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# The antecedents of visitors' flow experience and its influence on memory and behavioral intentions in the music festival context



Hai-Meng Ding<sup>a,b</sup>, Kuang-Peng Hung<sup>b,\*</sup>

<sup>a</sup> College of Creative Culture and Communication, Zhejiang Normal University, No.688 Ying bin Road, 321004, Jinhua, China
<sup>b</sup> Department of Business Administration, Ming Chuan University, Taipei, Taiwan, No.250 Zhong Shan N. Rd., Sec. 5, 111, Taipei, Taiwan

ARTICLE INFO	A B S T R A C T
Keywords: Music festival Music tourism Cognitive appraisal theory Flow experience	At present, few studies have focused on the antecedents and consequences of music festival visitors' flow experience. Based on the cognitive appraisal theory, this study explores five antecedents of music festival visitors' flow experience (skill performance, ambiance, self-congruence, other consumers' passion, consumer-to- consumer interaction) and two consequences (visitors' memory and behavioral intentions) to enrich relevant research. In this study, a total of 419 visitors were investigated. All of the participants were visitors of 2019 Midi music festival, the largest music festival in China. Findings indicate that five antecedents are all positively related to visitors' flow experience, which in turn positively affects visitors' memory and behavioral intentions. Visitors' memory also has a positive effect on their behavioral intentions. In addition, the mediating role of flow expe-

rience between its antecedents and consequences was examined.

# 1. Introduction

A music festival refers to a festival centered on a certain theme where many bands gather for several days or weeks to perform music. Each music festival is a feast of music, a carnival for musicians and audiences (Getz, 1997; Gibson & Connell, 2010; Pan & Wang, 2019). Music festival is an important part of music tourism (Hudson, Roth, Madden, & Hudson, 2015). Its development enriches the product portfolios of tourism destinations, attracts a large number of visitors, and drives the development of local festival markets (Andersson & Getz, 2009; Kruger & Saayman, 2018; Semrad & Rivera, 2018). Nowadays, music festivals have developed rapidly all over the world (Kruger & Saayman, 2018; Thrane, 2002), such as the Glastonbury music festival in the UK and the Woodstock rock music festival in the US. In China, the development of music festivals is especially fast (Han, Wang, Zheng, & Zhang, 2017; Li & Wood, 2016; Song, Xing, & Chathoth, 2014). On the one hand, the number of music festivals held in China has increased rapidly each year, from fewer than 70 in 2011 to 263 in 2018, and the market continues to expand (Pan & Wang, 2019). On the other hand, well-known local original music festival brands such as Midi music festival have emerged (Pan & Wang, 2019). The rapid development of the Chinese music festival market has drawn the attention from the academia, local and international media alike, and overseas counterparts in the music festival industry.

As music festivals become increasingly popular, it is critical that their operators understand how to deliver the flow experience to the visitors. As an important factor in luring visitors to participate in tourism activities such as music festivals (Cheng & Lu, 2015), flow experience provides the utmost state of being for the visitors (Csikszentmihalyi, 1975, 1990; Zhang, Li, Liu, & Ruan, 2019). Flow experience is also a key indicator in measuring the visitors' experience quality (Adam, 2015; Kim & Thapa, 2018; Zhang et al., 2019). There are previous studies, in the context of cultural park tourism and surfing activities, which have explored the factors affecting the flow experience (Cheng & Lu, 2015; Fu, Kang, & Tasci, 2017; Wu & Liang, 2011; Zhang et al., 2019); these studies have verified that flow experience has an effect on visitor behaviors (Cheng & Lu, 2015; Zhang et al., 2019). However, few studies thus far have explored the flow experience of music festival visitors. The particular touristic scenario that music festivals create is significantly different from those in existing studies on tourist flow experience (Rivera, Semrad, & Croes, 2015; Sia, Lew, & Sim, 2015). Music festival is a unique and experiential tourism product (Andersson & Getz, 2009; Bowen & Daniels, 2005; Rivera et al., 2015; Sia et al., 2015). The touristic scenario that a music festival creates is characteristic in that it can, in a designated space and within a short time frame, create a dynamic and fluid soundscape for its visitors (Anderson, Morton, & Revill,

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<sup>\*</sup> Corresponding author. *E-mail address:* kphung@mail.mcu.edu.tw (K.-P. Hung).

2010; Jaimangal-Jones, Pritchard, & Morgan, 2010). In an immersive environment, it provides the visitors with a unique opportunity to interact with not only music but also other visitors (Ballantyne, Ballantyne, & Packer, 2014). As the attributes of a music festival differ from those in the studies mentioned above, the factors that affect the flow experience of the music festival visitors therefore also differ. In addition, Zhang et al. (2019) points out that "how to allow tourists to obtain flow experience" is coming to be an important research topic of cultural and creative tourism. Music festivals, as one of the cultural and creative tourism products (Prentice & Andersen, 2003), call for more research on the topic with respect to how to enable the tourists to obtain flow experience. Based on the above, this study proceeds with the research on the flow experience of the visitors who attend the music festival.

Although little research has been conducted on visitors' flow experience of music festivals, some enlightenments can be obtained from other related studies. First, previous studies found that many people participate in music festival in order to express their sense of identity (Goulding, Shankar, & Elliott, 2001), obtain opportunities for self-expression (Packer & Ballantyne, 2011), and show their self-image (Packer & Ballantyne, 2011). Fu et al. (2017) and Fu, Kang, Hahm, and Wiitala (2020) found that the self-congruence between tourism products and visitors' self-image will affect the flow experience of visitors. Visitors' self-congruity may influence their flow experience in music festivals. Second, the continuous growth of music festival consumption worldwide is largely attributed to people's preference for live music (Bennett & Woodward, 2014; Morgan, 2008), and live music is influenced by elements like music performance (e.g. skill performance), social factors (e.g. other consumers' passion, consumer-to-consumer interaction), the atmosphere (e.g. ambiance), etc. In other words, these factors affect visitors' festival experience (Chen, King, & Suntikul, 2019; Lee, Lee, Lee, & Babin, 2008). It can be inferred that these factors are likely to affect visitors' flow experience. It is worth further verification of the potential influence of these factors mentioned above on music festival visitors' flow experience.

Based on the above discussions and the cognitive appraisal theory, this study examines the antecedents and consequences of music festival visitors' flow experience. Specifically, this study takes the Midi music festival in China as the research context to examine the antecedents (i.e. skill performance, ambiance, self-congruence, other consumers' passion, consumer-to-consumer interaction), and consequences (i.e. visitors' memory and behavioral intentions) of visitors' flow experience. This research also attempts to investigate the mediating effect of visitors' flow experience between antecedents and consequences.

The findings of this study make the following theoretical and practical contributions. Firstly, from a theoretical perspective, this study chooses to investigate musical festival visitors from the best state of their consumer experience - flow experience, which enriches the research topic in relation to visitor experience in a music festival. Secondly, by studying the influence of other consumers' passion, ambiance, skill performance, consumer-to-consumer interaction, and self-congruence on the flow experience of the visitors, this study can gain an in-depth understanding of which factors affect the visitors' flow experience at the festival. Thirdly, by verifying the relationships among the visitors' flow experience, memory, and behavioral intentions. Finally, by verifying the potential mediating effect of antecedents and consequences of the flow experience of music festival visitors, this study can have a more comprehensive understanding of the role of flow experience between antecedents and behavior. Other scholars can make good use of these findings and insights for their future research. On a practical aspect, this study helps music festival operators realize the importance of the enhancement of flow experience of the visitors in music festivals. Further, it provides specific suggestions on how to do so for music festival operators among other stakeholders.

#### 2. Theoretical background

#### 2.1. Cognitive appraisal theory

Cognitive appraisal theory is an important theory to explain the reaction of people's emotional state (Ellsworth & Scherer, 2003; Hosany, 2012), which believes that people's cognitive appraisals of environmental stimuli or events will affect their emotions (Arnold, 1960; Lazarus, 1991). Tourists' cognitive appraisal of travel conditions will affect their emotional state during their travel (del Bosque & San Martin, 2008; Kim & Thapa, 2018; Trauer & Ryan, 2005). In tourism research, many scholars adopted cognitive appraisal theory to study the factors affecting tourists' emotional state (e.g. Hosany, 2012; Kim & Thapa, 2018). For example, in the study of Kim and Thapa (2018), the tourists' value perception of natural ecotourism was used as a cognitive appraisal of the travel situation, the flow experience as the emotional state of tourists, and the destination loyalty of tourists as a result of the flow experience, and confirmed the impact of cognitive appraisal on flow experience, which in turn affected tourists' behavioral responses.

This study follows the cognitive appraisal theory and draws references from Kim and Thapa (2018), flow experience as an emotional state, skill performance, ambiance, self-congruence, other consumers' passion, and consumer-to-consumer interaction as appraisals, as well as memory and behavioral intentions as outcomes of the flow experience.

# 2.2. Music festival

As a modern festival form, music festival organizes singers and bands to perform for several days around a specific theme in a specific place (Getz, 1997; Gibson & Connell, 2010; Pan & Wang, 2019). During the music festival, visitors get to appreciate the experience of music performance enjoyment in an immersive environment (Bennett & Woodward, 2014; Semrad & Rivera, 2018). Within a short and specified time frame and in a designated space, the music festival provides visitors with a unique opportunity for leisure, social, and cultural experience (Getz, 1997; Gibson & Connell, 2010). It also provides a way for visitors to connect with art, and to discover and perceive the meaning that exists between themselves and society (Ballantyne et al., 2014; Packer & Ballantyne, 2011). In western countries, attending music festivals has always been a popular activity (Ballantyne et al., 2014), China also began to pick up steam around the turn of the century (Pan & Wang, 2019). Since the first Midi music festival in 2000, music festivals have developed into a large-scale industry in China (Han et al., 2017; Li & Wood, 2016; Song et al., 2014). Over 200 music festivals are held each year (Pan & Wang, 2019). In 2016, over three million visitors attended music festivals held in China (Daolue Music Industry Research, 2017). Nowadays, attending music festivals is becoming a way of life for many people in China (Pan & Wang, 2019). From a global development perspective, music festivals have become popular tourist destinations, many of which are emerging as the mainstream tourist attraction (Stone, 2009). In sum, music festivals are more popular than ever before.

There have been many studies around the visitor's experience of the music festival. For example, Packer & Ballantyne, 2011 pointed out that social interaction, festival ambience, separation from daily life and music itself are all important aspects of the music festival experience. Rivera et al. (2015) found that 5Es (education, entertainment, escapism, esthetics, and economic value) are the crucial factors influencing the generation Y visitors to form an unforgettable music festival experience. Semrad and Rivera (2018) examined whether an unforgettable experience will affect the generation Y participants' electronic word-of-mouth (eWOM) for music festivals and destinations. But it is worth noting that although there have been many studies on music festival experience, few scholars paid attention to the flow experience of music festival visitors.

#### 2.3. Flow experience

Flow experience refers to an individual's psychological state when fully engaged in an activity or involved in an event (Csikszentmihalyi, 1975). Specifically, people immersed in an activity that can only focus on a specific goal while ignoring the existence of other things, and then feel pleasure and fulfillment (Csikszentmihalyi, 1975; Kim & Thapa, 2018). Flow experience is a temporary and subjective mental state considered as the optimal experience state for consumers. Besides, flow experience is the best method to judge the tourists' satisfaction and an important indicator to reflect tourists' loyalty to destinations (Gao & Wu, 2017).

Getting flow experience is the main reason for visitors to participate in leisure activities (Cheng & Lu, 2015). In order to understand how people obtain flow experience, scholars have found and confirmed some influence factors that affect the flow experience, such as skill, challenge, and playfulness, etc (Agarwal & Karahanna, 2000; Csikszentmihalyi, 1975; Kang, Lee, & Namkung, 2018; Lee & Yoo, 2011; Novak, Hoffman, & Yung, 2000; Wu & Liang, 2011). Specific to tourism research, many scholars have carried out further research by combining different tourism scenarios. For example, scholars have studied tourists' flow experience in different visitor scenarios such as tourists visiting cultural parks (Zhang et al., 2019), visiting theme parks (Fu et al., 2017), and participating in water adventure activities (Cheng & Lu, 2015; Wu & Liang, 2011). Differing from previous scholars, this research aims to explore the visitors' flow experience in music festivals, and to verify still more factors that affect the flow experience.

Music festival creates an environment for the visitors to enjoy live music performances at the specific time and in the specific location (Leenders, 2010), which is very different from enjoying music on other occasions (Ballantyne et al., 2014). In this immersive environment, visitors can obtain a pleasant and satisfying experience through the temporary separation from daily life, the festive atmosphere of the music festival, social interaction, and live music performances (Ballantyne et al., 2014; Packer & Ballantyne, 2011). Those satisfying experiences will affect visitors' behavioral intentions and the development of music festival (Semrad & Rivera, 2018). For the music festival, it is necessary to provide visitors with a satisfying experience. Therefore, flow experience, as an optimal visitor experience (Csikszentmihalyi, 1975), is also the best experience that the music festival hopes to provide to visitors.

## 3. Research hypotheses development

## 3.1. Antecedents of flow experience

Based on cognitive appraisal theory, this study draws on the relevant research of visitors' music festival experience and identify five antecedents of visitors' flow experience in music festivals: skill performance, ambiance, self-congruence, other consumers' passion, consumer-toconsumer interaction (Chen et al., 2019; Fu et al., 2017, 2020; Lee et al., 2008). In the following, the relationship between these factors and flow experience in detail will be discussed.

#### 3.1.1. Skill performance

Skill performance for spectator sports refers to the spectators' perception of athletes' performance quality in sports competitions or actors' performance quality in sporting activities (Ko, Zhang, Cattani, & Pastore, 2011). In this study, skill performance refers to visitors' perception of the quality of the performance of singers or bands in the music festival. The performance of the music festival will affect the consumer experience (Uhrich & Benkenstein, 2012). In service consumption such as ballets, musicals, events, etc, for consumers, the performance of related shows/matches is the core service content and an important factor affecting their service experience (Uhrich & Benkenstein, 2012). Enjoying the music performance, as a motivation for music

festivals visitors (Vinnicombe & Sou, 2017), meanwhile, is one of the important aspects of their experience (Cashman, 2016; Packer & Ballantyne, 2011).

In the study of sports events, scholars found that athletes' skill performance can make the spectator immersed in the games, feel excitement and pleasure, and obtain a positive emotional experience (Foroughi, Nikbin, Hyun, & Iranmanesh, 2016; Uhrich & Benkenstein, 2012). As a kind of service consumption situation similar to sports events (Uhrich & Benkenstein, 2012), music festival visitors are attracted by the performance, enjoying the fun and getting a positive emotional experience (Bennett & Woodward, 2014; Morgan, 2008). It is easy for visitors to obtain flow experience when they are attracted and involved by skill performance (Havitz & Mannell, 2005). Based on the above discussion, the following hypothesis is proposed:

**H1.** Skill performance of the music festival has a positive influence on visitors' flow experience.

## 3.1.2. Ambience

Ambience refers to the background elements in the service environment, such as smell, lighting, temperature, color and music (Bitner, 1992). These elements are perceived by people's sensory organs (Lin & Worthley, 2012) and play a driving role in the environmental experience of consumers (Baker, 1987; Uhrich & Benkenstein, 2012). It is these elements that make up the festival ambience (Lee et al., 2008). The festival ambience affects participants' experience and behavior (Chen et al., 2019; Grappi & Montanari, 2011; Lee et al., 2008).

Ambience of music festival is an important motivation for visitors to participate in (Ballantyne et al., 2014; Little, Burger, & Croucher, 2018; Vinnicombe & Sou, 2017), also a key indicator when evaluating the music festival's experience (Packer & Ballantyne, 2011). Although there is lack of research on the relationship between music festival ambience and visitors' flow experience, other studies have found the effect of ambient factors on flow experience. For instance, the lighting level in casinos will affect gamblers' excitement (Lucas, 2003). The background music in servicescapes will affect consumers' emotion (Lin, 2004). The ambient cues in stadiums will affect visitors' emotion (Uhrich & Benkenstein, 2012). Different background colors of online stores will affect the consumers' flow experience when they were shopping (Ettis, 2017). It can be seen that consumers' perception of the on-site ambiance will influence their emotional reactions and affect their experience (i.e. flow experience) (Uhrich & Benkenstein, 2012). Based on the above discussion, the ambiance of the music festival will affect the satisfaction of visitors' motivation. In a proper ambiance, visitors can integrate themselves into the music festival and get flow experience. The following hypothesis is proposed:

**H2**. Ambience of the music festival has a positive influence on visitors' flow experience.

#### 3.1.3. Self-congruence

Self-congruence refers to the cognitive match between the brand or product's image and the consumer's self-concept (Sirgy, 1982). Self-concept comprises four dimensions: actual (how I actually see myself), ideal (how I like to see myself), social (how I think others see me) and ideal social self (how I like others to see me) (Sirgy, 1982). Consumers sustain or enhance their self-concept by preferring the brand or product that is similar to the self-concept (Malär, Lucia, Krohmer, Hoyer, & Nyffenegger, 2011; Sirgy, 1982). The self-congruence can enhance consumers' emotion to the brand or product (Aaker, 1999). Based on the dimensions of self-concept, self-congruence contains four facets: actual, ideal, social and ideal social self-congruence (Sirgy, 1982). The four facets of self-congruence have been widely recognized and applied in tourism research. Many scholars use these four dimensions simultaneously to measure visitors' self-congruence in tourist attractions (e.g. Fu et al., 2017; Fu et al., 2020; Sirgy & Su, 2000). Self-congruence reflects people's attention to different levels of self.

Visitors' motivation to participate in music festivals is closely related to the strengthening of the individual, group, social identity and the expression of different levels of self to the outside world (Ballantyne et al., 2014). Thus, this study adopts the four facets of self-congruence (Ballantyne et al., 2014; Fu et al., 2017, 2020; Sirgy & Su, 2000).

Despite no research on the relationship between music festival visitors' self-congruence and flow experience, there had been studies confirmed that the self-congruence can affect the flow experience of visitors in theme parks (Fu et al., 2017, 2020). Specifically, self-congruence gets visitors completely involved in the park activity, ignoring the passing of time and have an optimal experience (Fu et al., 2017, 2020). Thus, it is possible that visitors who feel congruent with the image of the music festival are likely to have a flow experience. Based on the analysis above, a hypothesis is developed as follows:

**H3.** Self-congruence with the music festival has a positive influence on visitors' flow experience.

# 3.1.4. Other consumers' passion

As an integral part of the service environment, other consumers' passion refers to consumers' positive emotional expression behaviors in consumption (Kim, Byon, Baek, & Williams, 2018), which mainly refers to other consumers' cheering, clapping, and booing expressions (Kim et al., 2018). To a large extent, consumers' experience is influenced by their perceptions of the service environment (Uhrich & Benkenstein, 2012). As a part of the on-site service environment, other consumers' passion will affect people's experiences (Kim et al., 2018; Uhrich & Benkenstein, 2012).

According to social psychology, consumers are prone to make emotional responses to others' behaviors in the service environment (Ng, Russell-Bennett, & Dagger, 2007). As a part of the service environment, the passions of other on-site consumers will also affect the emotional response of consumers. For example, in sports events, other spectators' passion will affect spectators' emotions and arouse their positive emotional response (Chen, Lin, & Chiu, 2013; Kim, Byon, & Baek, 2020; Kim et al., 2018; Uhrich & Benkenstein, 2012). In addition, visitors also can feel this kind of influence in leisure activities. For example, when visitors participate in the music festival, influenced by the passion of the surrounding visitors, visitors tend to be more relaxed, more easily involved in the music festival to enjoy the fun and get flow experience. Based on the above discussion, a hypothesis is developed as follows:

**H4**. The perception of other consumers' passion in the music festival has a positive influence on visitors' flow experience.

#### 3.1.5. Consumer-to-consumer interaction

Consumer-to-consumer interaction refers to the reciprocal influence or communication between consumers in the context of mass service (Kim & Choi, 2016). It is a way for customers to talk or take action with one another (Su, Chiang, Lee, & Chang, 2016; Zhang & Kaufman, 2015). Visitors inevitably interact with others during festival tourism (Rihova, Buhalis, Gouthro, & Moital, 2018). In the context of mass service (e.g. music festivals), consumer-to-consumer interaction occurs when consumers wait together and share space, time (Ng et al., 2007).

The interaction with other customers has a vital impact on flow experience (Cheng, Hung, & Chen, 2016; Csikszentmihalyi, 1975; Jackson, 1995; Su et al., 2016). In the research of online game users behavior, it was proved that the interaction with other users is effective in improving their flow experience (Su et al., 2016). The same conclusion has been confirmed in the context of Internet social commerce research (Liu, Chu, Huang, & Chen, 2016). In addition, the interaction between consumers will generate positive emotions (Peng, Chen, & Hung, 2017). Based on the above discussion, this study surmises that the interaction with other consumers during the music festival will help the visitors to generate flow experience. A hypothesis is developed as follows: **H5.** Consumer-to-consumer interaction in the music festival has a positive influence on visitors' flow experience.

# 3.2. Consequences of flow experience

Previous studies have shown that flow experience has a positive impact on consumers' memory (Sreejesh, Anusree, & Ponnam, 2018) and behavioral intentions (Kolar & Čater, 2018). Below this study will discuss how the music festival visitors' flow experience affects their memory and behavioral intentions.

#### 3.2.1. Flow experience, memory and behavioral intentions

Memory is the ability to retain and consciously reproduce past events or experiences (Schacter, Chiu, & Ochsner, 1993). Also, memory is the result of tourism experience (Zatori, Smith, & Puczko, 2018). As a vital role in the experience economy (Pine & Gilmore, 1998), consumers' memory will affect consumers' behavioral intentions (Oh, Fiore, & Jeoung, 2007; Quadri-Felitti & Fiore, 2012). It is regarded as a competitive tool for companies (Pine & Gilmore, 1999).

There has been much research on the factors affecting tourists' memory (Ali, Ryu, & Hussain, 2016; Kastenholz, Carneiro, Marques, & Loureiro, 2017; Manthiou, Lee, Tang, & Chiang, 2014; Oh et al., 2007). Some studies found that events related to emotions are more likely to form memory (Dolcos & Cabeza, 2002). Tourists forget a large part of details after the tour, but those emotions they experienced during the trip remain (Wirtz, Kruger, Scollon, & Diener, 2003). Flow experience is a kind of experience state that contains many emotional components such as pleasure and excitement (Nakamura & Csikszentmihalyi, 2002). It is also an emotional state which can also help people to remember the journey (Kim & Thapa, 2018). In the research of advergames, it was found that players' flow experience in the game will affect the brand memory of advergames (Sreejesh et al., 2018). Based on the above discussion, the following hypothesis is proposed:

**H6.** Flow experience with the music festival has a positive influence on visitors' memory about the music festival.

As the key index judging the success of the destination or tourism products in the tourism industry (Ajzen & Fishbein, 1980), behavioral intentions refer to the behaviors of tourists visiting the destination again or recommending it to others (Oliver, 1999; Petrick, 2004), which can be used to predict the future behavior of tourists (Webb & Sheeran, 2006). In this study, behavioral intentions mainly refer to visitors' behaviors participating in the music festival again or recommending it to others.

Oh et al. (2007) pointed out that tourists' memory can significantly affect their behavioral intentions. In the research of wine tourism, scholars further confirmed that tourists' memory has a significant impact on behavioral intentions (Quadri-Felitti & Fiore, 2012). Tourists' memories of creative tourism will also affect their behavioral intentions (Ali et al., 2016). Based on the above discussion, a hypothesis is developed as follows:

**H7**. Memory about the music festival has a positive influence on visitors' behavioral intentions to the music festival.

## 3.2.2. Flow experience and behavioral intentions

Flow experience brings people pleasure and happiness, which explains why people are willing to continue certain behaviors (Csikszentmihalyi, 1990). Research on the relationship between tourists' flow experience and behavioral intentions has been confirmed in different tourism situations. For example, tourists' flow experience in the escape rooms will affect their willingness to visit again and the spread of word-of-mouth communications (Kolar & Čater, 2018). Tourists' flow experience of using tourism website will affect their behavior of using the website again (Jeon, Ok, & Choi, 2017), and tourists' flow experience of nature-based tourism attractions will affect their willingness to revisit and recommend the destination (Kim & Thapa, 2018). Based on the above discussion, this study concludes that visitors' flow experience of the music festival may have a significant influence on their willingness to participate in the festival again and recommend the festival to others. Therefore, a hypothesis is developed as follows:

**H8.** Flow experience with the music festival has a positive influence on visitors' behavioral intentions to the music festival.

The relationships among the above hypotheses are presented in Fig. 1. The skill performance, ambiance, self-congruence, consumer-toconsumer interaction, and other consumers' passion in the music festival have significant effects on visitors' flow experience, followed by their memory and behavioral intentions toward the music festival.

## 4. Research method

# 4.1. Research context

The study selects Midi music festival held in Taihu, Suzhou, from May 2nd to May 4th, 2019, as the research context. Held in Beijing for the first time in 2000 (Wu, Li, Wood, Senaux, & Dai, 2020), the musical style of the Midi music festival is mainly rock music. It is the first original music festival in China (Baike, 2020). It is also the earliest and largest music festival in China, which incorporates the characteristics of many western music festivals (Li & Wood, 2016), and is known as China's "Woodstock" (Wu & Dai, 2018). As the pioneer of the Chinese music festival industry, the Midi music festival has become the icon of live music in modern Chinese music history (Baike, 2020). Over a span of 2-3 days, the music festival invites bands from home and abroad to perform music, luring tens of thousands of domestic and foreign visitors (Li & Wood, 2016; Wu et al., 2020). The continued success of the Midi music festival has attracted the attention of both Chinese and international press alike, which generate many media reports (Baike, 2020). For example, in May 2002, the British Broadcasting Corporation (BBC) and the Australian Broadcasting Corporation (ABC) live broadcasted the third annual Midi music festival to the world (Luo, 2004). The history and influence of Midi music festival make it an appropriate research context for this study (Li & Wood, 2016; Wu et al., 2020).

#### 4.2. Respondents and procedure

From May 2nd to May 4th in 2019, trained interviewers conducted a questionnaire survey at the site of Midi music festival. The questionnaire was distributed by means of purposive sampling and the researchers chose the visitors who participated in Midi music festival as the respondents. Before participants were asked to complete the anonymous questionnaire, the well-trained interviewers informed them of the purpose and requirements of the study. It took about 10 min to fill in the



Fig. 1. Conceptual model.

questionnaire, after which the respondents would receive a small gift. Finally, 500 questionnaires were collected, of which 419 were valid after deleting incomplete questionnaires, for a valid response rate of 83.8%. The sample size of 419 respondents in this study can be regarded as representative (Krejcie & Morgan, 1970; Stevens, 1996). See Table 1 for the full respondents' profiles.

#### 4.3. Questionnaire design and measures

The questionnaire consisted of two parts: the first part aimed to investigate Midi festival visitors' demographic characteristics, such as age, gender and education level. The second part focused on Midi music festival visitors' evaluation of skill performance, ambiance, selfcongruence, other consumers' passion, consumer-to-consumer interaction, flow experience, memory and behavioral intentions. A seven-point Likert scale that anchored from 1 (strongly disagree) to 7 (strongly agree) was adopted to measure the items. Measurement items were all appropriately modified from the related scales of existing literature to ensure that the measurement items are more consistent with the research situation (Netemeyer, Bearden, & Sharma, 2003) (see Table 2 for details). In order to let respondents understand the meaning of "flow experience", based on the suggestions of related scholars (Kim & Thapa, 2018; Novak et al., 2000), the concept has been explained at the beginning of the measurement items.

A two-stage questionnaire pre-test was carried out before the formal survey (Hung, Peng, & Chen, 2019). In the first stage, the operators of the music festival and the scholars who studied tourism experience were invited to discuss the applicability and accuracy of the questionnaire to determine the final scale. In the second stage, on the basis of the first stage, 30 consumers who had participated in the music festival were selected for pre-test to evaluate the validity of the questionnaire.

## 5. Data analysis and results

The study adapts the two-stage method proposed by Anderson and Gerbing (1988) for data analysis by using IBM SPSS Amos 24 for confirmatory factor analysis (CFA) and structural equation modeling (SEM).

#### 5.1. Measurement model

The confirmatory factor of the measurement model is used for analysis, which includes three aspects: fitting index, convergence validity and discriminant validity. In this study, the fit indices of the measurement model indicates that  $\chi 2 = 467.674$ , df = 247,  $\chi 2/df = 1.893$ , CFI = 0.979, IFI = 0.979, NFI = 0.956, RMSEA = 0.046, illustrating the model has a good fit (Hair, Black, Babin, & Anderson, 2010). As for the testing of the convergent validity of the measurement model, the standard factor loadings of the variables distribute between 0.717 and 0.937, and each is greater than 0.6 as shown in Table 2 (Chin, 1998). Each of the constructs has an average variance extracted (AVE) value

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Characteristics of the participants (n = 419).

Demographic traits		%
Gender	Male	42.7
	Female	57.3
Age	18–20	16.2
	21–30	48.2
	31–40	32.5
	41–50	2.9
	51or above	0.2
Education	High school degree	7.9
	University	57.8
	Postgraduate degree or above	23.6
	Other degree	10.7

#### Table 2

С	on	firma	tory	facto	r ana	lysis:	Items	and	loading	(n	=	419	9.
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Construct	Adopted from	Items	Standard factor loading
Skill performance	Ko et al. (2011)	SP1: The performers' skills make me excited. SP2: The performers provide	0.867 0.924
		a nigh-quality performance for me. SP3: Skill performance of the performers is excellent	0.923
Self-congruence	Fu et al. (2017)	S1: The typical visitor who visits Midi music festival matches how I see myself	0.918
		S2: The typical visitor who visits Midi music festival matches how I would like to see myself.	0.717
		S3: The typical visitor who visits Midi music festival matches how I believe others see me	0.899
		S4: The typical visitor who visits Midi music festival matches how I would like	0.927
Ambience	Ko et al. (2011)	A1: The festival's ambience is excellent.	0.937
		A2: The festival's ambience is what I'm looking for in Midi	0.937
		A3: The facility is clean and well maintained.	0.896
Other consumers' passion	Kim et al. (2018)	OCP1: The number of visitors is large in Midi music festival.	0.791
-		OCP2: Visitors' support is intense in Midi music festival.	0.907
		OCP3: Visitors' passion is intense in Midi music festival.	0.850
Consumer-to- consumer interaction	Kim et al. (2018)	CI1: I developed friendships with other visitors I met at Midi music festival.	0.907
		CI2: I enjoyed spending time with other visitors at Midi music festival.	0.886
		CI3: The other visitors in Midi music festival made my time more enjoyable.	0.849
Flow experience	Novak et al. (2000)	FE1: I thought I have experienced flow during Midi music festival.	0.892
		FE2: In general, I frequently experienced flow when in Midi music festival.	0.921
		FE3: Most of the time when in Midi music festival I felt that I am in flow.	0.810
Memory	Oh et al. (2007)	M1: I will have wonderful memories about Midi music festival.	0.904
		M2: I will remember many positive things about Midi music festival.	0.900
		M3: I won't forget my experience at Midi music festival.	0.910
Behavioral intentions	Jang and Namkung (2009)	B11: I would like to come back to Midi music festival in the future.	0.930
		BI2: I would say positive things about Midi music festival to others.	0.916
		BI3: I will recommend Midi music festival to my friends	0.926

greater than 0.7 and construct reliability (CR value) greater than 0.8 (Fornell & Larcker, 1981), therefore the measurement model satisfied the requirements for convergent validity. Moreover, as shown in Table 3, the square root of AVE of each construct is greater than the correlation coefficients between the construct and other constructs (Fornell & Larcker, 1981), which meets the requirements of discriminant validity. In addition, as some variables are highly correlated, VIF was adopted to check whether there is multicollinearity. All VIF values range from 1.568 to 2.746, which indicates that there are no multicollinearity in this study (Hair et al., 2010).

For detecting whether there is the common method bias (CMV), this study adopted the method of controlling for the effects of an unmeasured latent methods factor (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). A new latent variable was added to the measurement model, which was related to all the model's manifest variables. For the new latent variable, the variance was constrained to be 1, and the influence of the latent variable on all manifest variables was constrained to be w. The square of the non-standardized factor loading for the common latent factor of all paths is 0.236, which is far below the 0.50 threshold (Triantafillidou & Siomkos, 2018). Therefore, the potential problem of CMV is not significant in this study.

## 5.2. Structural model and hypotheses' testing

As shown in Fig. 2, the structural model of this study has a good fit ( $\chi 2 = 586.176$ , df = 257,  $\chi 2/df = 2.281$ , CFI = 0.968, NFI = 0.945, IFI = 0.968, RMSEA = 0.055). Eight hypotheses are supported. Among them, five antecedents of flow experience, namely skill performance ( $\beta = 0.429$ , t = 6.862), ambiance ( $\beta = 0.226$ , t = 3.832), self-congruence ( $\beta = 0.138$ , t = 3.598), other consumers' passion ( $\beta = 0.124$ , t = 2.755), consumer-to-consumer interaction ( $\beta = 0.215$ , t = 5.492) have a significant positive effect on flow experience. Therefore, H1, H2, H3, H4 and H5 are supported respectively. Besides, flow experience has a significant positive effect on visitors' memory ( $\beta = 0.768$ , t = 17.355) and behavioral intentions ( $\beta = 0.520$ , t = 9.663). Thus, H6 and H8 are supported. Additionally, visitors' memory has a significant positive impact on behavioral intentions ( $\beta = 0.394$ , t = 7.492), and H7 is supported.

This study has explored the antecedents and consequences of the visitors' flow experience at the music festival. Besides, this study is worth further studying the mediating role of the flow experience between its antecedents and consequences. This study adopted the bootstrap method to test these mediating effects based on the recommendation from Preacher and Hayes (2004) (Table 4), and this study also ran an alternative mediating model based on Chen and Chou's (2019) study (Fig. 3). The results indicate that flow experience has a full mediation effect in seven relationships, including the skill performance and memory relationship, the ambiance and memory relationship, consumer-to-consumer interaction and memory relationship, the skill performance and behavioral intentions relationship, the self-congruence and behavioral intentions relationship, other consumers' passion and behavioral intentions relationship, and consumer-to-consumer interaction and behavioral intentions relationship. The results also show that flow experience partially mediates the relationship between the self-congruence and memory, other consumers' passion and memory, and the ambiance and behavioral intentions.

#### 6. Discussion and implications

Flow experience is considered as the optimal consumer experience (Csikszentmihalyi, 1975, 1990), which is an important index to measure the quality of visitors' experience (Adam, 2015; Kim & Thapa, 2018) and has received attention in the research of different types of tourism. However, few scholars have discussed the flow experience of music festival visitors. This study is one of the earliest studies to explore visitors' flow experience in the context of music festival tourism. On the

#### Table 3

Results of convergent validity and discriminant validity.

	•	•		•								
	Mean (S.D.)	CrA	CR	AVE	FE	BI	М	S	CI	SP	А	OCP
FE	6.004	0.899	0.908	0.767	0.876							
	(1.013)											
BI	5.971	0.945	0.946	0.854	0.788	0.924						
	(0.925)											
Μ	5.518	0.924	0.931	0.818	0.732	0.793	0.904					
	(1.168)											
S	5.189	0.920	0.925	0.756	0.502	0.512	0.650	0.869				
	(1.232)											
CI	5.305	0.912	0.912	0.776	0.569	0.520	0.525	0.395	0.881			
	(0.989)											
SP	6.194	0.928	0.931	0.819	0.732	0.675	0.580	0.406	0.431	0.905		
	(0.896)											
Α	5.950	0.945	0.946	0.853	0.714	0.714	0.634	0.479	0.444	0.763	0.924	
	(0.959)											
OCP	5.423	0.884	0.887	0.724	0.565	0.569	0.583	0.484	0.475	0.456	0.596	0.851
	(0.965)											

Notes: SD = Standard deviation;  $CrA = Cronach's \alpha$ ; CR = Composite reliability; AVE = Average variance extracted. FE = Flow experience; BI = Behavioral intentions; M = Memory; S = Self-congruence; CI = Consumer-to-consumer interaction; SP = Skill performance; A = Ambience; OCP = Other consumers' passion.



Fig. 2. Estimated model.

Table 4Test for mediation with bootstrap procedures.

Path	Bias - corrected 95% CI											
	Total effe	ects	Direct effe	cts	Indirect effects							
	Lower	Upper	Lower	Upper	Lower	Upper						
$SP \rightarrow M$	0.039	0.400	-0.169	0.204	0.119	0.327						
A→M	0.026	0.368	-0.047	0.280	0.021	0.187						
$S \rightarrow M$	0.207	0.391	0.182	0.351	0.005	0.075						
OCP→M	0.044	0.355	0.002	0.293	0.009	0.116						
CI→M	0.077	0.257	-0.012	0.182	0.044	0.146						
SP→BI	0.125	0.491	-0.055	0.253	0.108	0.326						
A→BI	0.130	0.453	0.025	0.300	0.039	0.223						
S→BI	0.026	0.169	-0.098	0.027	0.080	0.201						
OCP→BI	0.007	0.269	-0.081	0.142	0.032	0.190						
CI→BI	0.067	0.218	-0.042	0.087	0.063	0.174						

Notes: SP = Skill performance; A = Ambience; S = Self-congruence; OCP = Other consumers' passion; CI = Consumer-to-consumer interaction; M = Memory; BI = Behavioral intentions.

basis of literature review and the data analysis of 419 Midi music festival visitors, the study put forward relevant hypotheses and established a model to verify five antecedents (skill performance, ambiance, self-congruence, consumer-to-consumer interaction, other consumers' passion) that affect visitors' flow experience and consequences of flow experience on visitors' memory and behavioral intentions. As the first discussion of flow experience in the context of music festival tourism, this research contributes to the related research and has certain theoretical and practical significance.

## 6.1. Theoretical implications

Firstly, previous music festival tourism researches mainly focused on the visitors' motivation (Kruger & Saayman, 2018; Li & Wood, 2016; Tkaczynski & Rundle-Thiele, 2013), composition of visitors' music festival experience (Rivera et al., 2015; Semrad & Rivera, 2018), and the social impact of music festival (Pavluković, Armenski, & Alcántara-Pilar, 2017). The previous research on the visitor experience of music festival mainly explored the overall music festival experience (Rivera et al., 2015; Semrad & Rivera, 2018), but did not discuss the flow



Fig. 3. The alternate mediation model.

experience of the visitors. This study explores the antecedents and consequences of music festival visitors' flow experience, which not only broadens the scope of research on festival tourism, but also enriches the research topics relevant to the visitor experience of music festivals. In addition, previous research on flow experience has mainly focused on tourism scenarios such as cultural parks, theme parks, and water adventure activities (Cheng & Lu, 2015; Fu et al., 2017; Wu & Liang, 2011; Zhang et al., 2019). This research chooses to study flow experience in the context of music festivals, and extends the research of flow experience to the festival tourism context, which has enriched the research context of flow experience.

Secondly, among the five factors that affect the flow experience verified in this research, it is found that skill performance has a greater impact on flow experience than the other four factors in this research ( $\beta$ = 0.429). As a crucial part of music festival service (Uhrich & Benkenstein, 2012), live performance is an important motivation to attract visitors (Vinnicombe & Sou, 2017). This study further strengthens the importance of skill performance as a variable in music festival. In addition, this study firstly proves a positive relationship between consumer-to-consumer interaction and flow experience in scenarios apart from the internet. Consumer-to-consumer interaction has always been an influencing factor that is the center of attention in flow experience research; however, previous research mainly focused on the scenarios where the internet is used, for example, the interaction among online game players (Su et al., 2016) has an effect on their flow experience. Unlike the research scenario depicted by Su et al. (2016), this research verifies that in music festivals, or in real life outside of the Internet, there is also a positive relationship between human interaction and flow experience. This finding enriches the research scenario where consumer-to-consumer interaction has an effect on flow experience. Besides, this study verifies and enriches the results of relevant researches on ambiance, other consumers' passion and self-congruence on flow experience (e.g. Ettis, 2017; Fu et al., 2017; Su et al., 2016). These findings help other researchers better understand the impact of different factors on the flow experience of the visitors. The findings also lay foundation for future research on the influencing factors of music festival visitors' flow experience.

Thirdly, regarding the influence of flow experience on memory, research findings between the two variables have not been consistent. For example, Schneider, Systems, and Cornwell (2005) found that there is no positive relationship between flow experience of online game players and their recall and recognition of brand placement in the game. However, Sreejesh et al. (2018) found that the flow experience of advergames gamers is beneficial to brand memory. The findings of this study in the context of music festivals are consistent with those of Sreejesh et al. (2018); they provide further support for the positive relationship between flow experience and memory. Moreover, in reference to the positive impact of flow experience of music festival visitors on behavioral intentions, this study further validates the research conclusions of previous scholars (e.g. Kim & Thapa, 2018; Kolar & Čater, 2018). This study verifies the effects between music festival visitor's flow experience and memory, and between the flow experience and behavioral intentions. It provides theoretical support with an added emphasis on that flow experience has important significance on relevant behaviors of music festival visitors (Zhang et al., 2019). In addition, the verification of the relationship between memory and behavioral intentions echoes that of previous scholars' research findings (e.g. Ali et al., 2016; Hosany & Witham, 2010; Manthiou et al., 2014; Oh et al., 2007).

Fourthly, the mediating role of flow experience between antecedents and behaviors has been discussed in previous studies (e.g. Cheng & Lu, 2015; Ettis, 2017). But it was mainly centered around the flow experience between online store atmospheric color and consumer approach behavior (Ettis, 2017), and between tourists' recreational involvement and their well-being (Cheng & Lu, 2015). This study examines the potential mediating effect of flow experience between the antecedents (other consumers' passion, ambiance, skill performance, consumer-to-consumer interaction, self-congruence) and consequences (memory, behavioral intentions) in the context of a music festival. The following empirical results enrich the research on the mediation effect of flow experience, which provide for other researchers to ponder further in regard to the mediation effect of flow experience.

## 6.2. Practical implications

In practice, the findings of this study have important practical implications as follows: On the one hand, the study helps music festival operators realize the importance of music festival visitors' flow experience for the operation of music festivals. For example, flow experience can improve visitors' memory and behavior intentions toward the music festival. Based on this understanding, music festival operators can consider capitalizing on visitors' flow experience as a key competitive strategy.

On the other hand, the research findings provide specific recommendations for music festival operators to enhance visitors' flow experience. First of all, they should continuously improve on the performance quality of the festival. It is imperative that the music festival performers deliver quality performances of high standard. In selecting the performers, it is necessary to consider the candidates' previous track record, their level of quality in live performance, and whether their performances are appropriate for the music festival. Secondly, the operators should actively create interactive opportunities among the visitors themselves by setting up interactive links among the visitors in the music festival. For example, they can encourage the visitors to free hug and say hello with one another so they feel comfortable and relaxed amongst one another. Thirdly, they can create a music festival ambience by hiring professional teams to design a coherently festive ambiance such as scent, light, color and certain background elements. Fourthly, they are encouraged to mobilize visitors' passion by providing free fluorescent sticks and festival stickers to let them unleash their enthusiasm. Finally, they should pay more attention to the visitors' perception of self-congruence of the music festival. For example, in the creation of the festive ambience, the presentation of the brand image, and the selection of cooperative partners for the festival, it is important to fully meet the self-recognition needs of the target visitors of the music festival in which they may perceive self-congruence. All of the above factors will affect the visitors' flow experience and in turn affect their memory and behavioral intentions.

In addition to its practical significance for the operators, the findings of this study are also meaningful for the music performers of the festival – an important stakeholder. Music performance constructs the focal point of the festival; it is the basis for the visitors' positive experience. The performers have to be aware that, as the core provider of the festival's performance service, their skill performance at the festival site directly affects the flow experience of the visitors. In order to enhance visitors' perception of the performers' skill performance, the performers not only need to be passionate about the live performance, but also need to ensure a high-quality live performance. They need to work hard to prepare in order to put on a show of superb talents, and deliver excitement to the visitors (Ko et al., 2011).

## 6.3. Limitations and directions for future research

Despite theoretical and practical contributions made regarding the role of flow experience in the music festival context, several limitations of this research can provide opportunities for future research. Firstly, this study targeted the Midi music festival as the research context. It is the largest music festival in China (Li & Wood, 2016), but as a rock music festival, it is just one of many types of music festivals. Further research can explore the influence of other types of music festival on visitors' flow experience, to make the findings of this study more widely applicable. Secondly, although this study discussed several antecedents that affected music festival visitors' flow experience, there are other antecedents that remain to be further studied, such as the design of the

festival scene, the consistency of performers and festival images, etc. Thirdly, the number of times the visitors have attended the music festival (e.g. first time or repeat visitors) or the knowledge they have had about music festivals may affect their flow experience. All of these factors can be studied as a moderator in future research. Additionally, since Midi music festival is mainly attended by young people (Li & Wood, 2016), who account for a relatively high proportion of the research subjects, further studies on visitors of different ages can be examined in the future.

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Hai-Meng Ding is a lecturer at College of Creative Culture and Communication, Zhejiang Normal University, China and a Ph. D. Candidate at the Department of Business Administration, Ming Chuan University. His research interests include consumer behavior, cultural and creative industries, brand management.



Kuang-Peng Hung is a Professor of the Department of Business Administration, Ming Chuan University, Taiwan, and received the Ph.D. degree in Strategy Management from National Taiwan University. Dr. Hung's recent publication appears in Tourism Management Perspectives, Journal of Travel & Tourism Marketing, International Journal of Hospitality Management, and Annals of Tourism Research. His research interests are in tourism management and consumer behavior.