent condition has a positive and negative relationship with an outcome condition, are considered in this study. These

relationships depend on the particularly complex configuration of antecedents under examination. For this current study, the contrarian case analysis is applied to investigate the potential opposite cases of domestic tourists, showing the motivation and risk conditions (antecedents) on adaptive behavior and destination advocacy.

Moreover, given that the causal asymmetry indicates that for the outcome to occur, the presence and absence of causal condition will depend on how the causal condition combines with one or more other causal conditions (Leischnig & Kasper-Brauer, 2015; Pappas et al., 2016). The combination of the antecedents, rather than a single factor, and the configurational model is proposed and fuzzy set Qualitative Comparative Analysis (fsQCA) is then conducted. In fsQCA, the role of each predictor can be defined based on the attributes of other predictors, and each factor may play a positive or negative role in predicting the given outcome, depending on the natures of other predictors (Olya et al., 2019; Taheri et al., 2019) and the outcomes of the relationships are often influenced by a combination of these causal factors (Olya, Shahmirzdi, & Alipour, 2019; Woodside, 2017; Taheri et al., 2019), resulting in a nonlinear relationship between variables. For instance, a high level of TA that a person has towards a destination may be caused by a high feeling of excitement (HM) and the need to meet new people (SM) or can be caused by a high feel of excitement but less desire to meet new people. These explanations represent an equifinality principle, whereby the outcomes can be achieved via many potential means or the combination of causal factors; this tenet has offered a pragmatic insight into the complex phenomena (Taheri et al., 2019).

Figure 1 illustrates the proposed structural and configurational models comprising travel motivations, perceived risks, ADB and TA. By examining the motivational and perceived risk configurations, this study highlights the conditions that are necessary for attaining the study outcomes (i.e. TA).

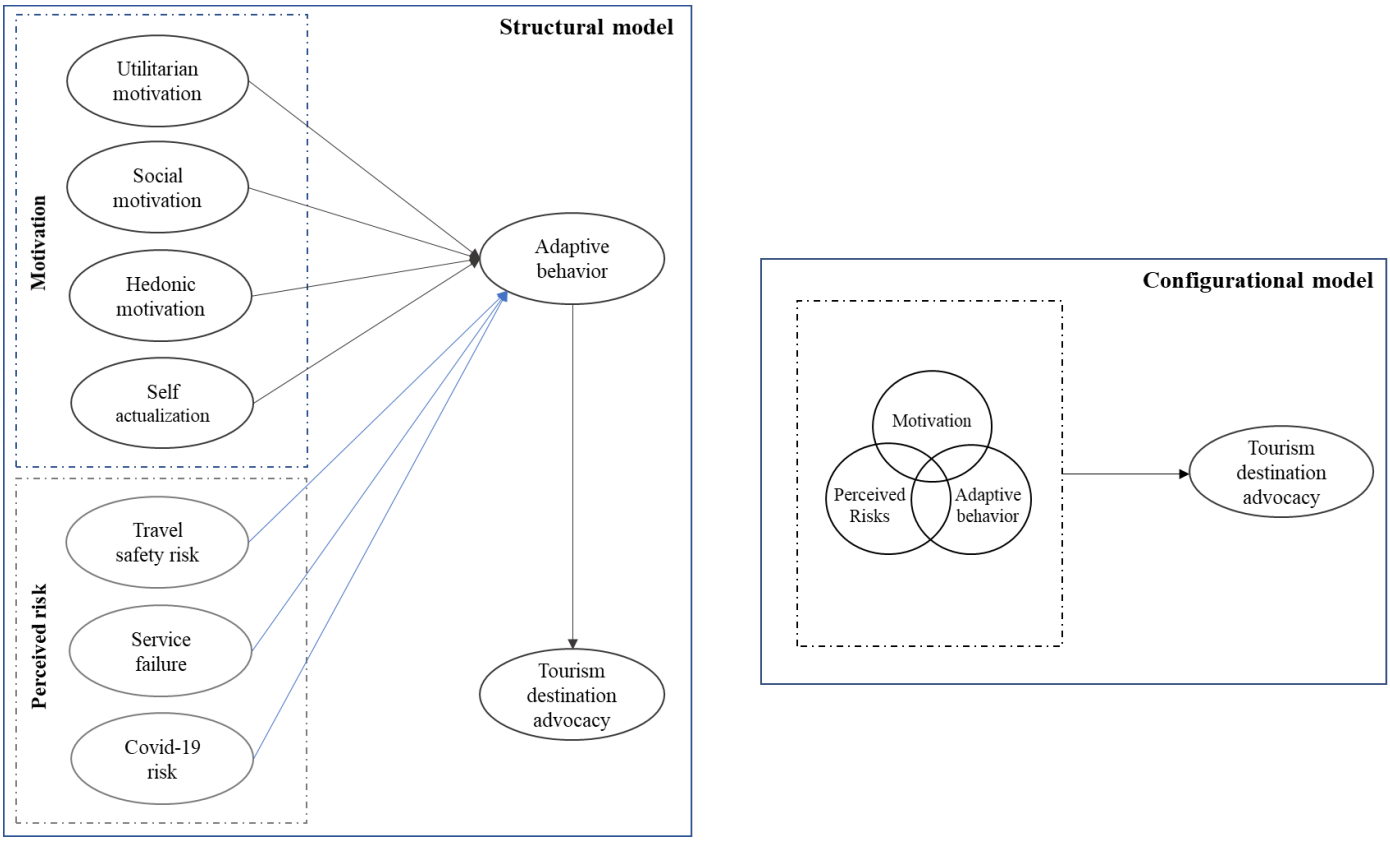


Figure 1[Caption]: Proposed structural and configurational models

Figure 1 [Alt text]: The image of two models. One is the structural model where four motivational independent variables and three risk variables are linked to adaptive behavior variable as a mediator which links to tourism destination advocacy as an outcome variable. The second model is the configuration model where the three group variables of motivation, risk and adaptive behavior all link to tourism destination advocacy [62 words]

3. Methodology

3.1 Research design

In this study, to respond to Objective 1, a structural model is first established to indicate the relationship among tourists' travel motivations, perceived risks, and post-purchase travel behaviors in terms of ADB and TA. To respond to Objective 2, a contrarian case analysis is further conducted to investigate the possible effects of travel motivation and perceived risks on travel behaviors that counter the result of a positive or negative symmetric relationship derived from the structural model. The results of the contrarian case analysis provide deeper insights into the complex cases that cannot be identified by the main effect of symmetric analysis, supporting the complexity theory, which indicates that when numerous variables interact, the number of unique situations can be unlimited (Woodside, 2014). If complex asymmetric natures are found, Objective 3 is then pursued. This study applies a fuzzy set qualitative comparative analysis (fsQCA) to

provide different case outcomes that reflect the real and complex phenomena of the combined motivational and risk factors and tourists' ADB that the symmetric analysis cannot reveal.

In achieving the study objectives, this empirical research primarily adopted a quantitative approach through a systematic six-step procedure. Firstly, a questionnaire was developed, and a panel of experts was employed to verify its clarity and validity. The panel of experts, comprising two tourism professors and two industry practitioners, made slight changes, particularly in terms of wordings to enhance the clarity and readability of the questionnaire statements. Secondly, experienced domestic tourists were recruited and asked to participate in the survey. In this research, the online questionnaire using Qualtrics professional platform was utilised by the researchers during the period of March to June 2022. Data of the tourists from three sources of residence (i.e. Thailand, South Korea and Mainland China) were collected through a large pool of Qualtrics data sources, which have been officially pre-screened by the Qualtrics administration. The researchers conducted the final screening check to ensure the validity of respondents using the combined screening questions. Thirdly, the survey responses were checked to identify incompleteness and outliers of the dataset. Fourthly, an analysis for the validity and reliability of the measures was performed. Fifthly, a structural model assessment was conducted to investigate the influences of motivational factors and risks on ADB and ADB on TA. Sixthly, this study conducted a contrarian case analysis to verify the potential opposite cases (when the antecedent condition has a negative (positive) association with an outcome condition that is different from the majority cases resulted from the main effect relationship) that may arise. Following the previous studies in identifying possible configurations that could arise to cause the outcome variable (see Mahosuthi et al. 2022; Ruan et al., 2021; Badu-Baiden, Correia, & Kim, 2022), this study concludes by applying fsQCA to examine the configurations of motivational and risk antecedents and ADB that were sufficient to predict the model outcome (i.e. TA).

3.2 Measurement scale and instrument development

The questionnaire contains three sections: screening questions, followed by measures of the constructs identified in the literature review and profiles of the respondents. To achieve the research aims, the planned survey measured four motivational antecedents and four risk dimensions associated with domestic tourists' ADB and TA. Motivation measurements, including social, utilitarian, hedonic and self-actualization dimensions, were adapted from existing scales used in previous studies (e.g. Božić et al., 2017; Chen et al., 2014; Fakfare et al., 2020a; Mehran et al., 2020; Shen et al., 2018). Perceived risk measures were taken from scales in extant research (Mehran et al., 2020; Reisinger & Mavondo, 2006; Simpson & Siguaw 2008; Weinsterin 1988), which were adapted based on the domestic tourism context.ADB, on the contrary, still receives the criticism from its unclear underlying theoretical framework (Price, Morris, & Costello, 2018), hence this study revisited previous related literature on adaptive behaviour and applied two predominant aspects relating to its given definition and meaning (Ditterline et al., 2008), namely caring for one's personal health and safety and behaving in a socially acceptable manner (Nihira, Leland, & Lambert, 1993 as cited in Ditterline et al., 2008) to form measurable items. Furthermore,

for TA, the study applies measurement items of Destination advocacy from Kumar & Kaushik (2017), together with the advocacy dimension definition from Melancon et al. (2011) to form the construct. All modified items were measured by the application of a seven-point Likert-type scale (1 = strongly disagree to 7 = strongly agree). The questionnaire was also submitted to the institutional review board for their approval before conducting a survey. After this process, 39 items remained for data collection.

3.3 Data gathering

This study collected data from March to June 2022, via e-surveys from participants residing in Thailand, South Korea, and Mainland China. The three countries were selected for two main reasons: firstly, during the COVID-19 pandemic, the governments of these countries heavily promoted domestic tourism to offset the sharp drop in international tourism income, increasing opportunities for respondents to take domestic travel. Secondly, these countries are located in Asia and are renowned for their cultural and social histories, making them popular tourist destinations in the region, including for domestic travel. By studying domestic tourist behaviors within these Asian groups, the results of this study could offer valuable insights into common patterns of domestic tourism derived from the top destinations in the Asian region.

Due to the COVID-19 crisis, field surveys were not recommended, and therefore an online survey was adopted to recruit participants. The survey instrument was a self-completion questionnaire conducted via Qualtrics, an experience management company that provides web-based survey tools and research services to a wide range of clients (Qualtrics, 2023). Similar to other tourism research (Gardiner et al., 2022; Hutchings et al., 2020), this study used Qualtrics because of its reputation in providing reliable data and ability to reach specific respondent profiles. To ensure that the data were gathered from tourists with established experience in domestic travel, a screening dichotomous question was posed (e.g. 'I have visited domestic destinations in the past 12 months'). To trigger the memory cues of the respondents, they were instructed to respond to a few questions regarding a domestic destination that they have travelled to recently. The respondents who unfavourably responded were redirected to exit the survey. The survey was pilot tested with 150 respondents and no modifications were made to the questionnaire based on this pilot study. As a result, 1,058 questionnaires were retrieved from the respondents, but 58 entries were discarded due to major incompletion. A total of 1,000 sample size were kept for further statistical analysis. Given the limited access to the total number of the residences of these three countries, we considered total population of the three countries which are slightly over 1.5 billion people [Thailand – approx. 70 million; South Korea - approx. 51 million; and China – approx. 1.4 billion] (Worldometer, 2023). We applied Cochran's sample size calculation with 99% confidence level, and 5% marginal errors, and got the result of 666. To enhance the power of statistical test and reduce the effect of random variation, we decided to collect 1,000 samples.

3.4 Respondents

The sample of the survey respondents comprised about equally male (53%) and female (47%). The age group of 31–40 years old has the largest number of respondents with 40.2%, followed by the age group of 21–30 years old (28.8%) and 41–50 years old (19.7%). Regarding education, the majority of the respondents attains undergraduate degree (51.6%), followed by postgraduate degree (25%) and associate degree and others (23.4%). The respondents' monthly salary are as follows: below USD 1,000 (19.8%), USD 1,001–3,000 (25.8%), USD 3,001–5,000 (24%), USD 5,001–7,000 (24.2%) and over USD 7,001 (6.2%). In terms of country of residence, 29.5% of the respondents come from Thailand, 35% come from South Korea and 35.5% are from China. Nonresponse bias was verified by comparing the data of survey respondents from the first 10% and the last 10% who completed the questionnaire to check for statistical differences of the mean scores for each item. The results indicate no statistically significant difference ($p = 0.05$), suggesting that nonresponse bias is not an issue.

3.5 Analytical methods

3.5.1 Structural model analysis

Composite-based SEM has gained popularity over traditional factor-based SEM, particularly when the research objective is focused on prediction or exploration (Manosuthi et al., 2021). In the composite-based SEM literature, two popular estimators are consistent partial least squares (PLSc) and integrated generalized structured component analysis (IGSCA). However, recent studies have shown that IGSCA outperforms PLSc in terms of statistical power (Hwang et al., 2020; Mahosuthi, Lee, & Han, 2022). According to Hwang et al. (2023), the IGSCA approach is considered appropriate for estimating parameters because it involves full information, making it more likely to provide better parameter estimates than PLS. Furthermore, IGSCA is also regarded as a non-parametric or distribution-free approach because it does not impose distributional assumptions, such as multivariate normality, on the indicators when estimating parameters (Hwang et al., 2023). Therefore, IGSCA has been selected as the primary estimator to assess the structural model in this study.

3.5.2 Contrarian case analysis

To investigate if there are the alternative or opposite cases which indicate that X can be asymmetrically associated with Y, the contrarian case analysis was conducted. This is to explain that from the main effect relationship when X is positively (or negatively) associated with Y, the cases of high X and low Y and cases of low X and high Y could also be found – see Table 2 (Woodside, 2014). In fact, as mentioned by Pappas and Woodside (2021), the representation of the contrarian case analysis is generally missing from the study. Therefore, the current study conducts the analysis to provide and strengthen the reasons for fsQCA. The contrarian case analysis is useful in probing complexity theory tenets and in developing compound outcome statements (Woodside, 2014). To proceed with the contrarian cases, quintiles are created for all

variables. A quintile analysis includes dividing the respondent cases into five equal groups, from the lowest to highest quintile for each measured construct, before examining the relationships among two or more constructs (McClelland (1998), as cited in Woodside (2014)). This procedure is helpful in understanding that not only main linear relationships exist between the X and Y but other counter combination effects between X and Y also exist. The findings support the necessity to implement configural analysis using fsQCA in the next step of research.

3.5.3 fsQCA

This study takes a step further from a structural model analysis by employing fsQCA to identify patterns of antecedents (or ingredients) contributing to a study outcome (i.e. Destination Advocacy). Following what being suggested by Pappas and Woodside (2021) and Rasoolimanesh et al. (2021), this study splits the overall samples into two groups, 70% of the samples is for the main fsQCA analysis and 30% of the samples is for the predictive validity test of the final model. FsQCA extends crisp set QCA by integrating fuzzy sets and fuzzy logic principles with QCA principles (Rihoux and Ragin 2009). Thus, when applying fsQCA, the antecedents and outcome are on a fuzzy scale rather than a binary scale. In fsQCA, the configuration (or recipes) is a specific combination of causally relevant antecedents or ingredients linked to an outcome (Wu et al., 2014). The configurations may be marked by their presence or their absence conditions and typically involve sufficiency and necessity. After determining the conditions and outcome variables in the study, a calibration of all measures into fuzzy sets (ranging from 0 to 1), called 'fuzzification', is required. The value of 0 represents no set of membership, and the value of 1 signifies a full set membership. The transformed values ranging from 0 to 1 indicate the level of their membership in each variable. In the fsQCA literature, transforming variables into a calibrated set can be achieved by two methods: direct assignment and transformational assignments. Direct assignment can be quickly handled, as the researcher's judgement is largely engaged. However, a more accurate range of fuzzy values can be obtained through transformational assignment, because this technique involves such complex mechanism as logistic regression to calibrate data (Thiem & Dusa, 2013). Thus, this study adopted a transformational assignment approach suggested by Thiem and Dusa (2013) to fine-tune data into a fuzzy scale.

Once the fuzzification process is complete, the fsQCA algorithm is applied to create a truth table. According to Ragin (2008), the truth table can be established based on consistency and frequency. Consistency considers 'the degree to which cases correspond to the set-theoretic relationships expressed in a solution' (Fiss 2011, p. 402), whereas frequency refers to the number of observations for each pattern of the combined elements. To ensure that a standard threshold for consistency and frequency is achieved, this study sets a minimum value of 0.75 for consistency (Ragin, 2008) and the researchers decided to set a cut-off point of nine for frequency, which is above the threshold recommended by Fiss (2011). In fsQCA, the terms 'antecedent' or 'ingredient' are used to present independent variables, whereas the term 'outcome' refers to the dependent variable used in the structural model (Rasoolimanesh et al., 2021). In addition, necessary condition analysis (NCA) is employed to identify essential elements to achieve an expected outcome. This

study performed NCA using an algorithm developed by Thiem and Dusa (2013) to explore the necessary conditions for attaining the study outcome. Finally, the test for predictive validity of the final model will be conducted to present how well the model predicts the dependent variable (TA) using the 30% of samples.

4. Findings

4.1 Measurement and structural model assessment

This study adhered to the principles of conducting IGSCA, which involved specifying and evaluating the model. To ensure accurate results and account for the complexity of the data, we initially defined the representations of observed constructs, leading to the identification of formative models. Unlike common factors, the formative indicators are not highly correlated, indicating that the meaning of the construct is tied to the content captured by its composite indicators. The components of travel motivations, perceived risks, and outcome variables (ADB and TA) were identified as formative constructs given the characteristics of the measurements used in this research.

Hwang et al. (2023) stated that SEM analysis typically involves two models: measurement and structural. The measurement model identifies the relationships between constructs and indicators, while the structural model establishes the hypothesized relationships among endogenous and exogenous variables. To ensure that the research models had the optimal number of constructs and were valid and reliable, we evaluated the measurement model before proceeding with the structural model assessment. Overall, our approach involved careful consideration of the model specifications and thorough evaluation to ensure the accuracy and reliability of the results.

To evaluate the formative models, the estimated weight scores should be positive, and the 95% of bias-corrected confidence interval must not include zero. In this study, the estimated weight values of the examined constructs were generally positive, and the 95% confidence interval did not include zero, which suggests the relevance of each item in forming formative composites (Table 1).

In case the indicator's weight is insignificant, the relevance and significance of the corresponding formative indicator's outer loading should also be considered (Hair et al., 2014). The factor loadings in this study were generally found as relatively high (i.e. >0.5), and the significant t-values and correlations among all variables were below 0.70, thereby confirming the validity of the measurement model.

Table 1: Assessment of measurement models

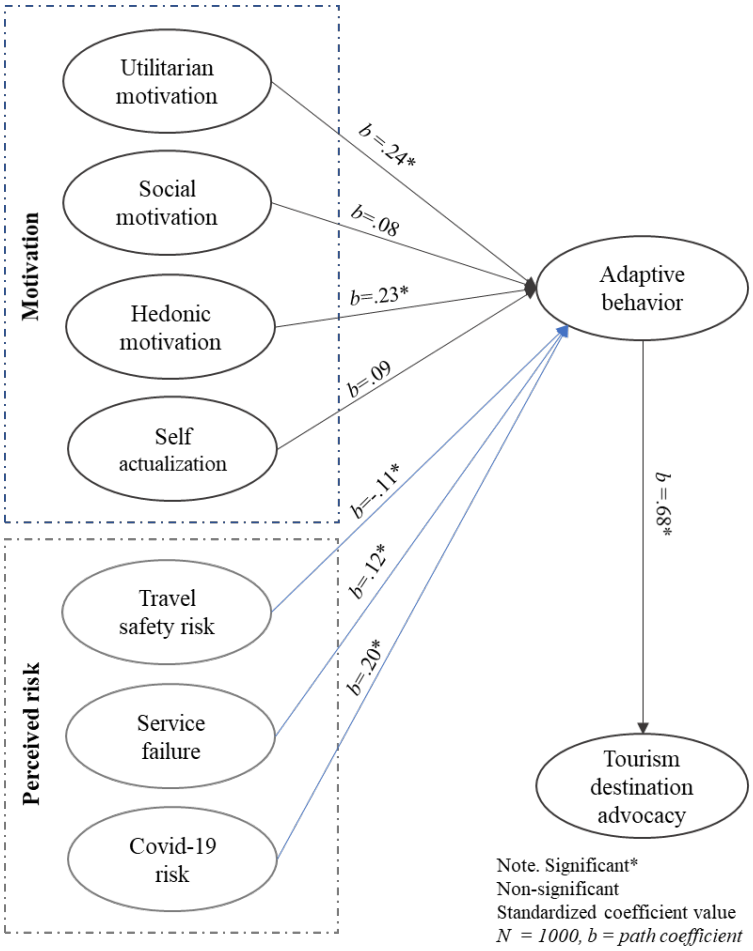
Constructs/Items	$\hat{\lambda}$	$\widehat{w}$	BCa CI 95% ($\widehat{w}$)
HM *(F^2: 0.06, VIF: 1.65)*			
To have an adventure.	0.4736	0.0781	[−0.2978; 0.3984]
To make me excited and stimulated.	0.6665	−0.0668	[−0.5119; 0.3402]
To feel relaxed, happy and be in a better mood.	0.9982	1.0094	[0.7446; 1.2265]
UM *(F^2: 0.04, VIF: 2.58)*			
To get to know a domestic destination and gain knowledge from travel.	0.6631	−0.0048	[−0.5348; 0.3555]
To understand local culture, history and society better.	0.8766	0.3937	[−0.0226; 0.7861]
To increase my travel experience about taking a trip to domestic destinations.	0.9612	0.6846	[0.3482; 1.0201]
SM *(F^2:0.01, VIF: 1.59)*			
To tell my friends and family about what I experience during the trip.	0.6455	0.3084	[−0.9333; 1.0885]
To share my travel experience through online social media.	0.4259	−0.3635	[−0.9942; 1.2342]
To socialise or bond with other people	0.9617	0.9938	[−1.1876; 1.2621]
SA *(F^2: 0.01, VIF: 1.85)*			
I want to know and understand myself.	0.9698	1.078	[−1.5993; 1.4781]
I want to develop personal capacity.	0.7553	0.2237	[−1.0317; 1.1802]
I want to change my character and become a better person.	0.5523	−0.3882	[−0.9043; 1.4925]
SFR *(F^2: 0.02, VIF: 1.36)*			
I am concerned about the quality of the tourism products or services in domestic destinations.	0.5585	0.0257	[−0.7873; 0.7699]
I am concerned about the ability* of service providers (e.g. hotels, restaurants, food stores and tourist attractions).	0.5782	−0.1506	[−1.0299; 0.6473]
I am worried about the hygiene standards* of the service providers in domestic destinations.	0.9948	1.0783	[0.5973; 1.3325]
STR *(F^2: 0.02, VIF: 1.33)*			
I worry about the occurrence of an accident during the trip.	0.6317	0.1801	[−0.4751; 0.7239]
The general level of safety in taking a domestic trip is low.	0.9878	0.8971	[0.4211; 1.1524]
C19R *(F^2: 0.05, VIF: 1.46)*			
I will have the health safety concern resulted from COVID-19 with the selected transportation if I am to visit the destination.	0.9584	0.5835	[0.0728; 0.9777]
I will have the health safety concern resulted from COVID-19 if I am to visit the destination.	0.8527	0.084	[−0.4614; 0.6682]
I will have the health safety concern resulted from COVID-19 if I am to visit service providers (e.g. hotels and restaurants) in the destination.	0.9159	0.403	[−0.0678; 0.8175]
ADB *(R^2: 0.43)*			
	0.9208	0.4908	[0.3961; 0.5863]

I organise my trip well to reduce risk and inconvenience caused by the COVID-19 pandemic.	0.889	0.2581	[0.1466; 0.3768]
I strictly comply with the pandemic preventive measures, such as wearing a mask as much as I could and observing social distancing.	0.8957	0.3558	[0.2444; 0.4542]
I take protective behaviours, such as washing my hands, avoiding touching surfaces and disinfecting things (e.g. surfaces, door knobs etc.).			
TA *(R^2:0.46)*	0.962	0.5799	[0.4453; 0.7027]
I feel confident and calm to visit the domestic destinations.	0.8994	0.2803	[0.1511; 0.4081]
I feel confident and relaxed to tell my friends and family to take a trip to domestic destinations.	0.880	0.216	[0.0715; 0.3623]
I feel confident and comfortable to bring my friends and family to take a trip to domestic destinations			

Notes: $\hat{w}$ = estimated weight; $\hat{\lambda}$ = estimated loading, BCa CI 95% = 95% bias-corrected and accelerated confidence intervals from bootstrapping with 10,000 samples; VIF = variance inflation factor; F^2 = Cohen's effect size; R^2 = in-sample predictive power

The significance of path coefficients and collinearity issues must be examined to assess the composite-based SEM (Hair et al., 2020; Manosuthi et al., 2021). This study applied a bootstrapping approach with 10,000 samples for the bias-corrected and accelerated confidence interval to verify the relationships among variables (Hair et al., 2020). Figure 2 illustrates the net effect of motivation and risk antecedents to predict the outcomes (i.e. ADB and TA). The links between the two motivation factors, namely, UM (b = 0.24 and CI 95% ∈ [0.1301; 0.3649]) and HM (b = 0.23 and CI 95% ∈ [0.1378; 0.3248]), and ADB were supported. Three risk antecedents, namely, C19R (b = 0.20 and CI 95% ∈ [0.1280; 0.2715]), STR (b = -0.11 and CI 95% ∈ [-0.247; -0.133]) and SFR (b = 0.12 and CI 95% ∈ [0.0629; 0.1947]), were found to be significantly related to ADB. The effect of ADB (b = 0.68 and CI 95% ∈ [0.6156; 0.731] on TA was also positive. Therefore, the hypotheses H1a, H1c, H2a, H2b, H2c, and H3 are supported.

As shown in Table 1, the variance inflation factor ranged between 1.33 and 2.58. These figures are lower than the minimum threshold (i.e. 3.3) for evaluating the collinearity issue (Diamantopoulos and Siguaw 2006). Therefore, collinearity was not a concern in this analysis. Predictive power was also examined using a criterion recommended by Benitez et al. (2020). Effect sizes were reported to vary between 0.01 and 0.06, showing an acceptable level of effect sizes. Moreover, this study evaluated the predictive power of the model using a technique recommended by Shmueli et al. (2019). The analysis of $Q^2_{predict}$ revealed that all measures were greater than zero, indicating that the predictive power generated from IGSCA was superior than a simple mean prediction. This study found $RMSE_b$ to be greater than $RMSE_t$ in all variables, suggesting the satisfactory predictive power of the proposed structural model (Manosuthi et al., 2021).



Insert Figure 2 [Caption]: Results of the structural model
Figure 2 [Alt Text]: The image of the results, showing two types of motivations which are utilitarian motivation and hedonic motivation affect adaptive behavior. All risk types also affect adaptive behavior. And adaptive behavior affect destination advocacy [34 words]

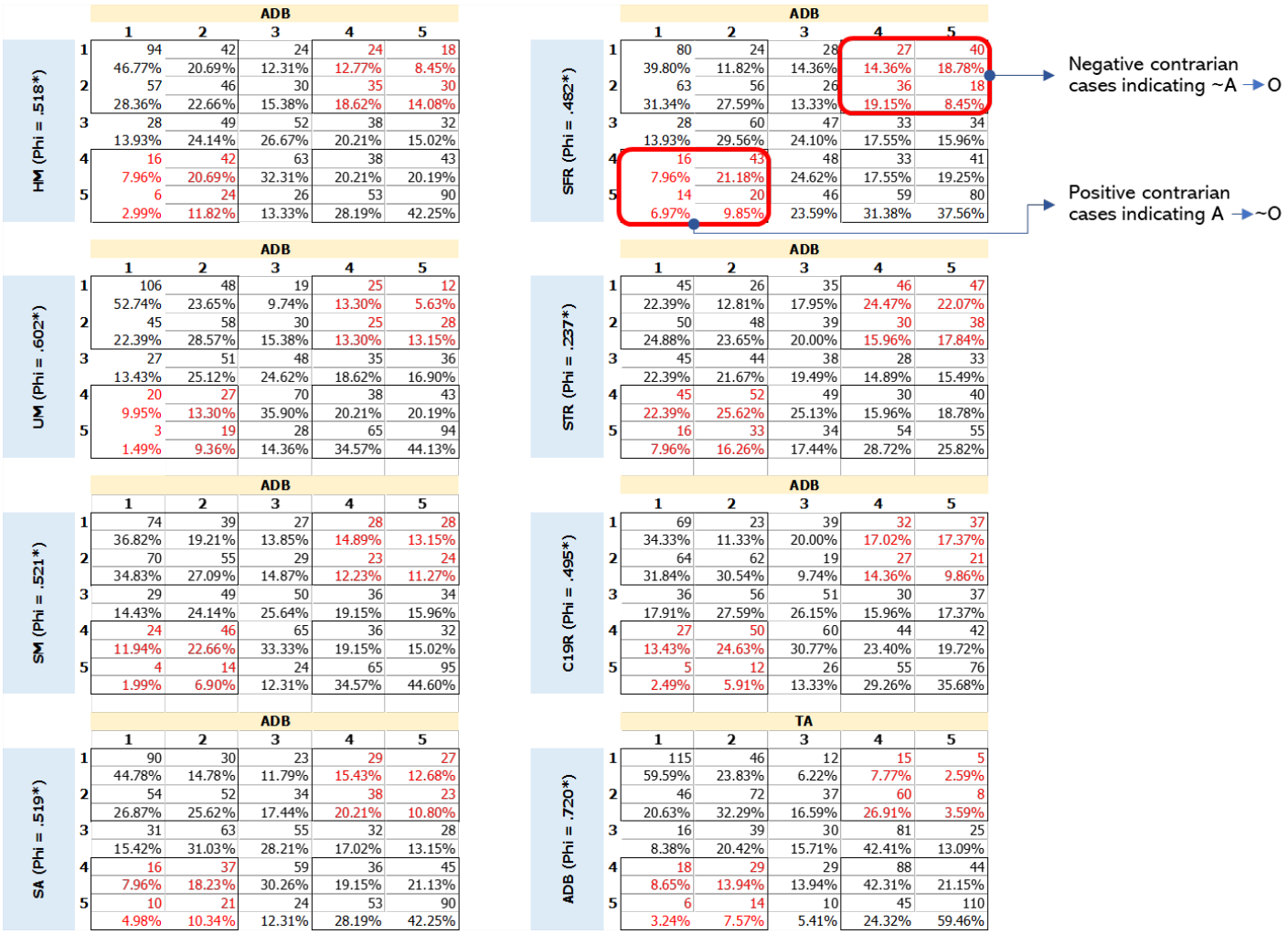
4.2 Results of contrarian case analysis

Table 2 presents contrarian cases that contradict the main effects of the structural model. The contrarian cases are those cases in our samples that are not explained by the main effect (Pappas & Woodside, 2021). The quintile analysis divided respondent cases into five groups and examined the relationships among measured constructs A quintile analysis includes dividing the respondent cases from the lowest to highest quintile for each measured construct and examining the relationships among two or more constructs (McClelland, 1998), as cited in Woodside, 2014).

Positive and negative contrarian cases were found for motivation, risk factors, and the relationship between ADB and TA. A total of 354 cases contradicted SEM results for motivation and risk factors, and 155 cases contradicted the positive relationship between ADB and TA. These findings suggest that there are cases of independent variables that did not consistently associate with the

outcome variables, and a strong symmetric relationship between them was not supported. The study used fsQCA to explore other possible relations and potential conditions that could lead to TA to the destination.

Insert Table 2: Contrarian cases



Notes: Cases in red represent the contrarian cases. Cases in black represent the main effect. The sets of contrarian cases are counter to the main effect size (phi ranges from 0.05 to 0.72).
~A → O indicates that the low score for the antecedent condition leads to a high score in the outcome condition.
A → ~O indicates that the high score for the antecedent condition leads to a low score in the outcome condition.

HM: Hedonic motivation; UM: Utilitarian motivation; SM: Social motivation; SA: Self-actualisation.
SFR: Service failure risk; STR: Travel safety risk; C19R: COVID-19 risk; ADB: Adaptive behavior

4.3 Configurational model assessment

Outcomes of the fsQCA for achieving ADB are shown in Appendix 1 (truth table) to demonstrate the combination of presence (■) and absence (□) conditions in each configuration (or recipe). Appendix 2 demonstrates the sufficient configurations (selected from the intermediate solution) of

fsQCA from a combination of motivations and risks to predict tourists' ADB. The chosen conditions from Appendix 1 comprised the number of cases, values of set-theoretic consistency and proportional reduction in inconsistency (PRI) for each configuration, with all values greater than the threshold of either 0.7 (Pappas & Woodside, 2021) or 0.75 (Ragin, 2008). PRI is an alternative measure of the consistency of subset relations in social research that is only relevant to fuzzy sets; it is used to avoid simultaneous subset relations of configurations in the outcome and the absence of an outcome (Pappas & Woodside, 2021). Moreover, only those configurations that have more than nine cases and with consistency > 0.9 and PRI > 0.7 are shown in the table (Pappas & Woodside, 2021). Appendix 2 shows the models of intermediate configurations with coverage > 0.2 and consistency > 0.9. The results indicated that for tourists to promote ADB (precautionary action for COVID-19), complex combinations between motivations and risks exist beyond what was shown from the result of IGSCA analysis. To being with, in the truth table case 6 where 79 cases represent the condition leading to ADB (consistency: 0.939, raw coverage: 0.662), these tourists regarded all types of motivation to travel, together with the concern on SFR to be important for their ADB. Moreover, the result from the sufficient configuration or the solution table reveals the three possible intermediate configurations that can lead to adaptive behavior. From the solution table, the utilitarian motivation and social motivation appear in all configurations. The respondents can have all types of motivation and concern on the risk perceived from service providers to develop adaptive behavior (M1:HM***UM*SM***SA*SFR) or the respondents can develop three types of motivation to travel (apart from self-actualization), even with less concern on travel safety and Covid-19 risk (the negation of the current constructs) (M2:HM***UM*SM***~STR*~C19R) or the respondents can have the three types of motivation (apart from hedonic motivation), and have all risk concerns to develop adaptive behavior (M3: **UM*SM***SA *SFR*STR*C19R). These results are different from the result of IGSCA in which utilitarian and hedonic motivation are the only two components that have positive effect on adaptive behavior, together with the three types of risk.

As the outcome of this current study is destination advocacy (TA), the researchers demonstrated the truth table and the sufficient configuration or the solution table using all antecedents, namely, motivations, risk factors and ADB, to investigate the potential combinations towards destination advocacy. As shown in Table 3, the black (■) and white (□) squares in the truth table denote the presence and absence of the condition, respectively. Table 3 also comprises values of the number of cases, consistency and PRI for each model, with all values greater than the threshold of either 0.7 (Pappas & Woodside, 2021) or 0.75 (Ragin, 2008). Similar to Appendix 1, only those configurations that have more than 9 cases with consistency > 0.9 and PRI > 0.7 are shown in the truth table (Pappas & Woodside, 2021). For Table 4, which presents sufficient configurations, only the configuration models with coverage of approximately ≥0.2 and consistency > 0.9 are elaborated (Rasoolimanesh et al., 2021). The overall consistency (0.961) and the solution coverage (0.713) indicated the substantial proportion of the outcome, which was covered by the two configurations. M1: HM * UM * SM * SA and M2: UM * SM * SA * SFR * STR * C19R * ADB. These two configurations can lead to the desirable outcome of destination advocacy (TA), that is,

the tourists would support to a destination when they have all the motivations to travel and even without any perceived risk (M1) or when they have the three types of travel motivation (utilitarian and social motivations and self-actualization) to travel, combined with concern of service failure, travel safety and risk from COVID-19 (SFR, STR, C19R), which make them take precautionary behavior (ADB) leading to the support to a destination (Destination advocacy). By contrast, the analysis via IGSCA indicated a substantial effect of ADB on TA, whereas the fsQCA revealed the cases where ADB could be absent from the configuration or was only regarded as a peripheral condition (or weaker relationship). The fsQCA results for sufficient configurations to generate a high level of destination advocacy demonstrated more complexities when compared with the symmetric analysis result via IGSCA.

Table 3: Truth table for configurations to achieve high TA

Configuration	**1**	**2**	**3**	**4**	**5**	**6**	**7**
HM	■	■	■	■	□	■	■
UM	■	■	■	■	■	■	■
SM	■	■	■	■	■	■	■
SA	■	■	■	■	■	■	■
SFR	□	□	■	□	■	■	■
STR	□	□	□	■	■	■	■
C19R	□	□	□	□	■	□	■
ADB	□	■	■	□	■	■	■
Consistency	0.998	0.998	0.995	0.993	0.993	0.990	0.986
PRI (>0.75)	0.996	0.996	0.992	0.985	0.979	0.980	0.981

Note: Cases < 9 and consistency < 0.75 are removed from the truth table

Insert Table 4: Sufficient configuration of fsQCA results from a combination of motivations, risks, and ADB to predict TA outcome (intermediate solutions)

Model for predicting TA	**Raw coverage**	**Unique coverage**	**Consistency**
TA = f(HM, UM, SM, SA, SFR, STR, C19R, ADB)			
M1: HM * UM * SM * SA	0.694	0.296	0.968
M2: UM * SM * SA * SFR * STR * C19R * ADB	0.417	0.020	0.985

Configuration	**HM**	**UM**	**SM**	**SA**	**SFR**	**STR**	**C19R**	**ADB**
M1	•	●	●	●	⊗	⊗	⊗	⊗
M2	⊗	●	●	●	•	•	•	•
Solution coverage: 0.713								
Solution consistency: 0.961								

● indicates core conditions; • indicates peripheral conditions; ⊗ indicates its absence

Note: Model with consistency < 0.75 and coverage < 0.2 are removed from the table

4.4 NCA

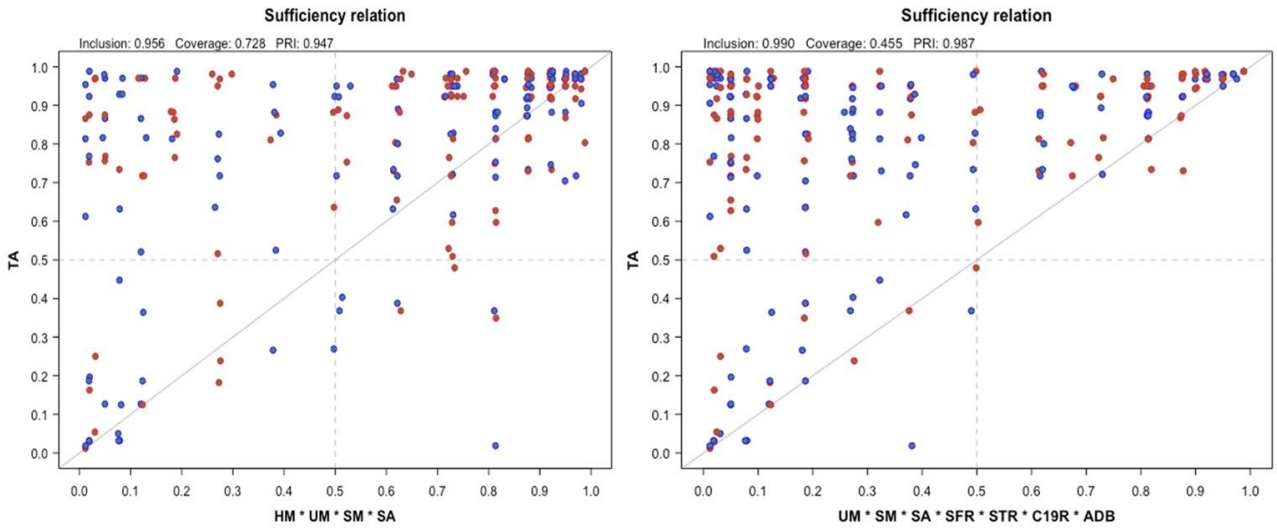
NCA was performed to identify the necessary conditions for TA. Following Han et al. (2019), an element that possesses a consistency score greater than 0.85 is necessary, along with considerable levels of the condition, for achieving the high level of outcome. As shown in Table 5, NCA reveals one type of motivation as a necessary condition which is utilitarian motivation (UM). UM is a necessary condition, but it is not sufficient to attain TA, meaning that for TA to occur, UM must exist. That is tourists must have the motivation to gain local culture, knowledge and experience before the tourism destination advocacy to happen.

Insert Table 5: Results of NCA

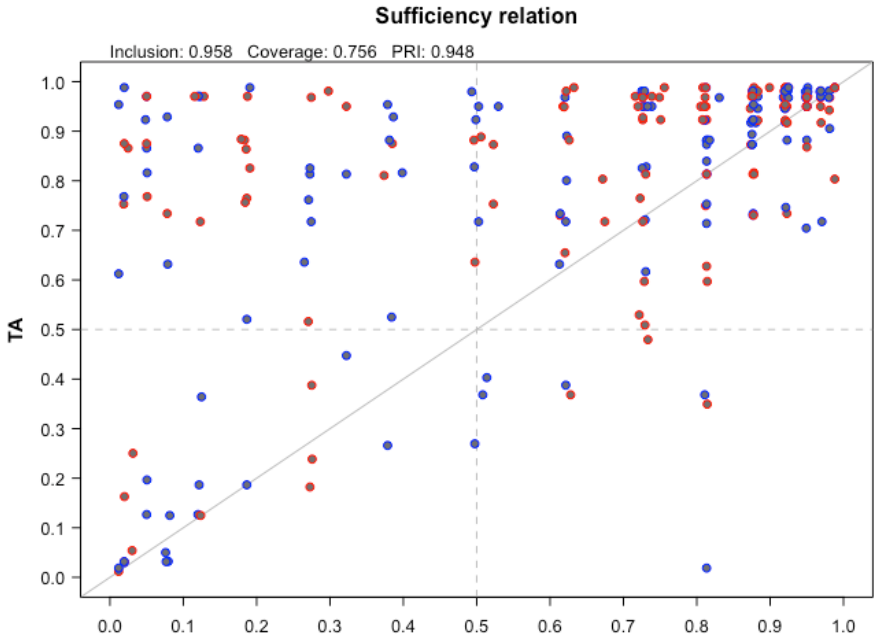
Predictor condition	Consistency	Coverage
HM	0.836	0.934
UM	**0.870**	**0.929**
SM	0.835	0.928
SA	0.769	0.934
SFR	0.775	0.935
STR	0.592	0.924
C19R	0.562	0.927
ADB	0.825	0.943

4.5 Predictive power

To assess the predictive power of the fsQCA solution, the second dataset of subsamples (30% percent of the total samples) was used to demonstrate the XY plot, along with calculating the consistency and coverage for M1 and M2 configurations, together with the final model. The results of the XY plot reveal the high/acceptable level of consistency values of M1 (0.956; PRI: 0.947; coverage value = 0.728), M2 (0.990; PRI: 0.987; coverage value = 0.455) as shown in Figure 3, and the final model (0.958; PRI: 0.948; coverage value = 0.756, shown in Figure 4, which confirmed that all configurations and the final model had a high predictive power.



Insert Figure 3 [Caption]: Test of two configurations from subsamples
Figure 3 [Alt Text]: The image 3 illustrates chart, scatter chart that accumulated on the top left diagonal matrix of the two models. With model 1 being HM * UM* SM* SA and model 2 being UM* SM* SA* SFR* STR* C19R * ADB [40 words]



Insert Figure 4 [Caption]: Test of the final model from subsamples
Figure 4 [Alt Text]: The image illustrates chart, scatter chart that accumulated on the top left diagonal matrix of the final model tested from subsamples [18 words]

HM * UM * SM * SA + UM * SM * SA * SFR * STR * C19R * ADB → TA

5. Discussion and conclusion

The importance of domestic tourism has been captured in previous studies (Bel et al., 2015; Božić et al., 2017; Fakfare et al., 2020a) and received considerable attention during the pandemic. Particularly, during COVID-19, the number of domestic tourists has been rapidly increasing in many destinations (Wen et al., 2020). Therefore, developing destination products that cater to tourists with different combinations of psychological demands has never become more essential. This study applied the symmetric and asymmetric analyses to understand how travel motivation and risk antecedents drive precautionary actions or behavioral changes (ADB) and how the factors affect tourism destination advocacy (TA) as a post-purchase behavior.

The innovative symmetrical technique, IGSCA, was initially used to assess the underlying components of travel motivation and perceived risk on ADB and TA. This technique showed the net effects of these factors. The measurement and structural model confirmed the validity and main effects of the dimensions of travel motivation and perceived risk, which echoes previous studies (Mehran et al., 2020).

In response to the current travel situation, health and safety risks related to COVID-19 and tourists' precautionary behaviors were incorporated into the model (Wen et al., 2020). The findings from SEM revealed that all travel risks including travel safety (STR), service failure (SFR), and risk from COVID-19 along with two travel motivation dimensions (i.e., UM - culture, knowledge, & experience and HM – fun, excitement, relaxation), positively and significantly influence tourists' ADB, and in consequence significantly affects TA. UM has significant effect and is the most powerful predictor on ADB. For local tourists to take a domestic trip, the motivation on cultural and historical experiences are quite predominant. This result is in line with the study by Božić et al. (2017) to address that the domestic tourists travel and enjoy knowledge seeking about the heritage of their own country. Moreover, it is not surprising to see that hedonic motivation (represented by HM) is amongst one of the key motives. Domestic tourists also have desire to travel for pleasure, to search for excitement, to have fun and to be in a better mood, supporting what Fakfare et al. (2020a) found in the study of the second-tier domestic destinations.

When it comes to the risk construct, the findings reveal that the three types of risk are crucial for the domestic tourists to take the precautionary adaptive behaviour for their travel. As earlier mentioned, the travel safety risk, risk from service providers and the COVID-19 risk occurred during the trip (on transportation, services and at the destinations) have significant effect to ADB. This finding supports the theories of self-protection behavior (Maddux & Robers, 1983; Weinstein, 1988) by showing that the perceived threat (all three risk types) leads to the likelihood that a person will take precautions to prevent such a threat (Maddux & Robers, 1983), inferring how domestic tourists make cost-benefit decisions for domestic travel under health-risk circumstances.

From IGSCA, the results from the structural model guide the way to three risk factors and two motivation factors that influence adaptive behavior which acts as a strong mediator towards destination advocacy.

However, the contrarian case analysis elaborated on potential cases that additionally differ from the results obtained using IGSCA, leading to the conclusion that the relationship towards outcome variables is more complex, and the structural model cannot sufficiently portray the associations among motivations and risks towards ADB and TA. As the contrarian analysis revealed other possible cases that contradict the symmetric effect, fsQCA analysis was further employed to reveal the possible combinations of different antecedents that could bring about the TA outcome.

According to Appendix 1, the truth table showing configurations (or recipes) for achieving high ADB indicates that, contradicting to the IGCSA results, in most cases, all four motivations are required to be present for tourists to have high precautionary ADB, instead of being mainly influenced by UM and HM as indicated in the structural model. Conversely, although the structural model presented the three types of risk as substantially leading to high ADB, other cases found in four configurations of the truth table show that only one or two types of risk can be sufficient to trigger tourists to take precautionary ADB for COVID-19. For instance, in Configuration 6, the result showed that all types of motivation combined with service failure risk (SFR) would trigger tourists to take precautionary ADB for COVID-19 before traveling to the destination. The final sufficient models in appendix 2 also reveal that the utilitarian and social motivations must always be present with different combination of risks, which indicate other possible combination of antecedents for tourists to take adaptive behavior.

To elaborate more on the destination advocacy outcome, the truth table shown in Table 3 and the sufficient configurations in Table 4 reveal that travel motivations, mainly utilitarian, social motivations and self-actualization, presented as core antecedents in all possible cases and models, whereas all risk factors appeared in less configurations (only 5 and 7) and only in model 2 (M2). Hence, this could be inferred that, in some cases, the motivation construct was more relevant in leading to destination advocacy than the risk construct, as in both sufficient configurations (M1,M2), the tourists placed more emphasis on travel motivations towards their destination advocacy rather than the concerns on various risk types.

Interestingly, all configurations demonstrated that domestic tourists saw the importance of enhancing one's knowledge and experiencing one's own country (UM), being socially connected (SM) and understanding and developing oneself (SA) as crucial motivations for domestic travels (Božić et al., 2017; Hsu et al., 2007; Shen et al., 2018), and especially when they wanted to gain high support (advocacy) towards a destination. From model 1 (M1) of sufficient configuration, the model indicated that the domestic tourists related all types of motivation to it, as all motivations must be present; whereas all notions of risk and precautionary adaptive behaviors could be irrelevant and absent (Table 4). Thus, risks and precautionary behaviors were not crucial and relevant for ones to develop destination advocacy, and only motivations to travel alone are adequate for ones to trust and advocate the destination, as long as the destination products can fulfil ones' motives.

On the contrary, the second configuration that leads to destination advocacy involved three types of motivation, namely, UM, SM and SA, together with the presence of all risk types and the precautionary adaptive behavior. Quite different to the former one, this configuration indicated that the three motivations, with concerns of all risk types and adaptive behavior, need to be present and are relevant to tourists for them to support the destination. These two models from fsQCA analysis enhance a better insight into the other possible tourist types that could not be explain by the main effect derived from IGSCA in the sense that, despite the situation that health and travel risk should be one of the most concerns, there are groups of domestic travelers who choose to travel and support the destination entirely from the travel motivation, without much concerns on risk nor the need to take precautionary behaviour to protect themselves (M1). This particular finding derived from model 1 provides new insight and does not support the mainstream research and our IGSCA's result in which the perceived risk has been perceived as the negative factor that reduce the visit intention (Caber et al., 2020) and promote preventive behavior (Ryu et al., 2023), and adaptive behaviour strongly affects the destination support. In conclusion, the fsQCA findings shed light on the complexity of potential combinations derived from the motivation, risk and ADB antecedents (ingredients) that the net effect analysis may not cover.

6. Contribution and limitation

This study enhances our current understanding of tourists' perceptions and behaviors as it highlights the complex interactions among various factors that influence travel decisions to support a destination, namely travel motivation, risk perception, and ADB.

As a theoretical contribution, this study sheds light on the importance of ADB as a key construct that enables tourists to develop destination advocacy during health-risk situations. This supports the cost-benefit decision-making principle and theories related to self-protection behavior that should be more incorporated into the tourism literature. The results from IGSCA and the sufficient configuration M2 show that ADB is crucial for building advocacy towards a destination. This finding aligns with previous research (Lu & Wei, 2018; Rye et al., 2023; Weinstein, 1988), and suggests that precautionary actions or ADB can play a crucial role in enhancing tourists' travel experiences. However, the present study also finds that despite its crucial role, ADB may not be a significant predictor for some tourist groups, as indicated in M1 of the fsQCA analysis, who choose to travel and support a destination solely based on their travel motivation. Therefore, the study emphasizes the importance of considering the complex reality of the studied phenomenon (Pappas & Woodside, 2021) and applies the asymmetric analysis that combines the effects of travel motivations, perceived risks, and ADB in shaping tourists' support for the destination, rather than viewing them as separate constructs with a symmetric relationship. The present study also reveals the necessary condition required for the support of the destination, which is the utilitarian motivation of tourists. This discovery is deemed important because without this necessary condition, the outcome is guaranteed not to occur. Hence, utilitarian motivation, which reflects the utilitarian values that occur to tourists during domestic travel (e.g., knowledge, culture,

experience), is crucial for tourists to support the destination, and without this element, destination advocacy will never occur (Dul, 2016).

As a methodological contribution, this study is one of the handful of studies in tourism that perform structural analysis using the IGSCA estimator, incorporating with configural analysis using fsQCA by basing data from domestic travelers of the three countries. The combined techniques (i.e., IGSCA, contrarian case analysis, and fsQCA) offer an insightful comprehension of tourists' post-purchase behavior (destination advocacy) within the domestic tourism context than if any of the analytical methods are individually performed (Gannon et al., 2019; Taheri et al., 2019). As emphasized in the findings, the evaluation of cause and effect using conventional approaches, such as structural model and regression analysis, may not comprehensively explain how the combination of the examined constructs influences post-purchase behavior, because those techniques only provide a single interpretation of tourists' attitudes, perceptions and assessments about their domestic travel experiences (Woodside, 2017). The results of asymmetrical analysis offer alternative combinations of customers' attitudes, perceptions, and behaviors that lead to increased destination advocacy.

This study has important implications for tourism practitioners. The findings shed light on the motivations and perceived risks of domestic tourists, which are key factors that lead to high levels of confidence and support for a destination. Destination marketing and management can leverage these insights by focusing on the key motivational factors of domestic tourists, particularly utilitarian motivation, which is a necessary and crucial condition for destination advocacy. Without it, the tourist's support for the destination will not occur. For example, destinations can provide opportunities for tourists to learn about the cultural and historical significance of a location, which can enhance their positive experience and satisfy their utilitarian motives.

In addition to these factors, hedonic and social motivations and ways to promote tourists' self-actualization should not be overlooked because these factors remain important for some domestic tourist groups. Specifically, hedonic motivation shows a strong influence in the structural model and should be emphasized further. Destinations can provide opportunities for tourists to feel excited, relaxed, and happy, based on their key tourism products. Moreover, destinations can offer social connections by providing opportunities for tourists to socialize, setting gimmicks that allow tourists to share their experiences on social media, and offering activities that help them enhance their personal capabilities.

Although some tourist groups do not have risk concerns when visiting a destination (as shown in M1), the results from the structural and configuration models (M2) highlight that all risks are relevant for a larger group of tourists during and after the COVID-19 pandemic. Therefore, destinations must ensure that service providers meet necessary health and safety procedures, which can increase reassurance in travel.

Managing relevant factors, such as travel motivations, risks, and ADB, is a challenging task for practitioners who need to promote domestic destinations, particularly during and after a health

crisis. To overcome these challenges, destination managers are encouraged to develop effective mechanisms, such as an interactive dashboard using text analytic techniques, that will provide deeper insights into travelers' psychological preferences for each specific place. These data can be used to prepare tourism products and services that cater to the specific needs and demands of tourists.

However, like other research, this study has some limitations. First, the results are based on survey data from three countries combined, which may not capture specific patterns for each country. Conducting mixed-method approaches in a country-specific context can shed more light on the perception and behavior of domestic tourists in each country. Second, while the survey data provides insights, it may lack deeper understandings when it comes to what is going on in tourists' minds. Qualitative techniques, such as netnography and in-depth interviews, can provide an extended and complementary view to the analysis and explain the results of the fsQCA configurations. Third, this study may be vulnerable to the drawback of data gathered in a cross-sectional survey. Future research should collect longitudinal data from different geographical locations. Finally, in addition to motivation and risk assessment, exploring the concept of safety can be another interesting research agenda, as safety becomes a highly concerning element when people make travel decisions.

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Appendix

Appendix 1: Truth table for configurations to achieve adaptive behavior (ADB)

Configuration	**1**	**2**	**3**	**4**	**5**	**6**
HM	☐	■	■	■	■	■
UM	■	■	■	■	■	■
SM	■	■	■	■	■	■
SA	■	■	■	■	☐	■
SFR	■	■	■	■	■	■
STR	■	■	☐	■	☐	☐
C19R	■	■	■	☐	☐	☐
Consistency	0.986	0.976	0.975	0.954	0.947	0.938
PRI (>0.7)	0.957	0.967	0.942	0.896	0.784	0.878

Appendix 2: Sufficient configuration (solution) of fsQCA results from a combination of motivation and risk to predict adaptive behavior

Model for predicting adaptive behavior (ADB)	Raw coverage	Unique coverage	InclS
M1: HM***UM*SM***SA*SFR	0.662	0.080	0.939
M2: HM***UM*SM***~STR*~C19R	0.344	0.066	0.840
M3: **UM*SM***SA*SFR*STR*C19R	0.484	0.023	0.976
Solution coverage: 0.751			
Solution consistency: 0.892			

Note: HM: Hedonic motivation; UM: Utilitarian motivation; SM: Social motivation; SA: Self-actualization; SFR: Service failure risk; STR: Travel safety risk; C19R: Covid-19 risk; ADB: Adaptive behavior