Innovative Strategies to Tackle Seasonality Issue in Hospitality and Tourism Industry

Abstract

Purpose: This empirical research deepens the current knowledge of seasonality by investigating visitors' intentional and behavioural patterns during peak and off-peak seasons. It compares the variation in several key behavioural factors, namely, duration of stay, party size, revisit intention, spending and breakdown of spending in different sectors in hospitality and tourism including entertainment, restaurant, accommodation and transportation. Moreover, this research expands our understanding by examining the effectiveness of two innovative strategies of offering a digital app and organising a unique event to tackle seasonal imbalances through stimulating visitors' intention to change their timing of visit from peak to off-peak periods.

Design/methodology/approach: We initially used a Delphi approach to gather experts' opinion on the two scenario settings: event organisation and a trip planner app. The scenarios aimed to potentially encourage visitors to change their visit time to off-peak seasons. Then, using a quantitative survey, the travel habits and spending behaviours of 310 participants were captured. Furthermore, the survey assessed their intention to travel during off-peak seasons in response to the implementation of the two innovative strategies.

Findings: The results revealed that although the number of visitors who travel in off-peak seasons may be lower, their daily spending is higher than peak season visitors. In addition to total spending per day, the duration of stay, part size, quality of accommodation, and re-visit intention of visitors indicated significant variation between peak and off-peak seasons. According to the statistical analysis' results, organising events (including festivals) proves more effective in encouraging visitors to travel during off-peak seasons compared to digital innovation (i.e., a trip planner app). This finding is in line with the tenets of the Jobs-to-be-Done Theory of innovation.

Originality: This study contributes by conceptualising the mechanism of seasonality and its impacts on subsectors of tourism and hospitality. This is one of the few empirical research that compares the behavioural patterns of visitors including their average spending per day between peak and off-peak seasons. Previous studies focused on specific regions or sectors, whereas this research investigates visitors' behaviour on a broader scale to provide more comprehensive view. Furthermore, this study is novel due to practising an outside-in approach through investigating the effectiveness of the two innovative strategies aimed at addressing seasonality in the hospitality and tourism industry from visitors' point of view.

Key words: Seasonality; innovation; spending; digital innovation; event

Introduction

The hospitality and tourism industry's vulnerability to the challenges posed by seasonality has been identified as an issue that needs to be addressed. Seasonality is a phenomenon characterised by an uneven distribution of demand and revenue throughout the year (Rossello, Riera and Sanso, 2004; Turrión-Prats and Antonio Duro, 2018; Duro and Turrión-Prats, 2019). The imbalances with a higher number of visitors and revenues during peak seasons, and underutilised infrastructures and decreasing profitability in off-peak seasons have created challenges for businesses within the hospitality and tourism sectors. They have to generate a substantial portion of expected annual revenue during a limited period of time during peak seasons. Without enough demand in off-peak seasons, some businesses particularly small-to-medium enterprises (SMEs) as more vulnerable businesses to changes will depend on cost management measures even more to provide short-term profits (Hausman and Johnston, 2014; Clark, Wright and Ridgway, 2019).

As a temporary solution to the challenges, usually small-scale or too remote businesses decide to close partially or completely at least a few months of the year, when there is insufficient demand (Connell, Page and Meyer, 2015). Although the cost containment due to worker layoffs seems reasonable at first instance, its impact will further decline in the number of visitors. Because repeat visitors choose businesses that are reliably open or accessible throughout the year (Birenboim *et al.*, 2013). Therefore, less visitors requires greater cost containment, which induces more layoffs (Hausman and Johnston, 2014). Furthermore, businesses may struggle to improve the quality of their products and services as they cannot retain experienced staff which imposes higher costs of seasonal staff recruitment and training (Jolliffe and Farnsworth, 2003). All these factors highlight the importance of prioritizing innovation over cost management strategies.

Despite the key role of innovative solutions can play in addressing seasonality issues, many businesses in tourism and hospitality sectors are reluctant or unable to invest on an innovation development though, due to several reasons comprising the perception of risk, lack of enough resources, the costs involved in the process of market research, and idea implementation and evaluation (McAdam *et al.*, 2007; Camisón and Monfort-Mir, 2012). The lack of interest and capability to develop and implement innovations among businesses would render a destination's visitor economy vulnerable (Bristow and Healy, 2018). These challenges call for governments and local authorities' support to reduce the financial pressures on the businesses due to decreased demand in off-peak seasons and consequently seasonal closures, through implementing innovative strategies (Bristow and Healy, 2018). This is beyond simply support for R&D activities and science-led innovations. On occasions, their involvement in developing and implementing innovative ideas at destination level is required to lift the pressures from business' shoulders (Wang and Ritchie 2012). As suggested by Bristow and Healy (2018), offering a combination of innovations would enhance the adaptability and resilience of destinations' visitor economy, as it is more likely that at least one of the choices will be effective in response to uncertainties and challenges.

It is important to note that it is not straightforward to encourage visitors to explore destinations during less crowded periods, due to effects of internal and external factors such as weather conditions and visitors' specific preferences over the season of travel (Rossello, Riera and Sanso, 2004; Ferrante, Lo Magno and De Cantis, 2018; Duro and Turrión-Prats, 2019). Although it may not be a easy to change travel habits of visitors, providing attractive offerings in off-peak seasons may influence visitors' behaviour (Feng, Cai and Zhu, 2006; Ferrante, Lo Magno and De Cantis, 2018; Paradigms, 2019). Therefore, it is crucial that offerings satisfy visitors' expectations, needs and preferences and be appealing enough to attract them out of the high seasons and create memorable trips for visitors.

Visitors' preferences have been developing towards more unique and personalised experiences (Chen and Huang, 2021). Therefore, emphasising experience-based approaches rather than pricing strategies can be more effective to attract visitors during off-peak seasons and increase their revisit intention (Chen and Huang, 2021). In other words, the evolving demand of visitors require destinations to revisit their offerings to ensure authenticity and better experience while addressing the seasonality. In this vein, events and festivals are acknowledged as flexible and agile solutions against seasonal demand at a destination level (Higham and Ritchie, 2001; Connell, Page and Meyer, 2015; Richards and King, 2022). Furthermore, technological innovations are introduced as an effective strategy in creating unique experiences for visitors and therefore a potential solution to address seasonality issues (Martínez, 2017). However, there is still a lack of research on which one is more effective in encouraging visitors to visit a destination during off-peak seasons using scenario testing. This research intends to fill the lacuna by investigating the visitors' responses to questions on hypothetical scenarios related to a unique event and a trip-planner application. The findings provide insights for beneficiaries to develop and implement the pragmatic and effective strategies that can help mitigate the seasonality issue. Considering that not all types of innovation are equally effective to address the seasonality issues due to the complexity existing in the tourism system, it is essential to investigate the functionality and dysfunctionality of innovation interventions before further investments in the future and avoid failures (Khanagha et al. 2022).

To develop workable innovative solutions that could stimulate visitors to visit a destination in off-peak seasons, it is also imperative to unpack the factors that cause seasonality and drive the behavioural patterns of visitors (as demand side) across the seasons. Factors such as natural (e.g., climate) and institutional factors (e.g., school holidays) may influence the timing of visit for individuals, which makes the patterns of demand during peak and off-peak seasons often predictable (Rossello, Riera and Sanso, 2004; Duro and Turrión-Prats, 2019). Nevertheless, the

behavioural pattern of visitors during peak and off-peak seasons, may be unlike, which need further investigation. This research extends the existing knowledge of seasonality by unpacking the differences in the patterns between peak and off-peak seasons using empirical data. That would help understand what elements need to be considered in development of innovative strategies in order to attract more visitors out of peak season as well as address imbalances in visitor economies. To this end, the current research attempts at addressing the following two research questions (RQs):

RQ1: To what extent does seasonality affect the hospitality and tourism sectors?
RQ2: Which innovative strategy is most effective in alleviating the impact of seasonality?

Theoretical background

Causes and effects of seasonality in hospitality and tourism industry

The hospitality and tourism industry has long been associated with seasonal fluctuations in visitor flows caused by various natural and institutional factors (BarOn, 1973). As illustrated in Figure 1, climate and weather conditions of a destination, which are determined by its geographical location, are constraining reasons that could influence choice of season to visit a destination (Andriotis, 2005; Ferrante, Lo Magno and De Cantis, 2018). Wind speed, precipitation, temperature, and duration of sunlight are among the important factors affecting trip planning and visit experience (Olya and Alipour, 2015). Several studies suggested that people often prefer to go on a trip during particular seasons to enjoy pleasant weather (Feng, Cai and Zhu, 2006; Amelung, Nicholls and Viner, 2007; Ferrante, Lo Magno and De Cantis, 2018). However, the specific desired activities could affect the perception of the weather's pleasantness from visitors' perspective. This aspect is particularly applicable to visitors engaged in sports and nature tourism (Pröbstl-Haider *et al.*, 2021). A recent study by Wan

(2022) on the behaviour of sport tourism consumers, revealed that 90% of respondents would travel in summer, nonetheless, winter sport visitors may show different behaviour (Balbi *et al.*, 2013).

In addition to natural reasons, institutional factors such as school and public holidays have been stated as another key causes of seasonality in tourism and hospitality industry (Ferrante, Lo Magno and De Cantis, 2018; Zvaigzne, Litavniece and Dembovska, 2022). Although the natural and institutional factors may seem unrelated, Šegota and Mihalič (2018) have considered them relevant and complementary because they believe that these factors determine the availability and timing of activities in a destination (Šegota and Mihalič, 2018). For instance, destinations offer diversified options for families with children particularly during summer, where weather conditions are favourable for outdoor activities (Rossello, Riera and Sanso, 2004; Duro and Turrión-Prats, 2019).

The literature shows that the uneven distribution of visitor numbers throughout the year could have both positive and negative social, ecological and economic impacts. However, it has been generally confirmed that the adverse impacts of seasonality are greater than its potential benefit (Ferrante, Lo Magno and De Cantis, 2018; Caponi, 2022; Zvaigzne, Litavniece and Dembovska, 2022). For instance, greater demand during peak seasons creates employment opportunities for temporary workers such as students and artists. However, recruiting and training seasonal employees imposes further costs on businesses, while they struggle to generate a sustained revenue due to a decline in demand in the off-peak season (Jolliffe and Farnsworth, 2003). Furthermore, businesses may not be able to retain their competent staff, who are looking for full-time and permanent jobs due to seasonality and cost constraints. All these affect the job market adversely as the economic instability diminishes job security of the employees (Nickson, 2013).
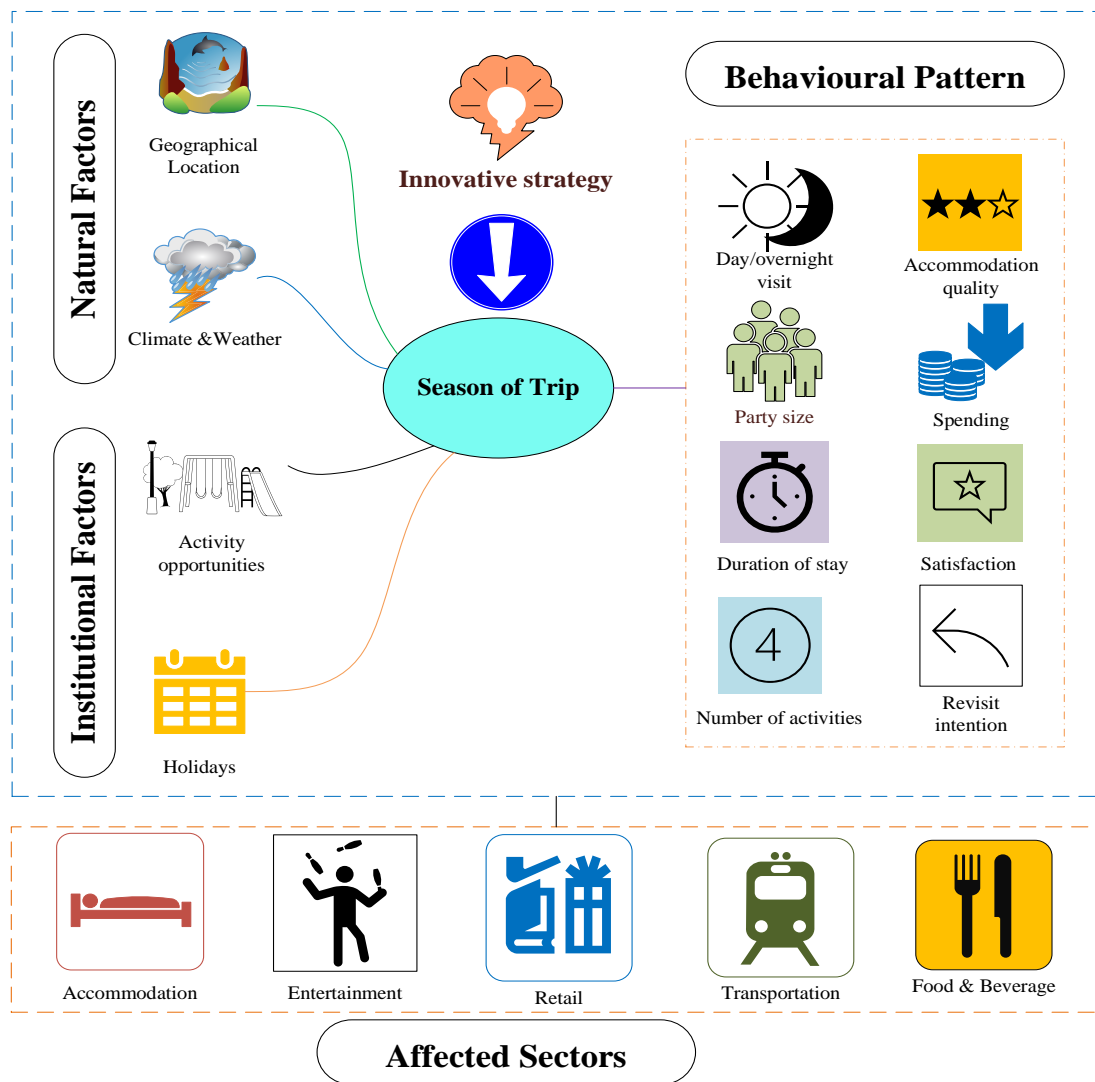
Figure 1. Research overview on causes and impacts of seasonality; Source: Created by author

Seasonal fluctuations in revenues are due to changes in visitor demand and spending patterns throughout the year. In addition to diverse behaviours towards the timing of visit to a destination, visitors have different spending habits during peak and off-peak seasons (Koc and Altinay, 2007; Duro and Turrión-Prats, 2019). The literature supports high spending of visitors during peak seasons, particularly summer due to the type of activities offered by destinations in this period (Brida and Scuderi, 2013; Marrocu, Paci and Zara, 2015; Zakaria, Numata and Hihara, 2021). However, there have been heterogeneous findings in the literature on the spending level of visitors across the seasons due to differences in the categories of indicators. Some scholars gauged total spending of visitors in a trip, while others measured the spending

per day, per person and per day per person (Brida and Scuderi, 2013). As shown in Figure 1, the level of spending can be also linked to the type of activities that visitors undertake, and trip-related factors such as accommodation type, length of stay, party size, mode of transport, etc (Downward and Lumsdon, 2003; Thrane, 2016).

Despite considerable efforts have been devoted to measuring and analysing seasonality in hospitality and tourism literature through various monetary and non-monetary variables such as visitor arrivals (Lim and McAleer, 2001; Chen and Pearce, 2012; Ferrante, Lo Magno and De Cantis, 2018; Grossi and Mussini, 2021), and bed nights (Fernández-Morales and Mayorga-Toledano, 2008; Duro, 2016; Lozano, Rey-Maquieira and Sastre, 2021), there is limited empirical research on the visitors' spending patterns (Koc and Altinay, 2007). Moreover, the focus of the most studies in the literature are limited to specific countries or regions, underscoring the need for global scale research to provide a comprehensive perspective. To the researcher's best of knowledge, it appears that Koc and Altinay (2007) are the exclusive scholars who have examined the seasonal spending patterns of visitors. Their study identified significant differences in monthly spending per person among inbound visitors in Turkey. They have called for further research on the breakdown of visitors' spending patterns during peak and off-peak seasons as these insights would help effective planning, investment, and marketing strategies, which ultimately enhance financial sustainability and mitigate challenges posed by seasonality. To address these research gaps, the present study investigates and compares visitors spending patterns during peak and off-peak seasons, aiming to shed light on the impacts of seasonality on the hospitality and tourism industry globally.

Innovative strategies and seasonality

To address the effects of seasonality in tourism demand, a diverse range of strategies such as diversification of offerings, seasonal taxes, differential prices, digital innovations, etc are

proposed by researchers (Connell, Page and Meyer, 2015; Martínez, 2017; Dalir, Mahamadaminov and Olya, 2021). However, it is not straightforward to change travel habits of visitors, as they have their own preferences for specific travel seasons and would not generally change these preferences (Feng, Cai and Zhu, 2006; Ferrante, Lo Magno and De Cantis, 2018; Paradigms, 2019). Therefore, providing enticing offerings during off-peak seasons are required to attract visitors out of the peak seasons. This is in accordance with the Jobs-to-be-Done Theory, which is proposed by Christensen *et al.* (2016) that postulates innovations should be designed in a way that do the job for consumers by satisfying their expectations, needs and preferences. This would increase the success rate and effectiveness of innovative ideas (Hankammer *et al.*, 2019).

Visitors seek for experiences that help them to get away from daily life's routines (Bachimon, Decroly and Knafou, 2016). They would like to visit unique places and demand for authentic experiences. They may even prioritise consumption of experiential to material purchases according to the experience priming mechanism (Gilovich, Kumar and Jampol, 2015; Bachimon, Decroly and Knafou, 2016; Hwang *et al.*, 2019). Therefore, traditional approaches such as pricing strategies may not be always adequate to attract visitors and to increase revisit intention (Chen and Huang, 2021). Delivering unique experiences that create memorable trips for visitors has become more attractive than producing new things or offering lower prices for visitors (Pine and Gilmore, 2014).

Among different experience-based strategies for addressing seasonality, events (and festivals) have been mentioned by many studies as solutions that could enhance the attractiveness of a destination and improve visitors' experience (e.g., Derrett, 2012; Connell, Page and Meyer, 2015; Gautam, 2022). Events and festivals can make a wide range of motives for visitors to visit a destination in off-peak season. These motivations include "escape from tedious life, relaxation, event excitement/novelty, cultural exploration, family togetherness, socialisation,

etc" (Chi, Cai and Han, 2021, P. 3258). Through organising events, festivals and providing a range of exciting indoor and outdoor activities, destinations can attract new types of visitors looking for unique experiences. In addition to offering the added value to visitors, events and festivals can significantly enhance a destination's image (Chi and Qu 2008), which means that their impact could last beyond a single off-peak season (Baade and Matheson, 2016; Teixeira and De Matos Ferreira, 2018). Moreover, destinations can use this opportunity to showcase their rich cultural heritage and establish a connection between visitors and the heritages. Such innovative interventions are also beneficial to many businesses within the destinations, including hoteliers as that would help them utilise the underused capacities during off-peak seasons and therefore cut down the fixed costs (Getz, 2010).

In addition to organising unique events and festivals, it is imperative for every destination to make sure visitors have seamless experiences from planning and booking to on-site experience. As visitors seek for personalised experiences infused with cultural elements and the discovery of hidden gems, the need for itinerary builder applications and web platforms that offer bespoke options based on visitors' preferences has become increasingly noticeable in the travel and tourism industry (Jones, 2020). In the modern era, digital innovations, particularly trip-planner apps, have changed how visitors explore and engage with destinations (Yi *et al.*, 2022; Shin and Baek, 2023). The use of trip-planner apps has been increasingly widespread among visitors, as these apps simplify the entire trip process. They offer accessibility and personalisation to visitors. These apps provide real-time information about destinations and available cultural experiences, and accordingly visitors can plan their itineraries and tailor bespoke experiences to their own preferences.

Given that there may be a lack of comprehensive information about the tourism and leisure activities available in off-peak seasons within destinations, the promotion of diversified offerings in off-peak seasons could help with extending the tourist season (OECD, 2005; Ricart

et al., 2019). Experiencing unique activities could improve visitors' satisfaction and revisit intention in off-peak seasons (Zhang, Sotiriadis and Shen, 2022). Through highlighting hidden gems and showcasing unique offerings especially during low seasons, destinations can improve their visibility and desirability, which lead to attracting a broader type of visitors. Using strong imagery, colour palettes, videos and keywords, destinations can give the user a feeling of what they can expect from the destination and the activities available in different seasons, giving them a sense of place. Otherwise, the destinations may struggle to market lesser-known attractions and entice the potential visitors who rely on digital tools for decision-making (Jones, 2020). Therefore, it appears utilising digital tools are crucial for the destinations to adapt to technological advancements, online competition, and developing consumer behaviours. Eventually, the digital tools can present significant advantages to both visitors and destinations. Despite the important role of digital apps in visitor's trip planning (Li *et al.*, 2017), there is yet paucity of empirical research that studies the effectiveness of trip-planner apps in attracting visitors out of peak seasons. This research advances the current knowledge of the seasonality by investigating whether the app can stimulate visitors' decision to visit a destination in off-peak seasons based on the responses of participants in the online survey to scenario questions.

Methods

This research uses a multi-method approach to address research questions. First, Delphi method is used to check validity of the two scenario sets of innovative strategies through obtaining the consensus view of a group of experts. Next, the scenarios are included in a survey questionnaire exploring visitors' opinion on the effectiveness of the innovative strategies in encouraging them to travel during off-peak seasons. The survey also comprises questions examining visitors' travel habits and spending behaviours between peak and off-peak seasons. Then, statistical analyses are conducted to compare the behavioural patterns of visitors between peak

and off-peak seasons and in response to the innovative strategies. Detailed information about the method and analysis are provided in the following subsections.

Delphi Method

This research uses the Delphi method, as one of the recognised approaches for collecting data from expert panels (Ng, 1984). It is utilised to ensure the scenarios of innovative strategies sound realistic and credible to the experts as the outcomes could help to predict visitors' behaviour regarding the time of travel. This method is recommended as a flexible, reflective and inclusive process that fosters consensus among a panel of experts (Donohoe and Needham, 2009). As an alternative for typical face-to-face consensus-seeking research methods, it mitigates the impact of psychological factors, persuasive effect, and the potential for a dominant voice to overshadow the others' viewpoints. Because the anonymous characteristics of Delphi method offers freedom to participants for thinking and reflecting independently between rounds or iterations.

To this end, first theoretical innovation frameworks and real-world cases in the hospitality and tourism industry (e.g., Hjalager, 2010; Gomezelj, 2016) were reviewed. Second, based on the features of the strategies of event organisation and digital innovation in the form of a trip-planner app, two initial scenarios were crafted. Next, the criteria for selection of experts were established based on their knowledge, experience, and qualifications relevant to the research questions. Regarding the size of panel members, it seems a restricted rule for governing the number of participants is not available, as the panel sizes range from 5 to over 900 in tourism studies (Lin and Song, 2015). Although a larger panel is desirable to collect a broader range of views, the panel size can vary depending on the scope of the study, the type of desired results, and the availability of time and other resources needed for carrying out and completing the research project. Garrod and Fyall (2005) suggested that a larger number of participants does not determine the quality of findings but a balance of diversity of expertise with practical

manageability does. Therefore, it is more important to find an appropriate panel of experts that represent the desired balance of knowledge and expertise rather than relying on the size of the panel.

Following the recommendation of McCleary and Whitney (1994) regarding a balanced panel, which should comprise both industry and academic experts, a list of five individuals from the researcher's network, who were well-informed and skilful in the areas of innovation and tourism and were available during the study period was compiled (comprising four academics and three industry experts). The experts were invited to participate in a short questionnaire study consisting of three parts: First, the aim and contextual background of the research were provided to the experts to avoid any ambiguity. Second, the experts were asked to rate the proposed scenarios relevant to the innovation interventions based on three criteria of being realistic, credible, believable ranging from 1 (Not at all) to 7 (Very much). Finally, a section was dedicated to their comments on the wording and length of scenarios to ensure the accessibility of the scenarios for everyone. After carrying out the survey in two rounds and inclusion of the experts' comments and reasoning to the draft scenarios, a 95% consensus was achieved regarding the validation of the scenarios in terms of being realistic, credible, and believable.

Quantitative analysis has been used to present the results of Delphi. Since the data gathered from experts cannot be assumed to be normally distributed, one-sample Wilcoxon Signed Rank Test is used as an alternative to one-sample t-test (Schmidt, 1997). The test determines whether the median of the sample is equal or greater than the standard value of 3. The results of Wilcoxon Signed Rank Test as a non-parametric statistical technique, confirmed that the observed median for each criterion is significantly higher than the median of 3 (Standardised Test statistics= 2.428, $p<.05$). This means that all experts believe that the scenarios are realistic, credible, and believable. After validating the scenarios with experts, the relevant questions

were included in the visitor survey to investigate the extent to which innovations could encourage visitors to go on a trip during low seasons.

Table 1. Scenarios finalised using Delphi method

Hypothetical Scenario	Description
Scenario 1- Event/Festival Name: The Festival of Light - An experience like no other	Imagine a magical gathering where a club concept, merging a spectrum of astounding lights, lanterns, effects, and live performances to an epic soundtrack. At this event, you will encounter giant, mesmerising lantern installations, laser shows, and incredible dancers and acrobats, all combining to craft an unforgettable experience for attendees. This is the Festival of Light. The Festival of Light is an annual event held during the low season spanning one magical day between October and March. It invites participants to immerse themselves in a world of creativity, innovation, and serenity.
Scenario 2- Digital Innovation: Be Adventurous- Your Personalized Trip Companion	Imagine a trip-planner application powered by AI technology, tailoring customised itineraries for visitors based on their preferences and requirements in various seasons. By understanding visitors' preferences and requirements and integrating with local databases, Be Adventurous transforms the traditional 'off-season' into a captivating adventure for those seeking unique experiences in lesser known yet enchanting off-peak periods. You can discover unique activities, explore themed itineraries, or create the journey of your dreams. With Be Adventurous, exploring a destination particularly in off-peak seasons has never been more efficient, delightful, and personalised.

Source: Created by author

Questionnaire Survey

A visitor survey was designed to understand visitors' behavioural patterns including their spending on different sectors during peak and off-peak seasons. It also intended to investigate

the effectiveness of the innovative strategies in stimulating visitors' decision to travel in off-peak seasons in the future. Those who have recently gone on a trip (i.e., day or overnight) to a destination were invited to participate in the survey. The survey comprised four main sections: first, in the introduction section the purpose of the survey was briefly explained, and the anonymity of respondents' identity was assured (Podsakoff *et al.*, 2003). Second, respondents were required to answer a few questions about their most recent visit to a destination to find out their season of travel, spending breakdown, satisfaction, and behavioural intentions. Third, using a within subject design approach (Viglia and Dolnicar, 2020), participants were requested to respond to two questions relevant to the scenarios of innovative strategies. In the end, demographic information such as age, education, occupation, and income level of the respondents were asked.

Prior to the main survey administration, a pilot test with 15 samples was performed to check whether survey questions were clear and accessible to all respondents. Few minor suggestions about wording were integrated which enhanced the readability of the survey. No issue was reported about the length and completion of the survey. The survey was distributed through the Prolific platform. Prolific Academic is chosen because the Prolific panel members have good diversity, which enhances the quality of data (Peer *et al.*, 2017). By applying filters in Prolific, those who were above 18 ages, and have had experience of a day or an overnight trip to a destination in 2022-2023 were able to participate in the survey. To cross-check their responses, participants reported the date and month of their last trip. After dropping the respondents who failed to answer the filter questions and scanning the data to ensure there is no inconsistency and significant missing values. Finally, 310 valid cases were obtained and used for further data analysis.

Data analysis

Descriptive analysis was used to determine participants' socio-demographics (age, gender, occupation, income, and education), travel characteristics (season of visit, day or overnight, party size, length of stay, and type of accommodation). Then, means comparison tests were used to compare the mean spending of visitors to shed light on the differences in peak and off-peak seasons. Their travel characteristics are also compared. Using SPSS, the statistical analysis of t-test is conducted to compare the effectiveness of two innovative strategies in changing visitors' intention to travel in off-peak seasons.

Results

Socio-demographics

According to the survey results that are presented in Table 2, 74.5% (231) of respondents travelled during peak seasons and 25.5% (79) during off-peak seasons. The demographics of the respondents show that 57.7% were male and 40.6% were female and the remaining respondents identified as others. The distribution of income level among respondents is as 22% earn between £5,000 - £14,999, 19% earn more than >£38,000, 15% earn £15,000 - £17,999, 14% earn £18,000 - £20,999, 15% earn £21,000 - £28,999, 10% earn £29,000 - £37,999, and 6% earn less than £5000 per year. Near to half of the respondents (43.9%) were aged between 18 and 26 years old, followed by 27.4% aged 25-35 years old, 16.8% aged 26-45 years old, 9% aged 46-55 years old, and less than 3% were older than 55 years old. Most of the respondents were educated, 36.8% hold bachelor's degree, 31% hold master's degree, and the rests hold either other degrees or no formal education. The 33.9% of respondents reported their occupations in supervisory, clerical, and junior managerial roles, 28.7% in intermediate managerial, administrative, and professional positions. The 15.8% were identified as skilled workers, 9.7% as higher managerial, administrative, and professional, 5.2% as semi-skilled workers, and 6.8% as state pensioners, casual and lowest grade workers, or unemployed.

Table 2. Profile of the respondents

Gender	N	%	Education level	N	%
Male	179	57.7%	No formal qualification	4	1.3%
Female	126	40.6%	Foundation degree or equivalent	6	1.9%
Other	5	1.6%	GCSE	10	3.2%
			A Level, or equivalent	35	11.3%
Annual income			Bachelor's degree or equivalent	114	36.8%
Less than £5000	18	6%	Master's degree or equivalent	96	31.0%
£5,000 - £14,999	69	22%	Doctoral degree or equivalent	7	2.3%
£15,000 - £17,999	45	15%	Higher National Certificate	25	8.1%
£18,000 - £20,999	44	14%	Other qualification	13	4.2%
£21,000 - £28,999	45	15%			
£29,000 - £37,999	30	10%	**Occupation**		
>£38,000	59	19%	State pensioners, casual and lowest grade workers, or unemployed	21	6.8%
			Semi-skilled workers	16	5.2%
Age (yrs old)			Skilled workers	49	15.8%
18-26	136	43.9%	supervisory, clerical and junior managerial	105	33.9%
26-35	85	27.4%			
36-45	52	16.8%	Intermediate managerial, administrative, and professional	89	28.7%
46-55	28	9.0%	Higher managerial, administrative, and professional	30	9.7%
56-65	8	2.6%			
66-75	1	0.3%			

Source: Created by author

Statistical analysis of the behavioural patterns

The Independent Samples Test is used to compare the means of visitors' behavioural patterns between peak and off-peak seasons. According to the results of test represented in Table 3, the type of visitors (day visitor and overnight stayers) is significantly different between off-peak and peak seasons (MD=0.152, p<0.001, t=2.585) which means that the number of overnight visitors in off-peak seasons (M=1.823, SD=0.384) is more than peak seasons (M=1.671, SD=0.470). In other words, during peak seasons, visitors tend to prefer day visits to destinations whereas during off-peak seasons they would stay overnight (Scholtz, Kruger and Saayman, 2015). Furthermore, overnight visitors in off-peak seasons stay significantly longer (M=4.429, SD=3.093 vs M= 2.796, SD=2.914) and choose accommodations with higher quality compared to peak seasons (M=3.149, SD=1.212 vs M=2.706, SD=1.431). As a result,

visitors in off-peak seasons spent higher on accommodation than visitors who travelled during peak seasons (MD=14.975). Delving deeper into the data, the purpose of almost 50% of overnight visitors during peak seasons was visiting friends and relatives (VFR) stayed. The majority of them also stayed with their friends and relatives and spent zero on accommodation.

Although the mean spending of overnight visitors varies between peak and off-peak seasons, these differences are not statistically significant. The main reason is that the number of visitors and particularly overnight stayers in off-peak seasons is considerably lower than the visitor number in peak seasons (i.e., smaller sample size). Furthermore, the standard deviation for the distribution of sample means in peak (SD=81.229) and off-peak (SD=67.305) seasons is not significantly different from the population standard deviation (SD=78.041). In other words, the difference to SD ratio is not high enough to reach significance (Ibragimov and Müller, 2010). Similarly, the mean differences of daily spending on entertainment activities during peak and off-peak season is insignificant (MD=4.734, $p > 0.001$, t=1.039). Except accommodation and entertainment, the means of spending on other sectors including restaurant (MD=8.41, $P < 0.05$, t=1.805), shopping (MD=10.343, $p < 0.001$, t=3.387) and transportation (MD=2.744, $p < 0.05$, t=1.979) are significantly different. The total daily spending of visitors in off-peak seasons is also significantly higher than spending of visitors in peak season (MD=39.347, $P < 0.05$, t=2.636).

The off-peak season visitors significantly spent more on restaurant and shopping compared to those who travel in peak seasons (MD=6.547 and MD=10.343). This makes sense as the results show that visitors usually travel in a larger group (M=3.094 vs M=1.846) and stay longer in off-peak seasons. Therefore, they spend more on restaurants. Furthermore, visitors are usually interested to undertake indoor activities including shopping in off-peak seasons when the weather is not favourable (Lee, Gino and Staats, 2014). Interestingly, the number of activities in off-peak seasons is not significantly different from peak seasons (MD=0.311, $p > 0.05$,

t=2.698), which implies that season of travel does not necessarily impact the number of activities that visitors undertake per day. That might be because of a limited budget and time that visitors allocate for different activities per day regardless of season (Wang *et al.*, 2006).

Regarding the daily spending level on transportation, visitors spent more on local transportation in off-peak seasons than peak seasons (MD=2.744, p<0.05, t=1.979), which is linked to the larger party size in off-peak seasons. Another interesting finding is that the revisit intention significantly varies between two seasons (MD=0.104, p<0.01, t=1.979). The off-peak season visitors have higher intention to revisit than those travelling in peak-season (MD=0.104). More than 75% of satisfied visitors in off-peak seasons stated that they intend to revisit the destination in the future, while the ratio is lower among peak season visitors with 65% revisit intention. Looking at data, the majority of visitors in off-peak seasons attributed their satisfaction to the less crowdedness of destination and attractions, which led to a higher level of travel experience and thus, a higher revisit intention (Pons *et al.*, 2014; Biondo, Cellini and Cuccia, 2020). The type of activities undertaken by visitors (or purpose of visit) in different seasons have also affected their revisit intention. For instance, the purpose of about 20% of visitors in peak seasons was to particularly attend an event including a football match or a conference. Therefore, it is less likely that the visitors return to the same destination, at least soon if a new attractive offer that suits their preferences is not provided (Christensen *et al.*, 2016).

Table 3. The results of mean comparison of visit attributes and spending patterns between high and off-peak seasons.

Factor	Mean		Independent Samples Test				
	Off-peak season (N=79)	Peak season (N=230)	Mean Difference	Std. Error Difference	F (df=208)	Sig.	t
Type of visitor[a]	1.823	1.671	0.152	0.059	37.846***	0.000	2.585
Duration of stay	4.429	2.796	1.633	0.479	6.462**	0.012	3.408
Number of activities	2.372	2.061	0.311	0.115	0.382	0.537	2.698
Party size	3.094	1.846	1.248	0.685	9.374**	0.002	1.822
Accommodation quality	3.149	2.706	0.443	0.186	26.373***	0.000	2.382
Total spending/per day	140.97	101.623	39.347	19.563	4.497*	0.035	2.636
Spending on entertainment	24.936	20.202	4.734	4.558	0.498	0.481	1.039
Spending on restaurant	37.747	31.200	6.547	4.080	3.281*	0.041	1.805
Spending on shopping	19.316	8.974	10.343	3.053	20.629***	0.000	3.387
Spending on accommodation	51.392	36.417	14.975	10.162	0.346	0.557	1.474
Spending on transportation within a destination	7.575	4.830	2.744	1.220	5.575*	0.019	2.250
Revisit intention	2.734	2.630	0.104	0.071	17.604**	0.006	1.979

Source: Created by author; *Note*: ***p<0.001, **p<0.01, *p<0.05. [a]: day visitor (1)—overnight visitor (2)

Table 4 provides the statistical results that compare the effectiveness of two innovative strategies of event organisation and a trip planner app on stimulating the intention of visitors to travel in off-peak seasons. The results showed that the revisit intention significantly varies between innovation strategies (MD=0.858, p<0.05, t=1.894). Organising events seems more attractive to visitors compared to offering the digital app to revisit destinations in off-peak seasons.

Table 4. The effectiveness of innovation intervention in encouraging visitors to travel in off-peak seasons

Factor	Mean of innovation		Independent Samples Test				
	Event	Digital app	Mean Difference	Std. Error Difference	F (df=208)	Sig.	t
Revisit intention	4.550	3.692	0.858	0.479	6.679*	0.035	1.894

Source: Created by author; *Note*: *: p<0.05

Discussions

Destinations have been dealing with seasonality which refers to imbalance in visitors' number and revenues between peak and off-peak seasons. This is primarily because tourism and hospitality industry is weather-sensitive. Therefore, suitability of weather which is greatly influenced by geographic location of destinations could potentially affect visitors' choice regarding when to travel. Furthermore, institutional factors such as school holidays and cultural or religious events can affect the timing of visit. According to the research findings, visitors' spending patterns per day significantly vary between peak and off-peak seasons. The number of respondents who have recently travelled in peak seasons is significantly higher than off-peak season visitors. However, off-peak season visitors spent higher per day which is in the contrast with the majority of existing literature that supports a higher spending of visitors in peak seasons (Brida and Scuderi, 2013; Marrocu, Paci and Zara, 2015; Zakaria, Numata and Hihara, 2021). This is because the previous studies mainly focused on visitors' total spending per trip,

while this research delve deeper by measuring their spending per day as well. As shown in Figure 2, visitors on average spend £140.97 per day in off-peak seasons whereases they spend £101.62 in peak season.
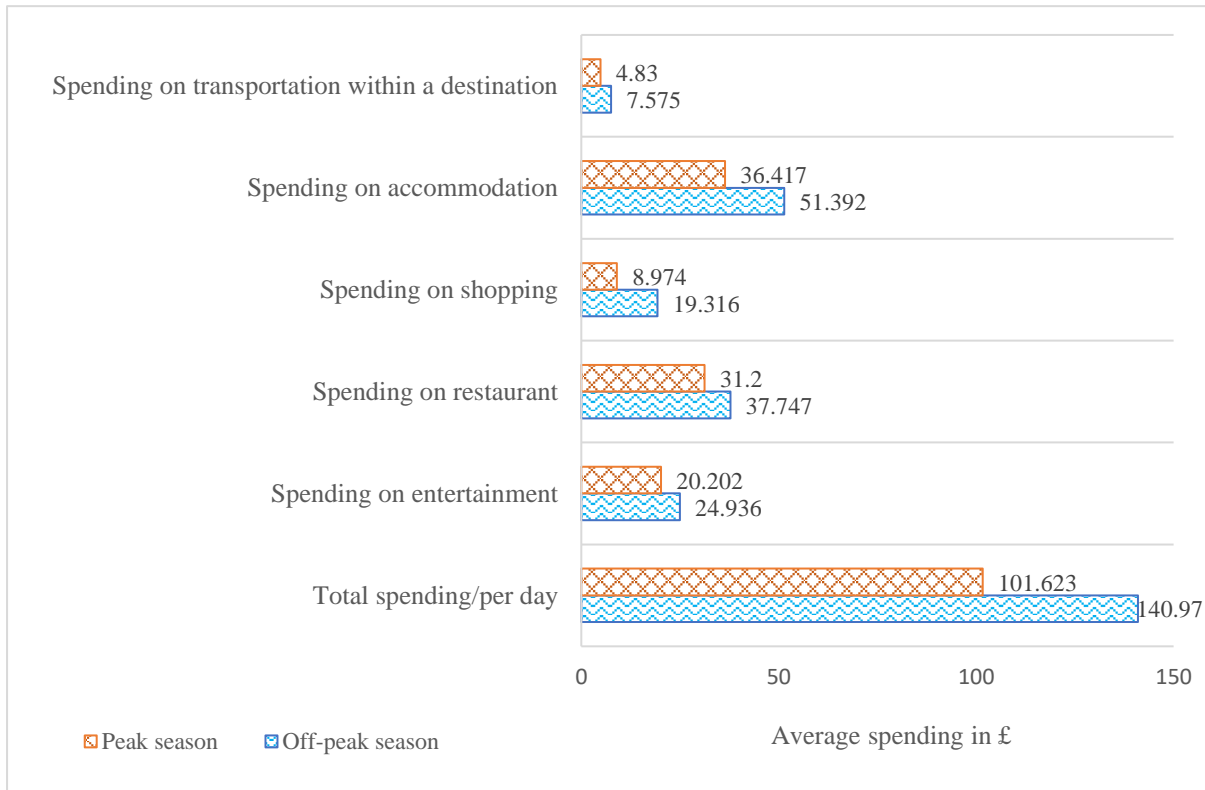

Figure 2. Spending pattern of visitors on different tourism and hospitality sectors during peak and off-peak seasons; Source: Created by author

The main differences in spending per day between the seasons were attributed to restaurant, shopping, and transportation expenses. Visitors spent less on accommodation in peak seasons, as the purpose of most of them was VFR (Figure 3). In line with Laesser and Crouch (2006) and Park *et al*'s (2019) findings, although the VFR could generate significant revenue for other sectors of tourism and hospitality such as food and beverage and shopping, it is not preliminarily beneficial to the accommodation sector. Because the visitors who travel to visit their friends and relatives may not often spend money on accommodation. This highlights the

significance of understanding the spending patterns of visitors on different sectors between peak and off-peak seasons.

In contrary to peak season visitors, the word count cloud represents the main motivation for those traveling during off-peak seasons was to attend an event or festival (Figure 3). This confirms that organising unique events or festivals can potentially encourage visitors to travel out of peak season, overcoming specific preferences and habits regarding the time of travel as well as the influence of climatic and institutional factors (Rossello, Riera and Sanso, 2004; Duro and Turrión-Prats, 2019). Visitors generally do not intend to change their travel timing unless destinations provide attractive offerings in off-peak seasons (Feng, Cai and Zhu, 2006; Ferrante, Lo Magno and De Cantis, 2018; Paradigms, 2019). In line with the pertinent research, a majority of respondents in this study who travelled during peak seasons stated a preference for going on a trip during the same seasons to enjoy pleasant weather or take advantage of extended holidays. Therefore, innovative offerings are required to encourage travel during off-peak seasons.

Figure 3. A visualisation of reasons for travel in peak (left) and off-peak (right) seasons; Source: Created by author; Source: Created by author

Relevant research in tourism and innovation literature discusses how innovative strategies could increase the attractiveness of a destination (Candi, Beltagui and Riedel, 2013; Nieves and Diaz-Meneses, 2016) and to improve visitors' experience (Paradigms, 2019). For instance, unique events and festivals not only enhances the attractiveness of a destination, but also contributes to successful destination management and generation of sustained revenue by influencing visitors time of visit (Van Niekerk, 2017; Richards and King, 2022). Attracting more visitors in off-peak seasons can potentially generate significant economic benefits to many businesses within tourism destinations. Because the findings of this research revealed that visitors often travel in larger groups, stay longer and spend more on different activities per day during off-peak seasons, which is in accordance with Scholtz, Kruger and Saayman (2015).

Despite the importance of innovations in addressing the seasonality issues that tourism destinations encounter, some innovative strategies may be more effective than others in addressing same challenges (Clark, Wright and Ridgway, 2019). An innovative strategy is effective if it can both satisfy the expectations of visitors and encourage them to reschedule their time of visit (in terms of season) to a destination (Hankammer *et al.*, 2019). To this end, this research evaluated the effectiveness of two innovative strategies of organising a festival and offering a trip-planner app as a digital innovation in stimulating visitor's intention to travel during off-peak seasons. According to the statistical results of the scenarios testing, the mean differences of the innovative strategies are significant and event organisation seems more effective to attract visitors out of peak seasons or extend tourist season. Although digital innovations could make the visitors more organised, independent, and involved in the tourism activities (Shin and Baek, 2023) and improve their travel experience (Jeon, Kang and Desmarais, 2016), the findings show that visitors found events more attractive. This is in line with the literature that emphasises on the important role of events and festivals in enhancing destinations' attractiveness and extending tourist season (e.g., Ritchie and Beliveau, 1974;

Higham and Ritchie, 2001; Getz, 2010; Connell, Page and Meyer, 2015). Organising events and festivals has been also supported by many businesses including hoteliers as it is believed that would help to utilise the underused capacities and cut down the fixed costs (Getz, 2008).

Conclusion and Implications

Theoretical contributions

This empirical research deepens the current knowledge on how seasonality influences behaviours of visitors and their travel characteristics. There are censuses about negative impacts of seasonality in the hospitality and tourism industry. Yet, the variation of visitors' behavioural patterns in peak and off-peak seasons has remained understudied. This research contributes to the seasonality literature by a statistical comparison of visitors' behaviour in peak and off-peak seasons. It also advances the current knowledge of innovation in the hospitality and tourism industry as it investigates the effectiveness of two innovative strategies, namely offering a trip-planner app and event organisation, in encouraging visitors to travel during off-peak seasons and extending tourist season. The most effective innovative strategy in addressing seasonality is also identified.

The findings of the study showed that most of respondents visited a destination during peak seasons, and they also preferred to go on a trip in the same season. Interestingly, peak-season visitors spent less per day than the other group who travelled during off-peak seasons, mainly because they travelled with a smaller group and preferred staying with friends and family. While the ratio of number of overnight visitors to day visitors as well as their duration of stay in off-peak seasons are higher than peak seasons. The off-peak season visitors also preferred staying in higher quality accommodations which make them higher spenders compared to peak season visitors. Particularly, visitors' spending on restaurants, shopping, and local transportation in off-peak seasons is significantly greater than the visitors' spending during

peak seasons. More importantly, the revisit intention of those who visited a destination in off-peak seasons is higher than the revisit intention of peak season visitors, mainly because attractions are less crowded.

According to the statistical comparison of behavioural patterns of visitors between two seasons, this study revealed that visitor's behaviours in off-peak seasons are more favourable of peak season visitors as they spent more and had higher intention to revisit the same destination in the future. Therefore, off-peak seasons are not a challenge itself as the visitors travelling in these periods are high spender, but the uneven distribution of visitor numbers and revenues throughout the year is the problem. Therefore, innovative strategies are needed to encourage visitors who tend to travel during peak seasons to reschedule their trip to off-peak seasons, which could address the unfavourable consequences of seasonality.

This study compared the effectiveness of two innovative strategies of organising an event and offering a trip-planner app. The results showed that the events that could offer unique and new experiences are more likely to stimulate the intention of visitors to visit a destination in off-peak seasons. It means that visitors did not find the digital app appealing enough to encourage them to travel to the destination in off-peak seasons in comparison to event/festival, which is explainable by the theory of Jobs-to-be-Done that enlightening some innovative strategies may be more successful to achieve desired outcomes.

Practical implications

This study recommends three practical implications. *First*, practitioners need to develop and implement innovative strategies that are effective enough to persuade more visitors to travel in off-peak seasons. Events and festivals could offer unique experiences to visitors, therefore encourage them to visit a destination in off-peak seasons. However, it is important to ensure the events remain distinctive by including new and unique items to the events' agenda and

activities. *Second*, policy makers need to be aware of functionality and consequences of the innovative strategies as not all of them could lead to desired outcomes. For example, digital innovation (trip-planner app) was not as effective as events and festivals to stimulate visitors' decision-making to travel during off-peak seasons. This highlights the significance of conducting pre-test by capturing the views of the potential end-users about possible effects of the innovative strategies. This would help policy makers, investors, and managers to avoid future mistakes and investment failure. *Third*, destination managers need to collaborate with relevant stakeholders such as DMOs, Creative companies, visitors, residents to plan through organising ideation and brainstorming workshops to encourage creative thinking and co-developing innovative ideas. Then, the innovative ideas need to be posterized based on specific criteria such as significance of the problem (e.g., seasonality and imbalance of visitors' number), feasibility, and required resources.

Limitations and recommendations for future research

This research discusses three limitations that could be directions for future studies. *First*, it investigates the variation of visitor's behavioural patterns between peak and off-peak seasons using cross-sectional data and a quantitative method to assess the effectiveness of the innovative solutions to tackle the seasonality issue in a destination. This study used an online survey to collect views of potential travellers. Future research could conduct in-situ survey by targeting participants of an event and users of an innovative digital app. Furthermore, this was a self-reported survey, future research could use multi-source data and more powerful modelling approaches such as agent-based modelling to simulate the impact of the innovation strategies on the behaviour of visitors.

Second, this research also compared the outcomes of two innovation strategies of event organisation and offering a digital app in encouraging visitors to travel during off-peak seasons.

Future research could investigate the effectiveness of other strategies such as innovative marketing campaigns, AI-generated innovations, and new infrastructure development in attracting more visitors during off-peak seasons and address the disparity in the number of visitors and revenues. For example, digital innovations could be utilised to create more personalised communication and customised offerings. This strategy could increase loyalty and provide an opportunity to increase the revenue of businesses by cross-selling and upselling. Furthermore, using omnichannel could improve the experience of visitors in various ways such as promoting new offering and innovations appealing to the visitors, receiving and addressing the feedback of visitors to enhance quality of the services, and establishing a more integrated and effective customer relationship management. *Third*, this study utilised a consumer centric approach and focused on visitors' perspective as the end-users of innovations, however, innovation development and implementation involve a complex process where views and roles of different stakeholders should be included in the modelling process and impact assessments.

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