Research note

Impact of government policy and environment quality on visitor loyalty to Taiwan music festivals: Moderating effects of revisit reason and occupation type

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HIGHLIGHTS

- Model the effects of government policy and environment quality on visitor loyalty.
- Government policy affects environment quality, visitor satisfaction, and loyalty.
- Revisit reason moderates the relationship between policy and visitor loyalty.
- Revisit reason moderates the relationship between policy and environment.
- Occupation type moderates the relationship between policy and environment.

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ABSTRACT

Tourists’ repeat patronage is a prerequisite for sustainable festivals. Past studies have examined tourist cognition, affection, and conation to festivals. Government involvement in festivals has increased during the past decade; however, few studies have examined how government policy and environment quality influence visitor loyalty to festivals. Using sample data collected from 931 visitors during spring music festivals held in Southern Taiwan, this study used a structural equation model (SEM) with latent variables to examine these influences. The results suggest that government policy positively influences perceived environment quality, visitor satisfaction, and loyalty to festivals. Furthermore, the results from a multigroup SEM approach reveal that tourists’ revisit reason (revisit festival versus other) and occupation type (student versus nonstudent) moderate the relationships between government policy and festival loyalty. Implications on festival planning and government policymaking are discussed.

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1. Introduction

Research on festivals and event tourism has increased since 2008 (Getz & Page, 2015). Studies have been conducted on tourism from various perspectives: marketing targeted place (Boo & Busser, 2005; Felsenstein & Fleishver, 2003), generating economic benefits (Litvin &etter, 2006; Mckercher, Mei, & Tse, 2006), and preserving local culture (Xie, 2004). Festivals have been identified as having two well-distinguished performative forces, namely hosts and guests ( Giovanardi, Lucarelli, & Decosta, 2014), and have been regarded as a mixed industry in which the public, nonprofit, and private sectors compete and collaborate in attracting and satisfying visitors ( Andersson & Getz, 2009). Government interventions have been deemed necessary because festivals and tourism are related to public goods, merit goods, and social equity. The extent to which government is involved in festivals depends on stakeholder relationships. For example, local authorities may be regarded as the most important stakeholder for public festivals, whereas spectators are likely to be considered the most critical stakeholder for nonprofit and private festivals ( Andersson & Getz, 2009). All festival types depend on venues, facilities, public space, and streets that must be maintained, more or less, by public authorities; i.e., festivals require tangible resources and political support to implement. Therefore, public–private partnerships are common. Generally, government policy refers to the government’s input into or support of the planning and staging of festivals; such intervention is reflected in the design of the servicescapes and the management policies and procedures of festivals. Justifying government interventions has become the most crucial public policy issue.
facing event tourism (Getz & Page, 2015). In addition, through participation and involvement, the stakeholders experience various types of values (Prebensen, 2010). The sponsors (e.g., local authorities) may receive amplified value with more spectators' participation, which aids public organizations in retaining legitimacy. Recent research has suggested that government policy indirectly affects hosts' loyalty to festivals (Lee, Liu, Chung, & Ho, 2015). Generally, guests (attendees) have been the study focus in festival and event tourism, which is primarily driven by the goal of economic benefits determined by their direct expenditures at festivals (Lee, Lee, Lee, & Babin, 2008; Mason & Paggiaro, 2012). Despite the importance of government's role, little research has addressed the relationship between government policy and personal perceptions, attitude, and loyalty intention in event tourism. Government intervention is likely to have been justified when festival attendees are satisfied and willing to revisit.

Spring music festivals are held annually in Southern Taiwan during spring break. Spring Scream at Kenting National Park and Spring Wave near Hengchun Airport are two of the most famous festivals. Since 2007, approximately 150,000 to 500,000 person trips have been made annually (Spring Scream, 2015). Both the aforementioned festivals are outdoor events and each lasts from 2 to 10 days. In addition to music, the festivals feature film festivals, art exhibits, stalls, food vendors, and camp sites. Various other annual music and entertainment events are held in nearby areas. Kenting National Park is a popular site among international tourists. The number of tourist visits (both international and domestic) reached 8.37 million in 2014 (Kenting National Park, 2015). The spring music festivals are held in or near the park and provide access to multiple attractions including the beach, maritime activities, and ecotourism. Such activities attract large numbers of young people. By understanding the factors and relationships affecting loyalty to festivals, government administrators and festival planners can attract more festivalgoers, thus generating more economic benefits, increasing the sustainability of festivals, and justifying government involvement in festivals. Festival patrons are the primary driver of sustainability, on which total festival impact is measured by incorporating economic, sociocultural, and environmental impact (Andersson & Lundberg, 2013).

Furthermore, moderators between government policy and attendees' festival loyalty were examined. Because the number of tourists visiting Kenting National Park far exceeds that attending the music festivals, attracting those tourists to the festivals would increase the festivals' economic impact (direct expenditure) on the local community. In this study, the respondents' reason for possibly revisiting the Kenting area was classified as "revisit festival" or "other" (e.g., beautiful ocean scenery and natural ecological environment), and the respondents were grouped according to occupation type as either student or nonstudent (e.g., service industry, self-employed, and other). Past behavior diminishes perceived risk (Oquell et al. & Wood, 1998), which can also be reduced through government involvement in festivals. Lower perceived risk may require less government intervention to reduce perceived risk; thus, government policy plays a less influential role for attendees reporting intention to return for festivals compared with those intending to return for other reason. Similarly, students habitually expect protection and guidance from public authorities such as schools and governments; thus, government policy likely has a stronger influence on the festival loyalty of students compared with nonstudents. Therefore, the aims of this study were to investigate the loyalty of attendees to festivals by incorporating government policy and the two aforementioned moderators. The following overarching questions guided the course of this study:

1. What are the underlying factors and causal relationships that determine attendee loyalty to music festivals?
2. How do revisit reason and occupation type moderate the relationships between government policy and attendee loyalty to music festival?

2. Literature review and hypotheses

2.1. Government policy

Government interventions in festivals and tourism are multifaceted. Festivals and tourism are strongly associated with the terms public goods, merit goods, and social equity (Andersson & Getz, 2009), all of that require government involvement. For example, the public goods argument states that public authorities, because they typically own tourist attractions, natural resources, and cultural resources, should manage and make these sites available to everyone. Unless public goods (e.g., concert venues and funding) can be justified, the government role in event tourism is likely to face opposition and problems (Getz & Page, 2015). A growing interest in the government policy dimension reflects both the magnitude of the event sector and related controversies. Event policy has been related to sustainability and social responsibility, governance, stakeholders participation, sociocultural impacts, and resident perceptions and attitudes (Getz & Page, 2015). Considering that festivals and tourism consume public resources, generate waste, and impose negative effects (e.g., traffic and noise) that must be managed or prevented by public authorities, government involvement is almost inevitable. Government intervention becomes politically acceptable when it generates economic, social, or cultural benefits (Hall, 2005; Pearce, 1992). The balance between attracting high visitor numbers and maintaining a safe, clean, and smoothly running festival environment entails efforts by the government. Furthermore, if the tasks that the government performs for festivals and tourism are legitimate in the minds of those served, these achievements could satisfy locals and tourists, and have a determining impact on political trust and the industry (Nunkoo, 2015), thereby making government policy justifiable (Getz & Page, 2015) and politically acceptable (Hall, 2005; Pearce, 1992).

Empirical evidence from previous research suggested that government policy positively influences the value perception of locals, according to an evaluation of the obtained social benefits after considering social costs (exchange theory); this increased value perception by locals further influences their spreading positive word of mouth (Lee et al., 2015). A desirable environment, in and out of festival venues, necessitates the government's active support to provide tourists with a satisfactory experience. Reactive measures by the government are required to monitor and control negative effects such as traffic, environmental problems, waste, and noise. For example, the increased traffic and waste problems incurred during music festivals cannot be solved by the private sector alone. In this study, we use the definition by Lee et al. (2015) of government policy referring to tourists' expectations of support from the government in overseeing all safety and quality measures, controlling illegal music activities, ensuring security, and creating a drug-free environment.

Attendee perception of government support is based on how favorably the government facilitates their consumption experience of environment quality. Effective government support leads to the smooth flow of festivals, which results in consumer satisfaction and repeat patronage of the festival. If government incompetence results in a festival that is disorderly or difficult to travel to, attendees may consider not attending the festival and spread negative word
of mouth (i.e., poor loyalty). A high degree of government support results in high patron loyalty. Therefore, we hypothesized the following:


2.2. Environment quality

Festivals are a large-scale industry in which governments, private firms, and nonprofit organizations collaborate to create tourist products (Andersson & Getz, 2009). Festivals typically create a demand for tourism services at a specific place and time. Consequently, the environment in which festivals operate, namely the festivalscape, has become a research focus (Lee et al., 2008, 2015). Getz and Page (2013) noted that the environmental impact of events and tourism has remained a largely neglected area of academic research. From a macro perspective, environmental impact has been estimated using two concepts, ecological footprint and carbon calculations, and incorporated when assessing the sustainability of festivals (Andersson & Lundberg, 2013). In studies adopting a consumer perspective, the servicescape model has frequently been used to evaluate environmental impacts on customers and employees, with the servicescape seen as affecting a person's cognitive, affective, and actionable responses (Bitner, 1992; Kim & Moon, 2009). The servicescape has been adopted in previous research as an independent variable and as a moderating variable. Consumers often seek quality evidence of servicescape according to various sensory cues and environmental attributes (Lin, 2004; Lin & Worthley, 2012).

Music festival patrons are people who purchase tickets and attend a concert; they are the guests of the festival and participate in the concert voluntarily. The festivalscape refers to the general atmosphere and environment (e.g., concert venues and nearby areas) experienced by patrons (Lee et al., 2008). Other festival patrons are locals or hosts, who might or might not participate in the festival but are involuntarily immersed in the environment that surrounds the festivals. Thus, the festivalscape for these two groups of patrons is related but different. In investigating locals' loyalty to music festivals, the festivalscape was described as the physical environment observed and experienced by local businesses or residents during the music festivals (Lee et al., 2015). Locals are more concerned with the physical environment surrounding concert venues than that inside the venues. However, festival attendees care about the concert venue and lines moving in and out of the venue more than they do with surrounding areas, because the concert venue directly influences their experience. Therefore, the festivalscape in this study is defined as the physical environment observed and experienced by attendees during the Spring Scream and Spring Wave music festivals. Environment quality refers to the quality of the festival exhibitions and concert venue layout, moving line efficiency, and the safety measure arrangement perceived by attendees.

The perceived quality of the servicescape influences affect and customer satisfaction (Siu, Wan, & Dong, 2012). A convention study postulated that comfortable seating, a high-quality soundproof conference room equipped with professional video and audio facilities, and clean and neat restrooms exert the strongest influence on attendee satisfaction (Xuo, Chen, & Lin, 2010). The effect of the environment on loyalty to dance festivals is mediated by patron satisfaction and emotions (Lee et al., 2008). Attendees, during the festival period, typically experience an environment according to the quality of festival exhibitions or concert venue layout, the efficiency of moving lines, the appropriateness of safety measures for the festival, and other environment qualities such as garbage, noise, traffic, and drugs. Environmental cues reflect the joint services of festival policymakers, private firms, and local government. Satisfaction in this regard is attendees' overall evaluation of the consumption experience related to festival services. Patrons are highly satisfied by festivals with festivalscape that they assess favorably (Lee et al., 2008). In addition, if attendees perceive that concert venues are difficult to reach or the festival is disorganized (i.e., poor environment quality), they spread negative word of mouth or leave to visit other attractions, which is an indication of poor loyalty. Environment quality perceived by local businesses or residents directly influences word of mouth (Lee et al., 2015). Therefore, we hypothesized the following:

H4. Environment quality positively influences attendee satisfaction.
H5. Environment quality positively influences attendee loyalty.

2.3. Satisfaction and loyalty

Satisfaction is regarded as reflecting overall satisfaction, the conformation with expectations, and the ideal presumption of a product or service (Fornell, Johnson, Anderson, Cha, & Bryant, 1996). Customer satisfaction has been examined in festival, tourism, and marketing research (Lin & Worthley, 2012; Siu et al., 2012). In the context of the current study, attendees consider a festival service to be a joint service coproduced by festival planners and the local government. Generally, in an outdoor music festival, the government must be involved in venue selection and layout as well as traffic and safety measures to and from the site. Thus, drawing from Fornell et al. (1996), satisfaction is defined in this study as reflecting overall satisfaction, the conformation with expectation, and the ideal presumption of the festival service.

Customer loyalty has been reported as indicating revisit or repurchase intention (Chang & Tseng, 2013; Floh, Zauner, Koller, & Rusch, 2013; Song, You, Reisinger, Lee, & Lee, 2014), word of mouth and preference (Chen & Hu, 2010; Cronin, Brady, & Hult, 2000; Fornell et al., 1996; Lee et al., 2008, 2015), and experience extension (Dong & Siu, 2013). Attendees are voluntarily immersed in the festival environment and customer loyalty results mainly from the consequences of that immersion. The results can yield repeat patronage and positive word of mouth after a favorable experience or avoidance behavior after a negative experience. Satisfaction enhances loyalty (Fornell et al., 1996; Lee et al., 2008) and approach—avoidance behaviors (Lin & Worthley, 2012). Although the relationship between satisfaction and loyalty may not exist in event tourism because eventgoers search for novelty, satisfaction directly and positively affects short-term revisit intention (Assaker, Vinzi, & O'Connor, 2011; Jang & Feng, 2007) but does not directly impact mid- or long-term revisit intention (Jang & Feng, 2007). However, recent research, after an extensive literature review, has generalized that there is a positive relationship between customer satisfaction and loyalty (Kumar, Pozza, & Ganesh, 2013). In event tourism, satisfied attendees will come back to experience this satisfaction again within a short period and spread positive word of mouth. Therefore, the following hypothesis was posited:

H6. Attendee satisfaction positively influences loyalty.

This study was aimed at investigating the relationships among government policy, environment quality, satisfaction, and attendee loyalty to music festivals. Fig. 1 displays the hypotheses of the research model.
2.4. Revisit reason and occupation type considerations

As mentioned, the multifaceted attractions of the spring music festivals and surrounding national park offer various reasons (such as ocean scenery, ecotourism, leisure and entertainment facilities, cultural heritage sites, unique folk customs, and the music concerts themselves) for tourists to revisit. The number of visitors to Kenting National Park substantially surpasses that to the spring music festivals. Therefore, enticing these national park tourists to attend the music festivals is a feasible approach to increasing the number of festival attendees. This calls for a better understanding of tourists’ behavior according to revisit reason. Past attendance of patrons may influence future participation in the festival because past behavior has been identified as a crucial predictor of future behaviors (Leone, Perugini, & Ercolani, 2004). Government policy in music festivals refers to overseeing all safety and quality measures, controlling unlicensed music activities, ensuring security, and creating a drug-free environment, which will likely affect the perceived physical risk of attendees. Physical risk in the tourism literature refers to the likelihood of encountering physical danger, injury, or sickness (Roehl & Fesenmaier, 1992). Perceived physical risk in this study refers to the likelihood of encountering problems regarding safety, security, and drug-free environment during the festival as perceived by attendees. Physical, sociopsychological, and financial risk have been identified as negative predictors of intention to revisit a destination (Chew & Jahari, 2014). Among them, perceived physical risk is applicable to this study. Although perceived risks diminish as a result of repetitive and habitual behavior (Oquellette & Wood, 1998; Sönmez & Graefe, 1998), attendees expressing repeat patronage of festivals may have a lower perceived physical risk compared with those reporting other revisit reasons. Low perceived risk entails less government involvement to reduce perceived risk, meaning that government policy plays a less influential role. Thus, the effects of government policy on loyalty, satisfaction, and perceived environment quality are likely to be less for tourists expressing repeat patronage than for those reporting other revisit reasons. Therefore, the following hypothesis was proposed:

H7. Revisit reason moderates the relationships between government policy and attendee loyalty.

The occupation of tourists was categorized into student and nonstudent. As mentioned, government policy support likely affects the perceived physical risk of attendees regarding the safety, security, and drug-free status of the environment. Generally, students at all levels are less socialized compared with people in other occupations and habitually expect guidance and protection from public authorities such as schools and police departments. In other words, regarding festival attendance, students may hold a higher perceived physical risk compared with nonstudents, and government policy can mitigate this perceived physical risk. Although perceived risk inhibits travel (Chew & Jahari, 2014), a higher perceived risk entails more government policy support to reduce it, meaning that government policy plays a more influential role. Therefore, the influence of government policy on loyalty, satisfaction, and perceived environment quality may be larger for student tourists than for nonstudent tourists, which leads to the following hypothesis:

H8. Occupation type moderates the relationships between government policy and attendee loyalty.

3. Methodology

3.1. Sample and procedure

A survey was conducted during the final 3 days of the spring music festivals. Nine college students approached festival attendees, explained the purpose of this study, and invited them to participate. For example, the Spring Scream music performances were from midday to midnight each day. The survey was conducted at the venue exit from 1:00 PM to 6:00 PM. The attendees’ multiple-entry tickets allowed them to enter and exit the venue multiple times. The students attempted to sample every fourth visitor (assuming that he or she had not been surveyed previously). In total, 931 valid questionnaires were collected.

The respondents were approximately balanced between genders: 51.8% and 48.2% of them were female and male, respectively. The attendees were in the age groups of 17–26 years (69.3%), 27–36 years (24.0%), 37–46 years (3.0%), and other (3.7%). The proportion of single respondents (90.8%) exceeded that of married respondents (9.2%). The respondents’ occupations varied: 50.1% were students, 9.5% were services workers, 8.1% were commerce workers, 6.4% were self-employed, 3.4% worked in manufacturing, 3.0% worked in entertainment, 3.0% were civil servants, 2.7% were military service workers, 2.6% worked in food and beverage, and 9.6% had other occupations. Regarding education level, 69.7% of the respondents were at the college level, 10.0% were at the graduate level, 9.8% were at the high school level, and 8.8% were at the junior college level. The attendees resided in Southern Taiwan (28.8%), Central Taiwan (12.9%), Northern Taiwan (36.7%), mainland China (14.6%), Hong Kong and Macau (3.0%), and other areas (4.0%). The reasons that tourists would revisit the Kenting area were grouped as follows: “spring music festival” (45.9%), “beautiful ocean scenery” (39.8%), and other (e.g., the natural ecological environment, leisure and entertainment facilities, cultural heritage resources, and unique folk customs) (14.3%).

3.2. Instruments

The survey questionnaire comprised 19 items in the first section. Items 1–7 asked about the quality of the environment in which the music festival attendees were immersed, and were adapted from previous studies (Kim & Moon, 2009; Lee et al., 2008). Items 8–13 comprised questions regarding government policy support (Lee et al., 2015; Tourism Management Dept, 2007). Items 1–13 were those most discussed and found to be the most relevant items by a panel of experts comprising county government department heads, representatives of the involved private sectors, and academics. These items also reflected the stipulation in the government legislation (Construction and Planning Agency, 2015). Items 14–16 were
were adapted from past research (Fornell et al., 1996; Yoon, Lee, & Lee, 2010) in which overall visitor satisfaction with festival services was measured. The remaining three items (17–19) measured loyalty (Lee et al., 2008; Yoon et al., 2010). All the measures were answered using a 5-point Likert scale with anchors ranging from 1 (strongly disagree) to 5 (strongly agree). A high score indicated a highly positive perception of the festival.

The second questionnaire section included questions on demographic and tourism information such as gender, age, marital status, occupation, education, salary, reasons to revisit the Kenting area, residence area, and the public services with which the respondents were most dissatisfied.

3.3. Testing measurement model

Confirmatory factor analysis (CFA) was performed using LISREL 9.10. An initial CFA analysis of the measurement model indicated a poor model fit, as indicated in Table 1. The ratio of chi-square over degree of freedom exceeded the acceptable level of 3.0. Therefore, the residuals and modification indices were examined to identify specific areas of problematic fit. The indicator variance of each item was also examined to determine whether substantial amounts were explained. As a consequence, six of the 19 items were eliminated. Table 2 shows the resultant measurement scales. The revised measurement model has an adequate model fit, as displayed in Table 1. Reliability, convergent validity, and discriminant validity were then evaluated for the adequacy of the measurement model. As shown in Table 2, the Cronbach’s α ranged from 0.767 to 0.886, which exceeded 0.7, indicating satisfactory internal consistency and reliability for all constructs. In addition, the composite reliability values ranged from 0.794 to 0.914 exceeding the acceptable level of 0.7. For convergent validity, the results indicated that estimated loadings for all indicators were significant at p < .001. All of the average variance extracted (AVE) values for each construct, ranging from 0.526 to 0.724 (Table 3), were higher than 0.5, suggesting that each construct was strongly related to the set of respective indicators. These results indicated acceptable convergent validity of the measurement model research variables. As shown in Table 3, the diagonal values (the square root of AVE) exceeded the inter-construct correlations, suggesting satisfactory discriminant validity (Fornell & Larcker, 1981). Therefore, the measurement model was acceptable.

4. Findings

4.1. Structural equation model results

The research model was evaluated using a structural equation model (SEM). The structural model was found to have an acceptable fit according to the fit indices presented in Table 1. To respond to the first research question, a final full model was derived (Fig. 2). The results show that government policy affects perceived environment quality, which together affect satisfaction, consequently affecting attendee loyalty. All the factor means were higher than the neutral state of 3, as shown in Table 3, indicating positive perception, affection, and conation regarding the music festivals. Table 4 indicates that all six direct paths exhibit a p value of less than 0.05, demonstrating that all six hypotheses are supported. The model explains 51.4%, 47.9%, and 9% of the variance in loyalty, satisfaction, and environment quality, respectively.

4.2. Moderating effects of revisit reason and occupation type

Multigroup SEM approaches were performed to test the moderating effects of revisit reason and occupation type on the research model and thus identify the differences in path coefficients between groups (Kline, 1998). A factor loading invariance among the groups was conducted first by testing the significance of the chi-square differences between two CFA models, one in which the factor loadings were constrained to be the same between both groups and the other without constraints. As shown in Table 5, the chi-square difference was nonsignificant (Δχ² (19) = 25.20, p < .05), suggesting a factor loading invariance. Therefore, a series of multisample SEMs was performed to test and identify the differences in path coefficients between these two groups. Table 5 indicates that revisit reason moderates the relationships of government policy on environment quality and visitor loyalty, with significant differences in the chi-square values (Δχ² (1) = 6.91, p < .05; Δχ² (1) = 3.94, p < .05). Fig. 2 illustrates the moderating effects of revisit reason on the relationships in the path model. The direct effect of government policy on loyalty was significantly stronger for the tourists who reported “other” as their revisit reason (γ = 0.138, p < .05, N = 504) than for those who reported “revisit festival” as the reason (γ = 0.028, p > .05, N = 427). The influence of government policy on environment quality was stronger for the tourists who reported “other” as their revisit reason (γ = 0.389, p < .05) than for those who reported “revisit festival” as the reason (γ = 0.212, p < .05). Thus, these moderating effects of revisit reason on the model relationships supported H7.

As shown in Table 6, the chi-square difference between the two occupation groups was nonsignificant (Δχ² (19) = 26.97, p > .05), suggesting a factor loading invariance. Table 6 indicates that occupation type moderates the relationship between government policy and perceived environment quality, because the chi-square difference was significant (Δχ² (1) = 7.32, p < .05). Fig. 2 presents the moderating effect of occupation type on the relationship in the path model. The direct effect of government policy on environment quality was significantly stronger for the students (γ = 0.429, p < .05, N = 466) than for the nonstudents (γ = 0.208, p < .05, N = 465). These moderating effects of occupation type on the research model supported hypothesis H8.

5. Discussion and implications

Research investigating the relationships between government policy and attendee loyalty to music festival is limited. This study contributes to the tourism literature in two regards. First, this research addresses the relationships between government policy

### Table 1

<table>
<thead>
<tr>
<th>Model</th>
<th>χ²</th>
<th>df</th>
<th>χ²(df &lt; 3.0)</th>
<th>RMSEA &lt; .08</th>
<th>SRMR &lt; .05</th>
<th>GFI &gt; .90</th>
<th>AGFI &gt; .80</th>
<th>NNFI &gt; .90</th>
<th>CFI &gt; .90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Measurement</td>
<td>628.96*</td>
<td>146</td>
<td>4.31</td>
<td>0.06</td>
<td>0.042</td>
<td>0.93</td>
<td>0.91</td>
<td>0.97</td>
<td>0.97</td>
</tr>
<tr>
<td>Revised Measurement</td>
<td>104.64*</td>
<td>59</td>
<td>1.77</td>
<td>0.029</td>
<td>0.025</td>
<td>0.98</td>
<td>0.97</td>
<td>0.99</td>
<td>0.99</td>
</tr>
<tr>
<td>Structural</td>
<td>104.64*</td>
<td>59</td>
<td>1.77</td>
<td>0.029</td>
<td>0.025</td>
<td>0.98</td>
<td>0.97</td>
<td>0.99</td>
<td>0.99</td>
</tr>
</tbody>
</table>

* Note. N = 931.
* * p < .05.
* * * Recommended values.
and attendee loyalty from conceptual and empirical standpoints, and finds that government policy directly and indirectly (through environment quality and satisfaction) affects attendee loyalty. Few studies have addressed the relationships between government policy and loyalty at the personal (attendee) level, though prior research has found an indirect relationship at the societal level (Lee et al., 2015). This study, as does Lee et al. (2015), echoes the residents and local businesses in the context of music festivals. From a practical point of view, government policy directly and indirectly affects attendee loyalty and occupation type is a significant moderator of government policy with loyalty and with environment loyalty, and occupation type is a significant moderator between government policy and environment quality.

The first major finding of this research is the identification of positive direct and indirect relationships between government policy and attendee loyalty. Research on the role of government policy in event tourism has been broad in scope (Getz & Page, 2015) encompassing, for example, stakeholder participation, resident perception and attitudes, sociocultural impacts, governance, and sustainability and social responsibility. The music festivals in this study (i.e., Spring Scream and Spring Wave) were planned by private firms and licensed, venue-subsidized, and/or partly funded by government authorities, and organized through the joint efforts of private–public partnerships. Particularly, private festival planners, in applying for holding outdoor music activities, must comply with the open-accessed guidelines stipulated by government legislation (Construction and Planning Agency, 2015) and contract with the government authority after approval. Although festivalgoers may or may not be aware of those policies, considering the in

![Fig. 2. Results of structural equation modeling.](image-url)

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Summary of measurement scales.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct</td>
<td>Measure</td>
</tr>
<tr>
<td>Environment quality (EQ) (composite reliability – 0.794, Cronbach’s α – 0.767)</td>
<td></td>
</tr>
<tr>
<td>eq1 Festival exhibitions or concert venues are well laid out</td>
<td>3.46 (0.93) 0.746</td>
</tr>
<tr>
<td>eq2 The moving lines of the festival are smooth</td>
<td>3.39 (0.98) 0.749</td>
</tr>
<tr>
<td>eq3 Safety measures for the festival are well arranged</td>
<td>3.44 (0.88) 0.679</td>
</tr>
<tr>
<td>Government policy (POL) (composite reliability – 0.870, Cronbach’s α – 0.875)</td>
<td></td>
</tr>
<tr>
<td>pol1 To ensure quality and safety, private sectors should have self-discipline, promise to enhance the safety maintenance, and bear the extra social costs</td>
<td>3.86 (0.98) 0.750</td>
</tr>
<tr>
<td>pol2 Illegal musical activities should be controlled or banned by the public authority</td>
<td>3.95 (1.01) 0.791</td>
</tr>
<tr>
<td>pol3 I support the police use of detectors to investigate dangerous metal goods at the entrance of concert venues</td>
<td>3.89 (1.03) 0.844</td>
</tr>
<tr>
<td>pol4 I support the police use of anti-narcotics police dog for drug enforcement at concert venues</td>
<td>3.90 (1.08) 0.806</td>
</tr>
<tr>
<td>Satisfaction (SAT) (composite reliability – 0.831, Cronbach’s α – 0.805)</td>
<td></td>
</tr>
<tr>
<td>sat1 Festival services exceed my expectation</td>
<td>3.21 (0.92) 0.705</td>
</tr>
<tr>
<td>sat2 Performance is close to the ideal festival service</td>
<td>3.26 (0.91) 0.717</td>
</tr>
<tr>
<td>sat3 Overall, I am satisfied with the festival services</td>
<td>3.45 (0.93) 0.856</td>
</tr>
<tr>
<td>Loyalty (LTY) (composite reliability – 0.914, Cronbach’s α – 0.886)</td>
<td></td>
</tr>
<tr>
<td>lty1 I will say positive things about this festival to other people</td>
<td>3.86 (0.84) 0.846</td>
</tr>
<tr>
<td>lty2 I will keep attending the festival if it is held again in the future</td>
<td>3.77 (0.90) 0.856</td>
</tr>
<tr>
<td>lty3 I will recommend this festival to my relatives and friends</td>
<td>3.80 (0.84) 0.850</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Table 3</th>
<th>Discriminant validity for the measurement model.</th>
</tr>
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<tbody>
<tr>
<td>Construct</td>
<td>POL</td>
</tr>
<tr>
<td>POL</td>
<td>0.638</td>
</tr>
<tr>
<td>EQ</td>
<td>0.526</td>
</tr>
<tr>
<td>SAT</td>
<td>0.581</td>
</tr>
<tr>
<td>LTY</td>
<td>0.724</td>
</tr>
</tbody>
</table>

Note: Diagonals (in bold) represent the square root of the AVE, and the off-diagonal entries are the factor correlations. POL = government policy, EQ = environment quality, SAT = satisfaction, LTY = loyalty.
providing concert venues, funding, and security. If government policy can result in more visitors, which generates more economic benefits to the local community, then all interested parties will consider government intervention to have been justified according to the public goods ideal. This is in accordance with the argument that government intervention must be justified to prevent the likely opposition and problems in event tourism (Getz & Page, 2015).

The second major finding of this study is the identification of a direct and positive relationship between government policy and environment quality, and a direct and positive relationship between environment quality and loyalty. Past research has largely neglected the environmental impacts of events and tourism (Getz & Page, 2015). Considering the resources consumed and macro and micro environmental outcomes is necessary during event planning (Case, 2013). From a macro perspective, environmental impact has been estimated according to ecological footprint and carbon calculations measured in terms of global hectares and/or tons of CO2 emissions. Environmental impact is expressed as the monetary value of the optimal alternative use of a resource and incorporated when assessing the sustainability of festivals (Andersson & Lundberg, 2013). By contrast, from a micro perspective, environment quality in this study refers to the attendee consumption experience of the tangible and intangible environment (e.g., festival exhibitions and concert venue layout, moving line efficiency, and safety arrangements) in which festivals operate. Notably, the term “environment” has different meanings between macro and micro viewpoints; therefore, the environmental impacts vary. As argued by Andersson and Lundberg (2013), the total festival impact from a sustainability perspective comprises economic, sociocultural, and environmental impacts. Environmental impact was reported as having little importance for the total assessment, and became negligible from an economic perspective because of the low market value of emission rights. The current study found that environment quality as perceived by attendees has direct and indirect (through satisfaction) positive effects on loyalty. This result suggests that favorable environment quality affects visitor patronage, thus generating more economic benefits. Because economic impact (benefit) represents more than half of the total festival impact from a sustainability perspective, perceived

### Table 4

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Determinant</th>
<th>Standardized estimate</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loyalty (R² = 0.514)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6 SAT</td>
<td>0.590**</td>
<td>0.590**</td>
<td>Supported</td>
</tr>
<tr>
<td>H5 EQ</td>
<td>0.134**</td>
<td>0.383**</td>
<td>Supported</td>
</tr>
<tr>
<td>H3 POL</td>
<td>0.076*</td>
<td>0.223**</td>
<td>Supported</td>
</tr>
<tr>
<td>Satisfaction (R² = 0.479)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4 EQ</td>
<td>0.650**</td>
<td>0.650**</td>
<td>Supported</td>
</tr>
<tr>
<td>H2 POL</td>
<td>0.112**</td>
<td>0.197**</td>
<td>Supported</td>
</tr>
<tr>
<td>Environment quality (R² = 0.092)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1 POL</td>
<td>0.303**</td>
<td>0.303**</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Note: *p < .05, **p < .01.

### Table 5

Test results of the multisample SEMs according to revisit reason.

<table>
<thead>
<tr>
<th>Models</th>
<th>χ²</th>
<th>df</th>
<th>χ² df&lt;3.0°</th>
<th>χ² diff</th>
<th>df diff</th>
<th>CFI&gt;-.90°</th>
<th>NNFI&gt;-.90°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Group CFA</td>
<td>170.77*</td>
<td>118</td>
<td>1.45</td>
<td>0.995</td>
<td>0.993</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor Loading Invariance</td>
<td>195.97*</td>
<td>137</td>
<td>1.43</td>
<td>0.994</td>
<td>0.994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple Group SEM Models</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path Invariance</td>
<td>190.87*</td>
<td>134</td>
<td>1.42</td>
<td>0.995</td>
<td>0.994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free POL→EQ</td>
<td>183.96*</td>
<td>133</td>
<td>1.38</td>
<td>0.995</td>
<td>0.994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free POL→TY</td>
<td>180.02*</td>
<td>132</td>
<td>1.36</td>
<td>0.995</td>
<td>0.995</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. N = 931. *p < .05.

### Table 6

Test results of multisample SEMs according to occupation type.

<table>
<thead>
<tr>
<th>Models</th>
<th>χ²</th>
<th>df</th>
<th>χ² df&lt;3.0°</th>
<th>χ² diff</th>
<th>df diff</th>
<th>CFI&gt;-.90°</th>
<th>NNFI&gt;-.90°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Group CFA</td>
<td>197.84*</td>
<td>118</td>
<td>1.68</td>
<td>0.993</td>
<td>0.990</td>
<td></td>
<td></td>
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<tr>
<td>Factor Loading Invariance</td>
<td>224.81*</td>
<td>137</td>
<td>1.64</td>
<td>26.97</td>
<td>19</td>
<td>0.992</td>
<td>0.991</td>
</tr>
<tr>
<td>Multiple Group SEM Models</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path Invariance</td>
<td>215.23*</td>
<td>134</td>
<td>1.61</td>
<td>0.992</td>
<td>0.991</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free POL→EQ</td>
<td>207.91*</td>
<td>133</td>
<td>1.56</td>
<td>0.993</td>
<td>0.992</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. N = 931. *p < .05.

*a Recommended values.*
environment quality affects festival sustainability. Briefly, the perceived environment quality of festival positively impacts on sustainability, whereas the environmental impact (estimated using ecological footprint and carbon calculations) has little effect on sustainability. One is a causal relationship between festival environment and sustainability; however, the other is a relative weight of the environmental impact on the total festival impact from a sustainability perspective. The result implies that, assuming environmental costs are not underestimated, festival planners should focus on improving the festivalscape rather than the environmental considerations related to ecological footprints and carbon calculations to enhance the sustainability of music festivals. In addition, the current study found that government policy directly influences environment quality, which consequently affects attendee loyalty. This result is consistent with that reported in a study of businessmen and residents in the area where the festivals are held (Lee et al., 2015). When government policy is enforced, the environment quality experienced by participants improves, resulting in the increased loyalty of both attendees and locals. These findings imply that government significantly affects the consumption experience regarding environment quality of all interested parties, and their patronage. The implication is that government should ensure tourist safety and the self-discipline of involved private-sector entities, ban unlicensed music activities, and search for drugs or dangerous goods in concert venues; doing so can protect the environment components such as festival exhibitions and concert venue layout, moving line efficiency, and safety, consequently leading to satisfaction and patronage.

The third major finding of this study is the presence of snowball effects along the model paths. The total effects of each antecedent on loyalty are, in ascending order, government policy, environment quality, and satisfaction, indicating that the total effects of these antecedents increase along the cognition–affection–conation path. Similarly, the total effects of government policy and environment quality on satisfaction increase along the cognition–affection path. Government policy, which appears to induce the snowballing process, is amplified or enlarged through environment quality and satisfaction, and then affects loyalty. Note that the results are consistent with the direct effect of satisfaction on short-term revisit intention (Assaker et al., 2011; Jang & Feng, 2007), and that of satisfaction on loyalty intention (Kumar et al., 2013; Yoon et al., 2010); furthermore, the direct effect of environment quality on satisfaction is supported by the findings of prior research (Lee et al., 2008). These phenomena are encouraging to both government policymakers and festival planners. Policy and strategy are often formulated at the local government level. The snowball effects imply that even a small government effort can become enlarged and affect environment quality, satisfaction, and loyalty. Therefore, festival planners, in addition to promoting music, art, and leisure activities, should create favorable environment quality, with, for example, efficiently moving lines, well-planned safety measures, and well-arranged exhibitions or concert venues. However this environment quality cannot be achieved without government support; thus, festival planners should seek the assistance of government policymakers, which is feasible because government intervention must be justifiable by the outcome of this public–private partnership (Getz & Page, 2015). Regarding policymakers, the results suggest that the government should proactively expend efforts to enhance policy support, which consequently improves environment quality, increases the satisfaction of participants, and leads to visitors' festival patronage. These achievements through government interventions may be viewed favorably by tourists and those served, thereby justifying such government interventions. The snowball effects intensify the importance of government policy on the festival loyalty of attendees. This result is also similar to that of Prebensen (2010), who argued that the sponsors (e.g., local government) receive amplified value with more spectator participation.

The fourth major finding of this study is that revisit reason significantly moderates the relationship between government policy and attendee loyalty and that between government policy and environment loyalty. In addition, occupation type was found to significantly moderate the relationship between government policy and environment loyalty. These results show that government policy exerted larger effects on loyalty intention and environment quality for the respondents who expressed “other” as their revisit reason than for those who reported “revisit festival” as the reason. The results also indicate that government policy was seen as having a larger effect on environment quality among the students than among the nonstudents. This finding is consistent with and supported by prior research in habitual behavior and perceived risk, suggesting that government policy reduced perceived physical risk for the respondents who expressed “other” as their revisit reason and the students, and consequently plays a more critical role in enhancing environment quality and/or revisit intention (Chew & Jahari, 2014; Leone et al., 2004; Oquellette & Wood, 1998; Sonmez & Graefe, 1998). These results have practical implications. First, among respondents, 45.7% reported that the spring music festivals as the main reason that they would revisit the Kenting area. If the aim is to attract the remaining 54.1% of tourists (who reported other reasons) to the music festivals, then the festival planners and managers must seek more government policy support by strengthening the public–private partnership, which had a stronger effect on attendee revisit intention among the tourists who expressed “other” as their revisit reason compared with those who reported “revisit festival” as the reason. In addition, government policymakers should actively work to strengthen the private sector's self-discipline, controlling or banning unlicensed music activities, and preventing dangerous goods or drugs from entering concert venues so that those tourists can form an increasingly favorable perception of environment quality. Second, students are the major consumers of spring music festivals and comprised 50.1% and 45.7% of the respondents in this study and a prior study (Tourism Management Dept, 2007), respectively. If the goal of festival planners or managers is to attract more students to music festivals, they should request stronger government policy support, which enables students to form a higher perception of environment quality, compared with nonstudents, which consequently affects satisfaction and intention to attend festivals, thereby attracting more attendees and indirectly leading to a sustainable festival. This finding has substantial practical implications. For example, student populations and birthrates in Taiwan (particularly Southern Taiwan) have been steadily decreasing. Thus, attracting more students from Northern Taiwan or abroad to the Kenting music festivals is imperative. By improving government policy support, students or traditional tourists (i.e., nonmusic festival attendees) would have higher intentions to attend the festivals compared with the nonstudents or festival attendees, respectively. The demographics of the study populations have shifted in the same direction. In this study, approximately half of the festival attendees were from Central or Northern Taiwan, 14.6% were from mainland China, and 3% were from Hong Kong or Macau. These numbers differ considerably from those of a previous survey (Tourism Management Dept, 2007) which showed that most attendees were from Southern Taiwan, with few from abroad. Therefore, attracting students or tourists from afar is necessary. Another favorable situation is that the number of tourists and exchange students from mainland China or foreign countries has sharply increased. Government involvement in festivals reduces those people's perceived physical risks of attending music festivals,
which consequently exerts greater effects on their intention to attend the festivals. This is in accordance with the negative influence of perceived physical risk on revisit intention (Chew & Jahari, 2014). This study provides insights into enhancing the sustainability of music festivals.

The limitations of this study should be acknowledged. First, this study focused primarily on how government policy influences patrons’ loyalty through the mediators of environment quality and satisfaction as well as moderators such as revisit reason and occupation type. Other festivalscape dimensions, such as music program content, staff, facilities, and information, were not included in the study. Future research can incorporate these dimensions. Second, the notion that students may hold a higher perceived physical risk compared with nonstudents regarding festivals must be examined further, though the empirical results of this study appear to support it. Differences may exist among students of different cultures as well as among patrons of different age groups. Third, perceived physical risk or perceived risk as a whole (high versus low perceived risk) could be another moderator in the model relationships according to the reasoning of this study. Future studies can explore in this direction. Fourth, this study was conducted in Taiwan. Stakeholders comprised government authorities, festival organizers, residents, and local businesses, and visitors mainly from Taiwan, mainland China, Hong Kong, and Macau. The study context was limited to Asian perspectives. Readers should be cautious in generalizing the results to non-Asian contexts. Finally, because music festivals are an economically valuable service sector, their linkage or leakage effects in the local area, which is critical to local governments, can also be examined in future research.

6. Conclusion

In conclusion, government policy was empirically shown to positively influence the festival loyalty of various interested parties, namely tourists, residents, and local businesses. Deliberate intervention by the local government might be required in music festivals to balance a festival attracting increasing numbers of patrons and a festival consuming resource, generating waste, and imposing negative effects. Festival planners, in addition to promoting music, art, and leisure activities, should create a highly favorable environment quality, which can be achieved only through government involvement. Therefore, festival planners should aggressively request government support to enforce private-sector self-discipline, maintain orderly business activities, direct traffic, provide a safe and drug-free environment, and help with other environmental problems. Both government policymakers and festival planners can leverage the findings from the two moderators (revisit reason and occupation type) to attract more patrons to music festivals.

References


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