Museum experience and satisfaction: moderating role of visiting frequency

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**Abstract**

**Purpose** – This paper aims at investigating how tourist experience elicits satisfaction and contributes to loyalty and willingness to pay more for a museum destination. The study also investigates the significant moderating role of visiting frequency on the relationship between satisfaction and willingness to pay more.

**Design/methodology/approach** – The research was conducted with 385 tourists who visited the National Museum in Ghana and answered questions relating to experience, satisfaction, loyalty, and willingness to pay more. Structural equation modelling was used to test the relationships and effects of the adapted constructs.

**Findings** – The results revealed the significant effects of tourist experience on satisfaction, as well as the significant effects of satisfaction on loyalty and willingness to pay more. In addition, a significant moderating effect of visiting frequency was reported on the relationship between satisfaction and tourist willingness to pay more.

**Research limitations/implications** – The research is destination-specific. The application of the findings to other museums would demand a bigger sample size for generalisation to be made.

**Practical implications** – Managers should develop strategies that promote museum tourist travelling experience, satisfaction, desire and choice, and thereby attract more tourists to museum sites.

**Originality/value** – The research contributes to the growing literature on museum tourist experience as an important variable in promoting tourist satisfaction, loyalty, and tourist willingness to pay more.

**Keywords** Museum tourism, Museum tourist, Experience, Satisfaction, Loyalty, Ghana

**Paper type** Research paper

**Introduction**

Museum tourism (MT) creates value for society by promoting education, recreation and cross-cultural understanding among people (Calinao and Lin, 2017; International Council of Museums, 2010; Pennings, 2015). Trinh and Ryan (2016) cited a number of reasons why...
cultural heritage tourism sites, such as museums, are important components of tourism. First, museums attract a large number of visitors; they are associated with the protection of heritage sites by various international bodies and create human curiosity about the nature of societies and historical pasts. Finally, the popularity of such places requires protection from tourism managers and other stakeholders. These reasons are in line with Confer and Kerstetter’s (2000) findings, which revealed that visitors travelled to museums and historic sites for various reasons, including interests in history, quality of exhibits, and special events or programmes. For example, the African Arts Museum in the Republic of Korea displays artifacts of African wildlife, collectibles and statues from the 18th to 20th century and gives tourists a feel of the African culture (Jeju Tourism Organisation, 2012). In the United Kingdom, visitors encountered war relics at battlefield sites (Miles, 2014), while in Ghana, artifacts in the slave castle in Cape Coast depict collective memories of extreme suffering during the slave trade (Mowatt and Chancellor, 2011; Yankholmes and Mckercher, 2015). The purpose of this study is to investigate the significant effects amongst museum experience, satisfaction, loyalty and tourist willingness to pay more (WPM). In addition, the study explores the moderation effect of the number of times (NT), that is, the frequency (first time and frequent tourists) of visits to the National Museum in Ghana, underpinned by the experience economy theory (EET) (Pine and Gilmore, 1999) within museum tourism context.

The motivation for this study is two-fold. First, not much is known about museum tourist experience and how satisfaction may influence tourist loyalty and WPM, and the moderating effect of frequency of visits within context. Second, this research purposefully concentrates on the selected variables in an effort to contribute to the growing body of theoretical and empirical knowledge and situate the findings within on-going discourse on museum tourism by various authors (e.g. Chan, 2009; Homburg et al., 2005; Ruiz-Alba et al., 2019; Trinh and Ryan, 2013). Therefore, this study examined the significant effects of tourist experience on satisfaction, satisfaction and loyalty, loyalty and WPM, and finally, explored the moderating effect of NT on the relationship between satisfaction and WPM. This direction of study would provide results that have implications for governments, businesses, investors, and allied institutions. Strategically, this study would help in identifying and developing museum destinations that would pull both domestic and international tourist traffic to achieve the needed socio-economic benefits. This paper is organised as follows: the first section presents a literature review on museum tourism, and in the second, the methodologies used are provided, followed by data analysis and discussion of the findings section. The next section presents the conclusion and implications. The study ends with the limitations and direction for future studies.

Literature review

Theory grounding the study

This study is underpinned by the experience economy theory (EET) (Pine and Gilmore, 1999). Proponents of this theory argue that experience economy is built on four experiential domains or realms: entertainment (desire to enjoy), education (desire to learn), escapist (desire to go and do ‘something’), and aesthetic (desire to be in a certain place). Theoretically, the theory posits that experience is a good starting point and an important factor that aids in understanding customer perception of a product or service attraction. Remarkably, the EET has been validated in several tourism studies (Hosany and Witham, 2010; Hwang and Lyu, 2015; Mahdzar et al., 2017; Mehmetoglu and Engen, 2011; Oh et al., 2007; Radder and Han, 2015). These studies have operationalised the experience types and developed different scales for examining the relationships among visitor perception, cruiser experience, golf tourist entertainment, satisfaction, intention to recommend, WPM, and others. For example, a recent study of Mahdzar et al. (2017) on museum tourist experience, found that the four experiential
dimensions determined museum tourist satisfaction, which significantly predicted future behaviours. According to Pine and Gilmore (1999), it was important for customers to encounter a unique experience in order to maximise their satisfaction. As such, for museum tourists within context to be satisfied, they needed to have experience through encounters with the artifacts and paintings in the museum.

The four suggested experiential realms proposed by Pine and Gilmore (1999) are relevant for this study since the researchers presume that the experience types will give tourists the experience that may influence satisfaction, loyalty and WPM. Thus, the fundamental aim of utilising the EET within context was to ascertain whether experience influenced tourist satisfaction and to examine how satisfaction significantly predicted loyalty (Kim et al., 2017; Kim and Thapa, 2018). In spite of the significant role EET plays in the tourism and hospitality context, there are some disadvantages associated with the theory. Williams (2006), for example, argued that much attention had been paid to the destination rather than to contemporary consumers. He contends that tourism and hospitality practitioners have failed to project the concept of experiential marketing as a new paradigm or orientation in marketing. In all, Williams (2006) suggested that in the service economy, destination marketers and practitioners should focus on service efficiency rather than on effectiveness. They should also redirect their effort at creating synergies between meaning, perception, consumption and brand loyalty. According to Williams (2006), this could be done by shifting the marketing efforts from ‘the functional features and benefits of products, and re-consider’ consumers as emotional beings (p. 493), so as to fulfil the entire needs of customers. Again, Freire (2008) maintained that EET deeply depends on constant innovation of products and services that would aid the experience activities of customers.

Interestingly, this study examines how loyalty significantly explains WPM (Calinao and Lin, 2017; MgxeKwa et al., 2019), and finally, investigates the extent to which NT significantly moderates the relationship between satisfaction and WPM (Chan, 2009; Su et al., 2016). The researchers’ argument is that museum managers purposefully collect historical treasures, exhibit culture, and offer a wide range of services that draw tourists’ attention to unique services in a friendly manner. Such museums also tend to increase visitor experience, which significantly improves tourist satisfaction. Based on these arguments, this research explores the experiences of tourists using the EET, on their visit to the National Museum of Ghana. The focus is on experience, the satisfaction of the museum visitors and interrelated constructs (loyalty, WPM and NT).

Museum tourism and context of the study
The most profound definition of a museum was proposed by the International Council of Museums (ICOM). According to ICOM (2007), museums are non-profit-making permanent institutions meant to provide unique cultural services, for the development of society, and are open to the public. Museums are for purposes of education, enjoyment, and for people to experience their cultural environment (ICOM, 2007). Pekarik (2003) indicated that the main roles of museums are to protect cultural heritage and to attract tourists. Thus, museums take custody of the history and culture of regions and countries, as they ensure the protection and restoration of cultural artifacts, and elements associated with the historical past (Cho, 2013). This implies that museums exist for purposes of education and sober reflection. Johanson and Olsen (2010) suggested that generally, museum destinations could be considered as part of heritage and cultural tourism. Notably, this form of tourism has socio-economic benefits to all interested parties. Further, museum tourism increases sales revenue, enhances the standard of living, promotes customer advocacy, and enhances sustainable competitive advantage within the hospitality industry (Shaw and Ivens, 2002; Tynan and McKechnie, 2009). Museums also provide customers with memorable experiences that stimulate their emotional, physical, intellectual and spiritual well-being (Pine and Gilmore, 1998).
Ghana is located in West Africa, on the shores of the Gulf of Guinea. The country occupies a landmass of 238,540 square km north of the equator, with a population of approximately 28 million (The Worldbank, 2017). The World Travel and Tourism Council (WTTC) estimation of tourism’s total contribution to Ghana’s Gross Domestic Product (GDP) was GHC 12,573.3 million (USD 1,335.5m), 6.2% of Ghana’s GDP in 2017. This was expected to increase by 4.2% to GHC 19,852.8m (USD 4,522.3m), 5.7% of GDP by 2028 (WTTC, 2017). This research is of interest to Ghana because tourism is one of the main socioeconomic drivers that generate foreign income, creates jobs and also stimulates the growth of other industries within the economy. Tourism is the fourth-highest income earner for Ghana after gold, cocoa, and oil (my joy online, 2018; Mensah-Ansah et al., 2011). Cable News Network’s (CNN) travel reported that Ghana was fourth out of the nineteen most interesting tourism destinations of the world (CNN Travel, 2019). In the year 2017, 1.3 million international tourists visited the country and were expected to increase by 8.4% in 2021 (Oxford Business Group, 2018).

Historically, Ghana has several museums scattered across the country, which include the National Museum and Museum of Science and Technology in Accra; Volta Regional Museum, Cape Coast Castle Museum, Upper East Regional Museum in Bolgatanga; St. George’s Castle (Elmina Castle) Museum; Fort Apollonia Museum of Nzema Culture and History. Ghana museums and monument board (GMMB) is responsible for managing these museums in Ghana and undertakes the function of equipping and managing the material and cultural heritage of the nation (Ashie, 2012).

Museums have three primary collections: archaeology, ethnography, and art, and these are used to tell stories about Ghana’s rich cultural heritage. The National Monuments Instrument (EI 42 of 1972) lists 33 forts and castles scattered all over the country, and are considered as national monuments (ICMS, 2019). These edifices exhibit the types of trade that took place between indigenous African people and the European trading partners from Portugal, the Netherlands, Denmark, England, France, Sweden, and Brandenburg of German Prussia. The nature of Ghana’s governance structure, in terms of administration, judiciary, religion, health care and even building architecture, could largely be traced to the legacies from the ancient trade partners (Ephson, 2012).

Interestingly, this study is relevant to Ghana, because of its position as a leading heritage tourism destination for the African-Americans who traced their roots to Ghana and to reconnect with their kinsmen (Bernhardt and Eroglu, 2004; Schramm, 2004; Teye and Timothy, 2004). In August 2019, Ghana hosted the ‘Year of Return, Ghana 2019’ event that welcomed Africans in the diaspora to participate in events associated with Ghana’s culturally rich heritage (Graphiconline, 2019). This event marked 400 years of the first enslaved Africans arriving in Jamestown, Virginia, and provided an opportunity for Ghana to reaffirm its prominence as the preferred market destination for heritage tourism.

**Museum experience and satisfaction**

Museums are perceived to offer both tangible (quantity and quality of services delivered) and intangible experiences (tourist feelings and motivation) to visitors. Tourism literature has argued that museums are experiential consumption sites for relaxation, cultural education and learning, and social interaction (Chan, 2009; Rowley, 1999). This study upholds the view of Chan (2009) that museums present overall ‘product’ experience to visitors. For example, the National Museum of Ghana presents artistry paintings, ethnography galleries such as the chief’s regalia, local Ghanaian musical instruments, Ghanaian traditional textile and beads, gold-weights, as well as archaeological objects that span the Stone Age era to present historical past. Further, Pine and Gilmore (1999) noted that museum experience was a valuable kind of offering for which tourists were willing to pay. Vu et al., (2018) study investigated tourist behaviour within the museum setting of Hong-Kong and found that
museum visitor behaviour and experience were important in improving visitor satisfaction. They pointed to linkages between tourists’ experience and satisfaction with the cultural elements that were associated with the services provided. Indeed, when the behaviour of museum visitors and their experiences were understood, tourist’s attraction to specific tourism destinations would be enhanced (Vu et al., 2018). Previous literature indicates that many museums customers consider satisfaction as a critical factor in the discussions on museum experience (Harrison and Shaw, 2004). In this circumstance, several important elements of museum experience, such as collections, displays, and interpretations influenced visitor satisfaction (Danaher and Mattsson, 1994). In this regard, this study presents the first hypothesis, as follows:

**H1.** Tourists experience has a significant effect on satisfaction

### Museum satisfaction and loyalty

It is essential to offer quality experience that will enhance visitor satisfaction to preserve and sustain the long-standing growth of museums. According to Oliver (1981), satisfaction is an emotional reaction, which follows confirmation experience. In the museum context, satisfaction might be continuously assessed through the entire service consumption process, rather than the post-consumption process (Gabbott and Hogg, 1998; Kang et al., 2017). Importantly, the level of consumer satisfaction is a major factor for consumer decision making, and is associated with loyalty to a product or a service (Halilovic and Cicic, 2013; Hwang and Zhao, 2010; Le Gall-Ely, 2009). Within the tourism literature, studies of Laroche et al. (2004) and Danaher and Sweeney (2007) argue that high-quality tourism services tend to promote loyalty and have a direct impact on profitability. In addition, empirical research has shown that museums are perceived as cultural experience goods; hence, tourist satisfaction and loyalty are important factors that need to be understood by museum management to offer attractive tour services to visitors (Kim et al., 2017; Kim and Thapa, 2018). Therefore, this study hypothesises, as follows:

**H2.** Tourist satisfaction has a positive effect on loyalty

### Tourist satisfaction, loyalty and WPM

Tohmo (2017) confirmed a relationship between cultural service and a positive attitude towards culture and a high WPM for cultural services. WPM is the maximum price a buyer accepts to pay for a given quantity of goods or services (Kalish and Nelson, 1991). Thus, this study considers WPM as the maximum price a museum tourist accepts to pay for a unique service experience at museum sites. Heritage tourists determine the WPM for non-market goods based on the value of the tourist experience (Calinao and Lin, 2017), which invariably creates satisfaction for the tourists (Shahrabani and Regev, 2019). Furthermore, Morrison and Dowell (2015) established that ‘sense of place’ (i.e. place identity) significantly influenced museum tourists’ WPM. A sense of place is the strong identity that is deeply felt by inhabitants and visitors, and likely to lead to tourist loyalty to the destination. For instance, in a study on a heritage site in South Africa, Mgxekwa et al., (2019) found that a comprehensive memorable heritage site experience contributed to visitor WPM for such experiences. In addition, a survey by Lopez et al. (2019) on visitors to the Pyramids of the Sun and the Moon (Peru) established that perceived value of the service experience had the strongest impact on visitors’ loyalty. Hence, the set of hypotheses as follows:

**H3.** Loyalty has a positive effect on WPM

**H4.** Tourist satisfaction has a positive effect on WPM
Moderating effect of frequency of visitation

Previous studies on the moderating role of frequency of visitation (first time and repeat visitors) within the tourism literature have indicated the significant contribution of frequent visits in explaining tourist behaviour (Franklin, 2003; Li et al., 2008; Liang and Zhang, 2011). In this research, the frequency of visitation is the NT a tourist visits the museum. Earlier, researchers have contended that first-time visitors were driven more by novelty (Anwar and Sohail, 2004), while repeat visitors enjoyed the familiarity with the tour sites (Li et al., 2008; Liang and Zhang, 2011). For example, the behaviour of first-timers might be different in terms of their responses, perceptions, perceived values, travel motives and are usually active planners (Li et al., 2008). However, repeat visitors are seen to be more antagonistic when faced with unsatisfactory service and are more likely to complain (Namkung and Jang, 2009). Evidently, previous literature on tourism indicated that repeat visitors were more likely to revisit the tourism site (Petrick et al., 2001; Petrick and Backman, 2002b; Sonmez, 1998). Similarly, the study of Dorn and Polegate (2014) indicated that first-time and repeat visitors differed in their segment profiles and the dimensions of their satisfaction with the museum experience. Mckercher and Wong’s (2004) study also found that repeat visitors might have lower degrees of satisfaction due to their high expectations in some circumstances. This implies that satisfaction may not directly influence tourists in their revisit intentions. Indeed, Chan (2009), and Su et al. (2016) revealed that tourists gained both emotional and cognitive stimuli and service experience through NT, which possibly motivate tourists to pay more for the same tour.

In conclusion, using NT as a moderator variable is relevant, in that the travel motives of tourists are basically guided by novelty, as well as familiarity with a destination. However, first-time and frequent visitors will react in different ways based on their understanding and perceptions about a destination. This research anticipates that from an EET perspective, NT might moderate the relationships between satisfaction and WPM within context. Again, guided by the significant moderating role of NT of previous studies (e.g Anwar and Sohail, 2004; Li et al., 2008; Liang and Zhang, 2011), there was an additional opportunity for this study to test whether NT would significantly moderate the relationships in a different research context. This direction of study will provide a more holistic understanding of museum tourism in this environment. In this regard, it is suggested that NT could moderate the relationship between satisfaction and WPM. Hence the next hypothesis, as follows:

\[ H5. \] NT significantly moderate the relationship between tourist satisfaction and WPM

Methodology

Data collection and sampling

The National Museum, situated in Accra, the capital city of Ghana, was selected for this study because it hosts the creative art exhibition that attracts a large number of tourists. Besides its location, the National Museum has unique characteristics. The museum consists of artifacts, cultural objects and the majority of Ghanaian artistry paintings. It is also the largest and oldest museum in Ghana, built in 1975 (GMB, 2017). The selected museum managers were contacted, and the objective of the research was explained to them, in order to facilitate the data collection procedure. The targeted population of this research was adult domestic and foreign tourists, who visited the National Museum in Accra during the months of June to August, 2019. Ghana’s major tourist season occurs from June through August when most European and North American visitors made their way to the country (Travel Tips, 2018). A convenience sampling method was used to administer a total of 560 questionnaires, and 385 valid responses were considered, representing a 68.8% response rate. This method was used due to the easy accessibility of participants, their willingness and readiness to complete the self-administered questionnaire (Creswell, 2014; Etika et al., 2016). Quantitative data were
collected from visitors who completed their tour; this was to ensure that the tourists had a very recent experience. The questionnaires were administered with the help of 6 experienced enumerators who were recruited and trained by the researchers. In addition, the participants were assured of anonymity and confidentiality (Wiles et al., 2007). The questionnaire was designed to be completed within 10–15 min.

The sample size for the study was determined based on the expected data analysis technique employed (Malhotra, 2007). Structural equation modelling (SEM) was considered as the preferred data analysis technique for this study and required a minimum of 100 participants (Hair et al., 2010; Tabachnik and Fidell, 2007). This study, drawing on these suggestions, considered a useable sample size of 385 respondents for this study. Earlier, the questionnaire was piloted utilising a sample of 30 visitors based on the recommendation of Preneger et al. (2014). These authors suggested that pre-testing of the questionnaire with 30 participants was likely to provide a high power of 80%, coupled with the ability to detect any problem within the population. The results of the 30 participants showed that the respondents for this study understood the questions, as they were written in simple English language.

Instruments

The questionnaire had 31 items in all, to measure each construct provided in the conceptual model, structured in five sections. The first section comprises sixteen (16) adapted items on museum experience by Caldwell (2002), and Rowley (1999) designed to measure service experiences. The second section has two (2) items adapted to determine tourist WPM (Zeithaml et al., 1996). The third section focuses on tourist satisfaction with five (5) items adapted from Oliver (1997). The fourth section measures the participants’ loyalty with four (4) items (Zeithaml et al., 1996). The participants were asked to indicate on a five-point scale, ranging from 1 = ‘strongly disagree’ to 5 = ‘strongly agree’. The final section of the survey captures four questions on the profiles of the tourists. The sample size entails 385 participants, with 44% male and 56% female. Fifty-two (52%) were international tourists, while domestic tourists recorded 48%. The number of first-time tourists is 47% and repeat tourists 53%. Age distribution was as follows: 18–24 years (22%); 25–34 years (11%); 35–44 years (30%); 45–54 years (20%); 55–64 years (11%); 65 years and older (6%). In addition, the descriptive results of the studied variables were presented (see Table 1). Museum experience recorded a composite average value of 4.46, and WPM (4.14), Satisfaction (4.28), and Loyalty (3.76). These findings revealed that tourists agreed that they were influenced by these behavioural factors to tour the museum. Besides, in the study model (Figure 1), an addition of a moderator (i.e. NT) was introduced to explain the effect on the relationship between satisfaction and WPM (Calinao and Lin, 2017; Shahrabani and Regev, 2019). Prior studies had

| Table 1. Mean, SD, Reliability Measures and Inter-correlation for constructs |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| **Construct**                              | **AVE** | **CR** | **1** | **2** | **3** | **4** |
| Museum experience                      | 0.83   | 0.95   | 0.91 | 0.87 |       |       |
| Satisfaction                           | 0.77   | 0.93   | 0.32 | 0.28 | 0.27 | 0.91 |
| Loyalty                                | 0.83   | 0.94   | 0.26 | 0.44 | 0.34 | 0.86 |
| WPM                                    | 0.74   | 0.80   | 0.28** | 0.44** | 0.34** | 0.86 |
| Mean                                   | –      | –      | 4.46 | 4.28 | 3.76 | 4.14 |
| SD                                     | –      | –      | 0.23 | 0.71 | 0.21 | 0.42 |

Note(s): SD = Standard Deviation, AVE = Average Variance Explained and CR = Composite Reliability. All inter-correlation coefficients are significant at *p < 0.05 and **p < 0.01. Italics Diagonal figures represent the square root of the AVE; sub-diagonal figures are the latent construct for inter-correlations.
shown that when a moderating variable was introduced between two other variables, it was much easier to understand the nature of the relationship (Aguinis et al., 2016). In determining the moderation effect, the study multiplied the explanatory variables of satisfaction with the moderator: NT (1 = repeat and 0 = first time) (NT*Satisfaction), as recommended (Chin et al., 2003).

Data analysis
The research model was tested using SEM to estimate the model fitness and also test the proposed hypotheses. It is generally accepted that SEM is effective for testing models that are path analytic with moderating or mediating variables (Bryne, 2009). The advantage of using SEM lies in its strength as a multivariate technique. Thus, SEM combines aspects of factor analysis and multiple regressions for analysing multiple hypothesised relationships among observed and unobserved (latent) variables, to determine whether the interrelationships are consistent with the data sample (Bollen, 1989; Jöreskog and Sörbom, 1993). Invariably, the focus of this study was to analyse the multiple hypothesised linkages among observed and unobserved (latent) variables and simultaneously test the moderating effect of the research model. This study followed the suggested methods within the literature to verify possible issues of normality of the data distribution, common method bias (CMB) and multicollinearity. First, this research explored whether the distribution of data deviated from normality and found that all items of the constructs were above 0.05, indicating no deviation from normality (Brown, 2006). This study is a cross-sectional study, where data was collected from the same participants at the same time or using the same technique for predictor and outcome variables (Heppner et al., 2008). Hence to measure for CMB, Harman’s single factor was conducted to determine the extent of CMB in this study. The simultaneous loading of all the items in a principal component factor analysis produced a total variance of 27.2% (<50%), a maximum acceptable threshold of the total variance (Podsakoff et al., 2003). This implied that there was no possibility of CMB. Finally, the correlation coefficients shown in (Table I) are not above 0.80, revealing that multicollinearity was not an issue (Hair et al., 2010).

Results
Factor analysis
The exploratory factor analysis specifically, the principal axis factorial (PAF) approach with equamax rotation method was employed which parsimoniously simplifies the number of items, as well as examines the underlying factor structure of the studied constructs.

![Tested research model](image)

Figure 1.
Tested research model
(Hair et al., 2010). The 16 museum experience items revealed, Kaiser-Meyer-Olkin (KMO) (0.653) and Bartlett’s test of sphericity \(x^2 = 2,093.73\) were all adequate in performing factor analysis. The findings showed three factors that accounted for 77.68% of the total variance explained. Factor one was identified as ‘education’, which explained 32.30% of the total variance with a composite reliability value of (0.95). Factor two of the museum experience was labeled ‘entertainment’, which explained 28.14% of the total variance with a composite reliability value of 0.93. Factor three was recognised as ‘escape’, which explained 12.10% of the total variance explained with a composite reliability value of 0.76. Factor four was identified as ‘aesthetic’, which explained 5.14% of the total variance explained with a composite reliability value of 0.76. Added to this, a total of 11 items, of which 2 items was for WPM, 5 items for ‘satisfaction’, and 4 items for ‘loyalty’ were factor analysed. Results of the factor analysis revealed the KMO value of 0.892 and Bartlett’s test of sphericity \(x^2 = 5,236.54\). In all, three factors were extracted, namely ‘satisfaction’, ‘loyalty’, and ‘WPM’, which recorded 65.30% of the total variation in the scale data. ‘Satisfaction’ accounted for 31.3% with a composite reliability coefficient of 0.94; ‘loyalty’ (21.4%) with a composite reliability coefficient of 0.93; and WPM had 12.6% with a composite reliability coefficient of 0.80. The factor scores were computed for each of the constructs utilising the regression factor score method due to its maximisation of the validity of the items used (Distefano et al., 2009). Following the exploratory factor analysis, the Anderson-Rubin factor score was computed utilising STATA 14 software package to estimate factor score coefficients, and used in the subsequent SEM analysis. The resulting scores are uncorrelated, have a mean equal to zero and SD equals to one (Hatcher, 1994).

Measurement and structural model
The analysis of a measurement model requires four stages: the individual reliability of items, the composite reliability of the constructs, the convergent and discriminant validity. First, the Cronbach alpha of the individual items obtained exceeded the threshold of 0.70 (Nunnally and Bernstein, 1994), meaning that the questions were reliable for the current study. Second, the findings of the calculated composite reliability values also showed an acceptable level \(\geq 0.70\) (Chin, 2010; Hair et al., 2010), which revealed the internal consistency of the items and confirmed the reliability of the survey instrument. Third, the existence of convergent validity was confirmed by utilising the average extracted variance values that exceeded 0.5 (Fornell and Larcker, 1981). Finally, to satisfy the requirement of discriminant validity, the square root of the construct’s AVE was greater than the inter-constructs correlation (Fornell and Larcker, 1981). As shown in Table 1, all the relationships among the variables obtained were less than 0.50 and the square roots of the AVEs were more than inter-correlation values. This shows that the constructs are distinct from one another. Thus, there is evidence of discriminant validity. The statistics for the measurement model without the moderating variable were \(x^2 = 276.542, df = 187, p = 0.002\), root mean squared error of approximation (RMSEA) = 0.09; comparative fit index (CFI) = 0.87; Tucker–Lewis index (TLI) = 0.88 and standardised root mean squared residual (SRMR) = 0.09. The results obtained above demonstrated poor fit. The model was refined through the modification indices to achieve a good fit for the structural model. A modification indices analysis suggested that an improvement in the overall goodness of fit of the model could be achieved by allowing museum experience to correlate with loyalty; hence this path was added to the model. The revised model produced a better fit index \(x^2 = 279.042, df = 189, p = 0.001\) RMSEA = 0.04, CFI = 0.96, TLI = 0.96 and SRMR = 0.03, providing evidence of good fit. In the model, experience accounted for 22.3% variance in satisfaction, satisfaction accounted for 13.0% of the variance in loyalty and loyalty recorded 7.02% variance in WPM. This accounted for 32.32% of the variations in WTP without the moderating variable.
Hypothesis testing

Table 2 shows the results of the SEM used in testing the hypotheses for the study. The results of the SEM provided support for H1–H5. It was revealed that museum experience has a positive effect on tourist satisfaction ($\beta = 0.293, p < 0.001$) and supported H1; tourist satisfaction has a positive effect on loyalty ($\beta = 0.199, p < 0.01$) and supported H2; loyalty has a positive effect on WPM ($\beta = 0.329, p < 0.05$) and supported H3; tourist satisfaction has a positive effect on WPM ($\beta = 0.493, p < 0.01$) and supported H4.

Test of the moderation effect

For testing the interaction effect, the study applied a two-stage approach recommended by previous studies (Chin et al., 2003; Sarkar et al., 2001; Walter et al., 2006). In stage 1, the structural model analysis was performed without the moderating variable and the results presented above. In stage 2, the result of the measurement model statistics, including the moderating variable was ($\chi^2 = 264.421, df = 187, p = 0.002$), RMSEA = 0.07, CFI = 0.87, TLI = 0.89 and SRMR = 0.06 produced a poor fit. However, an examination of modification indices revealed that the model fit was substantially improved by allowing theoretically plausible correlations between tourist satisfaction, WPM and loyalty. As a result of this model revision ($\chi^2 = 267.002, df = 188, p = 0.002$) RMSEA = 0.04, CFI = 0.95, TLI = 0.96 and SRMR = 0.03, provided evidence of good fit. This study was guided by previous studies (Chin et al., 2003; Moretti, 2015) in reporting the measurement and structural statistics of the interaction model. In this study, the coefficient resulting from the interaction effects on the relationships between satisfaction and WPM (NT*satisfaction $\rightarrow$ WTM) is statistically significant ($\beta = 0.072, p < 0.05$), supporting H5. However, the result of the explained variance, that is, the $R^2$ in stage 1 shows 32.32% whiles the result in stage 2 records 44.6%. Comparing the results in stage 2 to stage 1 show that the $R^2$-squared was increased to 12.2%, providing evidence of a better-explained variance. The increased $R^2$-squared is attributed to the moderating effects. The effect size was also determined by measuring the strength of the theoretical relationship, including the moderating effects (Chin et al., 2003). The recommended method of testing effect size was applied, respectively (see: Cohen, 1988). The effect size threshold values of 0.02, 0.15 and 0.35 are regarded as small, moderate and large effects (Cohen, 1988). The significance of the effect size was also confirmed using a $p$-value ($\leq 0.05$) as recommended (Tabachnik and Fidell, 2007). The calculated effect size of this study is 0.122, with corresponding significant value (0.04) demonstrating that NT is statistically significant to moderate the relationship and has more than the moderate effect (0.18 > 0.15) on tourist satisfaction. In all, the coefficient of determination reported for the tested research model accounted for 44.6% variations in WPM. The analysis model with the moderation effect is presented in Figure 1.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Beta coefficients</th>
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</thead>
<tbody>
<tr>
<td>Museum experience $\rightarrow$ Satisfaction (H1)</td>
<td>0.293***</td>
<td>+</td>
<td>Supported</td>
</tr>
<tr>
<td>Satisfaction $\rightarrow$ Loyalty (H2)</td>
<td>0.199**</td>
<td>+</td>
<td>Supported</td>
</tr>
<tr>
<td>Loyalty $\rightarrow$ WPM (H3)</td>
<td>0.329*</td>
<td>+</td>
<td>Supported</td>
</tr>
<tr>
<td>Satisfaction $\rightarrow$ WPM (H4)</td>
<td>0.493**</td>
<td>+</td>
<td>Supported</td>
</tr>
<tr>
<td>NT*Satisfaction $\rightarrow$ WPM (H5)</td>
<td>0.079*</td>
<td>+</td>
<td>Supported</td>
</tr>
<tr>
<td>Overall Coefficient of determination ($R^2$)</td>
<td>0.446</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Hypothesis testing

Note(s): ***$p \leq 0.001$, **$p \leq 0.01$, *$p \leq 0.05$
Findings and discussion
The main research problem addressed in this study was the need to consider museum cultural experience in determining tourist satisfaction and WPM for the service experience. Service experiences are integral drivers of consumer satisfaction and are likely to contribute to the loyalty of museum visitors. Museum experience has moved away from just a service experience to heritage experience, thereby affecting visitors’ emotional and cognitive stimuli (Chan, 2009; Ruiz-Alba et al., 2019). This study investigates the effect of tourist experience on museum visitors’ satisfaction. First, the finding confirms that visitors’ experience has a positive effect on tourist satisfaction. It could be inferred that visitor expectations were likely to have been met because of the cultural values and the associated service quality from the providers. This finding resonates with those of Yang (2012) and Ung and Vong (2010), both in Chinese contexts, which focused on culture, heritage and tradition. Considering that museum experience creates emotional attachments, these findings underscore the importance of preserving cultural heritage at museum destinations.

This study also investigates the effect of satisfaction on loyalty and finds a positive effect of satisfaction on loyalty. Meeting client satisfaction has been an important antecedent to consumer association with service patronage, with satisfaction being the main antecedent to loyalty. This finding supports the significance of loyalty drivers in heritage tourism destination research (Lopez et al., 2019). In most instances, satisfaction establishes loyalty (Carmen et al., 2017), and this occurs because consumers develop a taste for the services and experience less mental discomfort (i.e. low cognitive dissonance) when taking a decision on the museum services. Although the empirical study is emerging within context, majority of the research on museum tourist experience, satisfaction, loyalty and WPM are strongly rooted in Western cultures (Ruiz-Alba et al., 2019; Shahrabani and Regev, 2019). This study makes a significant contribution to museum tourism literature in a non-Western context. Thus, this study addresses the call to investigate tourist experience in different environments (Ruiz-Alba et al., 2019). Ghana provides a unique cultural context in which to study the effects of experience, as there are creative art exhibitions and cultural artifacts that attract a large number of tourists to the museums. Although this study’s environment differs from those of earlier studies, the findings of the current study are encouraging for Ghana because it suggests that museums in the country are adopting international standards to preserve and protect the cultural heritage that would attract tourists from all over the world and to keep Ghana in the competition.

Furthermore, this study explores the effect of loyalty on visitor WPM. Statistically, the analysis confirmed that visitor loyalty has a positive effect on WPM for the overall service experience. Carmen, Carmen and Laguna-Garci (2017) study finds that loyalty is driven by satisfaction and repeated visits to tourism destinations, and likely to culminate in a cultural experience at the heritage sites. In a study on Nelson Mandela Heritage site in South Africa, Mg xekwa, Scoltz and Saayman (2019) confirmed that whenever visitors encountered a unique experience, they were willing to pay higher amounts. Therefore, offering a unique cultural experience for tourists could become a strategic tool that ought to be given due attention by museum operators.

Another finding of this study is that tourist satisfaction has a direct positive effect on WPM. This finding is consistent with that of Morrison and Dowell (2015), which established that the perceived value of cultural resources offered to tourists, would affect their willingness to pay. These findings support the position held by consumer behaviour researchers that the cognitive and emotional aspects of consumer experience and consumption compliment to provide insights into tourist satisfaction and actions at a museum (Chiappa et al., 2014; De Rajas and Camarero, 2008). When tourists are satisfied with the service encounter, they are likely to remain loyal and likely to repeat visits because of the value derived from the experiences.
Finally, this study also investigates the moderating effects of NT on the relationship between satisfaction and WPM, and finds that NT has a positive moderating effect on the said relationship. This finding confirms propositions by Chiappa et al. (2014) and Kozak et al. (2002) that some variables are potential moderators on the relationship between satisfaction and perceived behaviour. Further, the finding resonates with Su et al. (2016) in a Chinese ethnic community setting where ethnic encounters were the motivation to return to museum sites because of their satisfaction. When tourists visit repeatedly, they are likely to encounter different personalities, learn the cultural values of the ethnic groups and build lasting relationships. These interactions give tourists a unique cultural experience, which is likely to motivate the re-patronage of the museum facilities and readiness to pay more for the valued service. Similarly, Brida et al. (2014) establish that repeating a visit to a museum without changing the place, created convenience, and so tourists were ready to pay higher prices so as to benefit from the said convenience. The study, therefore, provides evidence that tourist experience might influence the satisfaction of both domestic and international tourists visiting the National Museum in the future. These positions, as regards possible increased positive tourist satisfaction and its influence on loyalty and WPM, have practical implications for the future development of museum tourism within context.

**Conclusion**

An investigation into tourist experience shows that satisfaction, WPM, loyalty and the moderating effect of NT are among the neglected fields in tourism literature in Ghana. Notably, this study has added to the theoretical development and advanced the understanding of museum tourism and experience in a non-Western context. In addition, the current findings provide the foundation for future directions and provide empirical evidence that museum experience, satisfaction, WPM are significant factors that have an impact on the loyalty of tourists in the studied area. The study's results might suggest that both domestic and foreign tourists were satisfied with their choice of the National Museum and this would develop a high level of destination loyalty. Besides, this is likely to result in positive intentions to re-visit, or recommendations of the same to other potential tourists. Finally, this study’s contribution to museum tourism literature lies in using experience economy theory to develop, test and empirically explain the moderating mechanism through which museum experience leads to tourist satisfaction. Thus, this study further validates and highlights the relevance of NT for the improvement of tourist WPM. Again, this study’s findings add to earlier research of Ruiz-Alba et al. (2019) to extend the scope in museum tourism literature. Evidently, the findings of the main result Ruiz-Alba et al. (2019) revealed the importance of co-creation of museum tourism service, while this article established the significant moderation effect of frequency of visit, during which visitors encountered the service offerings. All these findings are equally important to the development of museum tourism on the globe.

**Implications**

The study has investigated the significant effects and the relationships within museum tourism, focusing on the museum experience, and the implications for theory and tourism policy development within context. The results extend the understanding of applying the EET in museum tourism. In addition, the proposed and verified hypotheses were grounded on the EET, with the introduction of NT as a moderator. The introduction of NT to the theory may be regarded as a contribution of this investigation, which opens opportunities for similar future studies in other geographical contexts. This research has also added to the body of knowledge by discovering museum experience in context, which is important to museum
tourism. The findings also substantiate that NT is a significant variable that aids in explaining the moderation effect on the relationship between satisfaction and WPM by museum tourists, and this has not been investigated before within this environment. These relevant findings will benefit businesses, marketers, practitioners, government, non-governmental institutions and other stakeholders to have a better understanding and knowledge about museum tourism in this part of the globe. This provides the basis for predictions and development of museum tourism strategies to enhance museum tourist travelling desires, choices, and attraction to museum destinations. Importantly, tourism practitioners may use the current findings as a tool to deliver improved services to satisfy tourists who are on vacation.

The results in this work have significant practical implications. This study affords business opportunities within the sector to forecast and possibly solve the problems of satisfaction of tourist experience, and thereby increase museum loyalty behaviour among tourists. It is also essential for managers of museums to note that experience might not necessarily translate into high tourist satisfaction, unless attractive cultural artifacts, objects, and artist paintings, among others, are exhibited at museum destinations. These are attainable through policy formulation and implementation, partnerships and capacity building of the stakeholders in the sector. Again, owners of tour businesses should endeavour to enhance satisfaction levels of the museum tourists in accordance with their cultural experience, WPM, and the level of loyalty that would build positive intention to re-visit and to recommend a museum. The implications of the above are that tourism business, as well as the tourism authorities in Ghana, need to invest time and effort in developing appropriate and important ways of promoting and sustaining museum tourism.

Limitations and areas for future study
This research has contributed to the effort to advance the understanding of the importance of NT, as well as the significant effect of satisfaction on WPM and loyalty among tourists, which have been neglected in earlier research within context, although there are some limitations.

The study has applied a convenience sampling method, and the data came from a single source-self report, which constrains generalisation of the findings. In addition to this, the study did not test first-time and frequent tourists separately. Hence, no generalisation can be made beyond this context. Further studies need to utilise a bigger sample size, as well as a test for the moderation effect of multi-groups (first-time and frequent tourists) in a similar geographical context, which might aid the comparison of the studied variables with other countries. Again, this study focused on experience and satisfaction as significant predictors of WPM and loyalty. Yet, there are other factors such as tourist perceived values, which are destination attributes needed to advance museum tourism worldwide. Besides, the introduction of moderating effects of NT on other tourism consumption theories is welcomed.

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