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"Cocoa-Based Tourism": Exploring Tourists' Image, Satisfaction and Loyalty Regarding a Cultural Heritage Destination

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ABSTRACT

This research aims to analyze the relationship between cocoa-based tourist experiences and tourists' perceptions of image, satisfaction and loyalty regarding a cultural destination. A quantitative approach was used, with data obtained via surveys distributed to tourists participating in a cocoa-based culinary experience in the Dominican Republic. The survey was designed with items adapted from previous research. The theoretical model of the study was examined using partial least squares structural equation modeling. The results indicate that cocoa-based culinary experiences are closely linked to tourists' cognitive and affective perceptions of the destination, improving overall satisfaction and contributing to loyalty intentions. Destination image and destination satisfaction mediate the relationship between cocoa-based culinary experiences and tourist loyalty, suggesting that immersive dining experiences are critical in shaping destination perception and visitor engagement. This research offers novel contributions to gastronomic tourism because it focuses on cocoa as a central element of gastronomic tourism, in addition to examining its effects on destination marketing outcomes. It is one of the first studies to analyze gastronomic tourism from the cocoa perspective. The results expand the existing literature on gastronomic tourism, as the experiential aspects of cocoa consumption with regard to tourist behavior and destination loyalty are integrated.

KEYWORDS

Cocoa; gastronomic tourism; image; satisfaction; loyalty

Introduction

Destinations assess their strengths to differentiate themselves from competitors (Karagöz & Uysal, 2022), promoting their cultural traits by offering unique experiences that strengthen their image (Kovalenko et al., 2023). Accordingly, gastronomic experiences and local cuisine have become fundamental elements in the development of the tourist image of a place (Jerez, 2023). This has led destinations to develop gastronomic tourism

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products based on their food, such as products with olive oil (DiClemente et al., 2023), wine (Martínez-Falcó et al., 2023), serrano ham (Sánchez-Cubo et al., 2023), fish (Pizzichini et al., 2022) and cheese (Fusté-Forné, 2020).

One of the characteristics of modern tourists is that they want to have a cultural and local experience in the place they are visiting, based on the discovery of local traditions (Kay Smith et al., 2022). From these gastronomic cultural experiences, it has been proven that gastronomic tourism strengthens tourists' image (Huete-Alcocer & Hernandez-Rojas, 2022), satisfaction (Esparza Huamanchumo et al., 2023) and loyalty (Hernandez-Rojas et al., 2021; Moral-Cuadra et al., 2023) regarding a place. Thus, in recent years, some destinations have developed new culinary – gastronomic experiences based on their local products. One of those local products is cocoa, which is gaining popularity as a gastronomic product for tourism (Park & Widyanta, 2022; Tourism and Society, 2024; Yong et al., 2022). Using cocoa, various shapes and types of chocolates are marketed, including cereals dipped in chocolate, mousse, biscuits, cocoa powder beer, liqueurs and nut creams with cocoa.

At an international level, cocoa and its most famous production, chocolate, have a particular prestige, being used both in the form of an ingredient and in solid or powdered presentations (Da Silva Carvalho, 2022). It has inspired a wide variety of creations, combinations and pairings, including versions with high cocoa content (Paz et al., 2021), even being integrated into molecular cuisine (Kozakiewicz & Cossuta, 2021), which is a modality of contemporary cuisine that emphasizes the flavor and presentation of dishes, relying on creativity and innovation to explore new textures and flavors (Spencer, 2022). Additionally, the trend has been identified to develop gastronomic routes focused on cocoa and chocolate, offering unique experiences around this ingredient. However, the study of cocoa-based tourism experiences is limited in the scientific works.

Nowadays, the Dominican Republic has increased interest, both among tourists and residents, in the so-called "Cacao Tours," which offer different experiences around cocoa. An example is the "Cacao Trail," located in a rural area, where the visitor can live the experience that begins from the planting of cocoa until it becomes a product; another example is the "Kah Kow Experiences," located in the Colonial Zone of Santo Domingo, where the visitor can live a complete culinary experience based on cocoa, where, in addition to learning the history of this food in the Dominican Republic, it involves all the senses, immersing you in a world of flavors, aromas and textures while you taste various products based on cocoa, make your own chocolate and have the opportunity to buy various products made from cocoa. "Kah Kow Experiences" has been consolidated, according to TripAdvisor (2024), as one of the main attractions of the city of Santo Domingo, ranking

eighth overall in the city (of 126 attractions) and third overall in the Colonial Zone, with an average rating of 4.5 points out of 5.

Therefore, gastronomy based on cocoa has been consolidated as a tourist resource for the city of Santo Domingo, which is the second tourist destination in the country, after Punta Cana, in number of visitors received. Thus, gastronomy, architecture or nature are fundamental resources to diversify the tourist offer of the Dominican Republic, focused on sun and beach tourism in all-inclusive resort hotels. In this sense, the Central Bank of the Dominican Republic (CBDR, 2024), tourism in the country registered notable growth in 2023, consolidating itself as one of the main economic drivers of the country. The arrival of foreign tourists increased by 29.6% compared to the previous year, reaching a total of 8,058,571 visitors. The main reason for visiting was leisure and vacations, representing 51.3% of tourists. Regarding the length of stay, 25.7% of visitors stayed between 2 and 5 days, while 25.8% stayed between 6 and 15 days. Income generated by tourism reached 8 billion dollars, reflecting a significant contribution to the country's GDP (7.5%). Specifically, Santo Domingo received 2 million tourists, representing an increase of 11.1% compared to the previous year. Visitors were attracted by the cultural and historical offering, with 48.7% of tourists interested in exploring historical sites and cultural aspects, such as gastronomy. Furthermore, the average expenditure per tourist in Santo Domingo was approximately $1,000, with a notable distribution in accommodation and food (CBDR, 2024).

In this sense, the purpose of this study is to analyze the influence of cocoa-based tourist experiences on the image, satisfaction and loyalty of the destination. According to the review carried out by the authors of this research, this is the first study that analyses the variables of satisfaction, image and loyalty toward a destination from the perspective of the cocoa-based tourist experience. Therefore, we seek to understand whether the level of satisfaction, loyalty and perceived image of the destination by tourists who participate in the cocoa-based experience is related to their culinary or gastronomic experience, as other authors have proposed for other types of gastronomic tourism (Valverde Roda et al., 2023). Furthermore, studies on gastronomic products in UNESCO World Heritage cities have been highlighted as fundamental for the conservation of cultural heritage and the promotion of sustainable development (Lima et al., 2023) and, in this sense, cocoa has not yet received attention in this aspect. Also, the study of cocoa-based products is of interest in the literature due to the benefits that this food has on health and the prevention of some diseases (Martin & Ramos, 2021), which can be attractive to people looking for tourist experiences in healthy gastronomy (Pérez-Rodrigo & Aranceta-Bartrina, 2021). Finally, this study contributes to Sustainable Development Goals (SDG) number 11 and 12, since it generates

implications to continue strengthening these objectives in cities with gastronomic experiences on offer.

Literature review and hypothesis formation

Expectation-confirmation theory (ECT)

Expectancy confirmation theory (ECT) is a widely accepted framework used in various fields to understand the relationship between expectations and experiences (C. Wang et al., 2021). ECT focuses on evaluating the satisfaction resulting from the alignment or misalignment between individuals' expectations and actual experiences (Sinha & Singh, 2023). In the tourism field, it has been used to investigate the impact of social networks on travelers' expectations and their perceptions after the experience (Guerreiro et al., 2024). Furthermore, ECT has been used to build comprehensive models that explain user behaviors and intentions in the tourism sector (Rahi et al., 2021).

In this context, ECT has been shown to be relevant to understanding post-purchase or adoption satisfaction based on expectations, perceived performance, and confirmation or disconfirmation of beliefs (Sinha & Singh, 2023). Also, it has been used to explore the connections between expectation confirmation, satisfaction, and continued use intention in various environments, including travel applications (Choi et al., 2023). Furthermore, ECT has been linked to customer satisfaction, repeat purchase behavior and service marketing, highlighting its importance in understanding consumer behaviors and decision-making processes (Nadya, 2020). The theory encompasses essential elements such as expectation, satisfaction, and repurchase intentions (C. Wang et al., 2021).

Previous studies have highlighted the importance of image, as well as cognitive and affective components, in visitor satisfaction and loyalty (Fu, 2019). Therefore, ECT can be expanded by incorporating the constructs of perceived experiences and global image, in order to know how it affects the relationship between expectations and destination loyalty. In this sense, the cognitive image captures the beliefs and knowledge about the destination, while the affective image reflects the associated emotions and feelings. For its part, the global image integrates these aspects, providing a complete vision of the visitor's perceptions.

In this sense, the global image of the destination can be included as a mediator in the relationship between visitor expectations and loyalty. Therefore, analyzing how visitors' experiences influence the initial cognitive and affective perceptions of the destination, as well as the global image, allows us to better understand the relationship and impact of pre-travel expectations with the visitor's loyalty to the destination. In this study, this analysis is significant, since, although expectations are not specifically measured, more

Table 1. Sociodemographic profile.

Gender	Age	Education level
Male: 46.2%	18-29: 28.3%	Without studies: 4.4%
Female: 53.8%	30-39: 22.3%	Primary: 8.6%
	40-49: 32.2%	Secondary: 34.7%
	50-59: 14.8%	University: 52.3%
	60 or more: 2.4%	
Origin	Did you plan to visit the gastronomic experiences with cocoa prior to visiting Santo Domingo?	
National: 79.7%	Yes: 80.1%	
International: 20.3%	No: 19.9%	

Source: Self-made.

than 80% (see Table 1) of visitors traveled to the destination with the expectation of visiting the cocoa experience prior to their trip and, Therefore, they had prior expectations that may influence, according to their experience, satisfaction, image and loyalty with the destination.

Therefore, ECT offers a conceptual framework to understand how visitors' prior expectations about a specific tourist experience influence their subsequent perception and behavior. In the context of this research, ECT allows analyzing how the cocoa-based culinary experience (CCE) affects both satisfaction (SAD) and loyalty (LOY) toward the destination, through the mediation of cognitive (COI) and affective (AFI) images. But this theory is strengthened by the incorporation of the global destination image (GLI) as an intermediate factor, facilitating the assessment of how initial expectations are confirmed or disconfirmed, significantly impacting the overall perception and intention to return of visitors. This could help to understand the mechanisms underlying tourist satisfaction and loyalty. Also, it would provide a solid basis for developing marketing strategies that optimize the visitor experience and foster a long-lasting relationship with the destination.

Culinary experience and image of the destination

Akgün et al. (2020) indicated that the image of a destination refers to the sum total of knowledge, attitudes, imaginations, impressions and emotional feelings that a person or a group can associate with a particular place. For his part, Stylidis and Cherifi (2018) states that brand image represents the collection of perceptions, thoughts, and feelings an individual holds about a destination. In this sense, the culinary experience may shape their perceptions of a travel destination (Lai et al., 2021), because this brand image is formed from how a tourist personally constructs and interprets their knowledge, their beliefs, experiences, emotional impressions, and conceptions about a destination (Guerreiro et al., 2024). Likewise, Kovalenko et al. (2023) indicate that experiences related to gastronomy are closely related with the perception of a tourist's image toward a destination.

However, the comprehensive perception of a destination is shaped by visitors' cognitive and affective evaluations (Woosnam et al., 2020). In this sense, the affective image pertains to the emotions or affective reactions an individual harbors toward a destination, while the cognitive image encompasses the knowledge and beliefs a tourist possesses regarding the destination (Huete-Alcocer & Hernandez-Rojas, 2022). The cognitive image encapsulates the assessment of the destination's perceived characteristics, regardless of prior visits (Papadimitriou et al., 2018), while the affective image is characterized by the emotional responses and sentiments that visitors experience toward the destination post-visit (Kim et al., 2019). Likewise, it has been shown that the cognitive component perceived by a tourist influences his affective component (Fu, 2019). In this sense, it is posited that tourists initially engage in a cognitive appraisal of a destination, which subsequently engenders affective reactions toward the same destination (Woosnam et al., 2020). Moreover, it has been proposed that both cognitive and affective dimensions exert influence on the overarching image of a tourist destination (Huete-Alcocer & Hernandez-Rojas, 2022; Marine-Roig & Huertas, 2020). Hence, the following hypotheses are articulated:

- H_1: The cocoa-based culinary experience (hereinafter, CCE) influences the affective image (hereinafter, AFI) toward the destination.
- H_2: CCE influences the cognitive image (hereinafter COI) toward the destination.
- H_3: CCE influences the global image (hereinafter, GLI).
- H_4: The COI influences the AFI.
- H_5: The COI influences the GLI.
- H_6: The AFI influences the GLI.

Based on ECT, the above hypotheses explore the relationship between tourists' expectations, their culinary experiences, and the resulting destination image. Thus, ECT postulates that the alignment or misalignment between expectations and actual experiences influences satisfaction (Sinha & Singh, 2023). Our approach indicates that this, in turn, shapes cognitive and affective evaluations. Therefore, in the context of tourism, and in this case culinary tourism, the culinary experience can be a fundamental factor that influences tourists' cognitive and affective images of the destination. In turn, these images collectively form the global image, which can impact satisfaction and loyalty (Marques et al., 2021), which are the aspects related in ECT when analyzing real experiences. Therefore, by including these relationships, we seek to understand how culinary experiences influence tourists' perceptions and behaviors toward a destination.

Culinary experience, satisfaction and loyalty

Destinations have used various foods and meals to generate gastronomic tourism products, with the aim that tourists find new experiences based on local culture (Emmendoerfer et al., 2023). These gastronomy-based experiences allow tourists to evaluate the product and the destination (Valverde Roda et al., 2023) and, consequently, gastronomic experiences are closely related to satisfaction and loyalty toward a place (Huete-Alcocer & Hernandez-Rojas, 2022; Sánchez-Cubo et al., 2023). Within the realm of tourism, satisfaction is defined as the emotional state that an individual has after the tourist experience (Saayman et al., 2018), while loyalty denotes an individual's inclination toward revisiting or advocating for a visit to a destination (Stylos & Bellou, 2019). Therefore, a tourist's gastronomic experience can generate satisfaction with the place and, consequently, can contribute to making another visit in the future (Moral-Cuadra et al., 2023). However, Q. Chen and Huang (2021) observed no significant correlation between culinary experiences and their impact on satisfaction and loyalty toward the destination. Consequently, these variables must continue to be analyzed to understand these relationships.

Satisfaction with the destination, through gastronomic experiences, has been perceived as a precursor to destination loyalty (Mora et al., 2021). Even other studies have indicated that satisfaction with the destination acts as a mediating factor in the nexus between culinary experiences and loyalty toward the place (Moral-Cuadra et al., 2023). Likewise, it has been suggested that tourists tend to develop loyalty toward a destination after experiencing satisfaction with local food and gastronomic offerings (Ullah et al., 2022). Furthermore, interest and satisfaction with local gastronomy are essential to improve visitor satisfaction with the destination's cultural offering, indirectly contributing to overall trip satisfaction and improving the overall image of the place (Serra-Cantallops et al., 2021). That is, the satisfaction derived from gastronomic experiences is related to the perception of the destination as a culinary point and, consequently, influences the image toward the destination (Cordova-Buiza et al., 2021). Hence, satisfaction with a destination is instrumental in shaping the global image an individual holds of that destination. Additionally, the perceived image of a destination can affect loyalty toward it (Jeong & Kim, 2020), suggesting that a tourist with a favorable perception of a destination is more likely to recommend or revisit it (Chen et al., 2020). In line with this, Mora et al. (2021) have indicated that satisfaction with the gastronomic experiences at a destination not only enhances the destination's image but also influences tourist loyalty toward it. Hence, the following hypotheses are articulated:

- H_7: CCE influences satisfaction with the destination (hereinafter, SAD).
- H_8: CCE influences loyalty to the destination (hereinafter LOY).

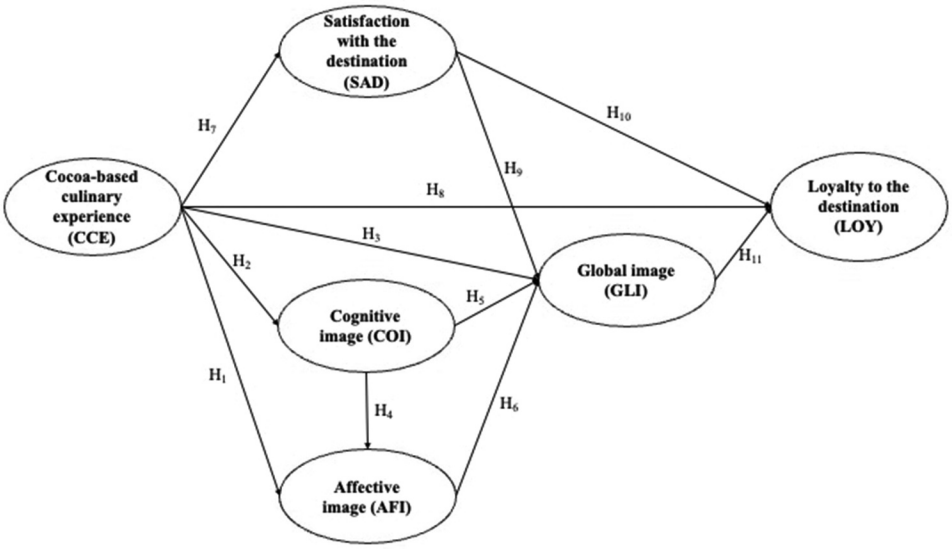

Figure 1. Research model and hypotheses. Source: self-made.

- H_9: SAD influences the GLI.
- H_{10}: SAD influences LOY.
- H_{11}: GLI influences the LOY.

Based on ECT, the above hypotheses examine the interaction between culinary experiences, satisfaction and loyalty in tourism. ECT suggests that when actual experiences meet or exceed tourists' expectations, satisfaction occurs, which subsequently influences loyalty and other behaviors (Lee & Kim, 2020). In the context of gastronomic tourism, the culinary experience can improve satisfaction with the destination, impacting both the overall global image and loyalty. Therefore, by analyzing these relationships, we seek to understand how culinary experiences contribute to tourists' overall satisfaction, the overall image of the destination and their loyalty, thus providing information on effective destination management and marketing.

Figure 1 presents the graphic model with the hypotheses proposed in this research.

Methods

Survey preparation

To obtain the data for this research, a questionnaire has been designed. All items used have been rigorously adapted from previous studies. The three items of the CCE have been adapted following the proposals for items from studies that measured perceptions of a gastronomic experience in restaurants

(Liu & Tse, 2018). The four items of the COI, the three items of the AFI and the three items of the GLI have been adapted using the studies of Afshardoost and Eshaghi (2020) and Hernandez-Rojas et al. (2021). The three items of the SAD were adapted from Moral-Cuadra et al. (2023). Finally, the three LOY items were adapted from Moral-Cuadra et al. (2023). To measure each item, a five-point Likert scale was used. Also, sociodemographic variables (origin, gender, level of education and age) were used, in addition to an item to determine whether the tourist planned to visit the CCE before the trip to Santo Domingo. Once the first draft was designed, the instrument was evaluated by two academics with knowledge and experience in designing questionnaires for gastronomic tourists. The draft was later translated by a translator, a native of the United States, from Spanish to English. Once this process was completed, a pretest was carried out, applying the draft questionnaire to the 20 tourists (10 in Spanish and 10 in English). These processes contributed to the mission of ensuring the understanding and clarity of the items.

Participants, data collection procedure, and common methods bias (CMB)

The data was collected through the perception of tourists who had participated in the "Kah Kow Experiences" in the Colonial Zone of Santo Domingo. A survey was administered, and data was collected using the simple random sampling method. Two interviewers participated in the questionnaire application process. The questionnaires were administered just after the culinary experience. Previously, the researchers asked the selected people if they were tourists in the city or were residents and hikers. In this case, residents or hikers were not selected for this study. In this study, tourists were those people who visited the city for leisure purposes and stayed in the city for at least one day. People who met the requirement of being tourists voluntarily completed the survey under the supervision of the researchers.

Data acquisition was conducted from the third week of January 2024 until the second week of March 2024. This endeavor yielded a total of 453 valid questionnaires, all of which were preserved for subsequent data analysis. The minimum requisite sample size was determined utilizing G*Power software (Kang, 2021). Given the six-construct model under consideration, an effect size of medium magnitude, specifically 0.15, was postulated. The targeted power level was established at 0.95, with the alpha threshold delineated at 0.05. Predicated upon these specifications, the minimum requisite sample size was calculated to be 146 participants. Therefore, the total sample size of this research was considered sufficient, because it was well above the amount indicated by the G*Power software.

To mitigate CMB, several strategies were adopted (Ibrahim et al., 2023; Viana-Lora et al., 2023). First, the anonymity of the respondents was guaranteed,

informing them that all responses are valid. Second, procedural solutions were applied, using simple and familiar terms, and avoiding syntactic complexity. This was verified through the pretest applied to the 20 tourists. Within this context, the prescribed procedural remedies alongside the preliminary testing of the questionnaire are deemed efficacious methods for mitigating biases. Furthermore, once the questionnaires were tabulated, Harman's single factor test was applied, which indicates that the single factor must present a percentage of variance less than 50%, obtaining in our study a lower percentage (21,587%), which suggests a negligible threat of CMB on the validity and reliability of research results (Alector Ribeiro et al., 2023).

Data analysis

The evaluation of the data was developed around three phases. First, an analysis of the sociodemographic variables, and the skewness and kurtosis of the data, was carried out to determine the nature of the data. In this sense, through the degree of asymmetry and kurtosis, the non-normality of the data was observed and, for this reason, non-parametric tests were applied (S. Wang et al., 2023). For these analyses, and for Harman's single-factor test, SPSS version 29 software was used. Second, the analysis of the measurement model was addressed, with the aim of checking the degree of validity at the individual level and for each construct. At the individual level, the factor loadings were analyzed and, at the construct level, Cronbach's Alpha (CA), average variance extracted (AVE), composite reliability (Rhoa_a and Rho_c) and discriminant validity were analyzed (Alector Ribeiro et al., 2023). Third, through bootstrapping, the structural model was evaluated, considering the collinearity statistics (VIF), the coefficient of determination (R^2), the effect size (f^2), the predictive relevance (Q^2) and the hypothesis contrast. Due to the results of the hypothesis contrast, the Variance Accounted For (VAF) test was also carried out to confirm the existence of mediation in the model. Phases two and three were carried out through PLS-SEM, selected for its suitability in exploratory research and with small samples (Hair et al., 2019). The PLS-SEM approach seeks to maximize the explanation of the variance of the dependent variables and evaluate the robustness of the model. SmartPLS software version 4.1.0.1, commonly used for PLS-SEM analysis, was used (Sarstedt et al., 2021).

Results

Presentation of the sociodemographic profile

Table 1 highlights that the participants in this study were 53.9% women, highlighting the age group between 40–49 years (32.2%) and between 18–29 years (28.3%). The predominant level of completed study is university (52.3%),

and local tourists stand out (79.7%). Before the tourist trip to Santo Domingo, 80.1% of the sample had planned to visit the cocoa experiences.

Measurement model

With reference to the items, it is necessary that all factor loadings present values greater than 0.70 (Hair et al., 2019). However, it has been suggested that in the preliminary phases of scale development, factor loadings from 0.6 can be considered acceptable, if eliminating these indicators does not significantly increase the reliability or internal consistency of the scale (Rezaei et al., 2021). Table 2 shows that 19 items are above 0.7 and one item is above 0.6, therefore, the individual reliability of the items is considered valid. Regarding the constructs, Table 2 presents that all of them have presented CA values greater than 0.7, except for the GLI construct which has 0.680, although some authors indicate that values of 0.6 can be accepted (Sarstedt et al., 2021). Table 2 also shows values of Rho_a and Rho_c between 0.7 and 0.9; and an AVE greater

Table 2. Construct reliability and convergent validity.

Construct/Item	Asymmetry	Kurtosis	External loads	t statistics (p values)
CCE - CA = 0.728; Rho_a = 0.740; Rho_c = 0.846; AVE = 0.647				
CCE1: Power of attraction of the cocoa establishment/product	−1.405	2.169	0.839	4.114 (.000)
CCE2: Opinion on the products tasted	−1.706	3.521	0.821	3.082 (.000)
CCE3: Opinion about the service received	−1.532	2.763	0.751	2.33 (.000)
COI - Cronbach's alpha = 0.716; Rho_a = 0.723; Rho_c = 0.824; AVE = 0.541				
COI1: Good relationship quality-price accommodation	−2.204	6.060	0.767	2.447 (.000)
COI2: Good relationship quality-price restaurants	−1.655	2.410	0.651	12.867 (.000)
COI3: Local residents are friendly and hospitable	−2.268	6.160	0.745	17.985 (.000)
COI4: It has good and useful tourist services	−1.976	4.896	0.772	24.374 (.000)
AFI - CA = 0.766; Rho_a = 0.765; Rho_c = 0.865; AVE = 0.681				
AFI1: Santo Domingo is beautiful	−2.801	10.088	0.855	25.851 (.000)
AFI2: Santo Domingo is fun	−3.137	12.979	0.835	2.563 (.000)
AFI3: Santo Domingo is exciting	−2.036	5.042	0.785	27.335 (.000)
GLI - Cronbach's alpha = 0.680; Rho_a = 0.785; Rho_c = 0.824; AVE = 0.611				
GLI1: The general image of the Santo Domingo destination is positive	−1.619	3.258	0.727	18.446 (.000)
GLI2: It is worth coming to Santo Domingo	−1.767	4.590	0.836	32.659 (.000)
GLI3: Santo Domingo has a good reputation	−2.278	7.421	0.778	19.923 (.000)
SAD - CA = 0.775; Rho_a = 0.788; Rho_c = 0.855; AVE = 0.597				
SAD1: My choice to visit Santo Domingo has been correct	−1.615	2.252	0.752	21.945 (.000)
SAD2: My level of satisfaction with the gastronomic products of Santo Domingo has been high	−2.184	6.230	0.704	14.811 (.000)
SAD3: My level of satisfaction with the culinary experience with cocoa that Santo Domingo offers has been high	−1.912	4.264	0.815	29.362 (.000)
SAD4: My general assessment of satisfaction with the Santo Domingo destination has been positive	−2.020	5.093	0.814	33.222 (.000)
LOY - CA = 0.767; Rho_a = 0.782; Rho_c = 0.865; AVE = 0.681				
LOY1: After my experience, I think I will return to this city in the future	−2.143	4.724	0.806	24.374 (.000)
LOY2: If anyone asks me for advice, I will recommend that they visit Santo Domingo	−2.406	7.505	0.800	19.044 (.000)
LOY3: I will recommend gastronomic products with cocoa from Santo Domingo	−2.377	7.154	0.868	46.183 (.000)

Source: Self-made. CA: Cronbach´s alpha.

Table 3. Discriminant validity.

	AFI	CCE	COI	GLI	LOY	SAD
AFI	**0.825**	0.623	0.700	0.860	0.710	0.630
CCE	0.474	**0.805**	0.71	0.802	0.599	0.830
COI	0.527	0.628	**0.735**	0.744	0.631	0.866
GLI	0.631	0.565	0.526	**0.782**	0.803	0.727
LOY	0.551	0.457	0.476	0.587	**0.825**	0.631
SAD	0.493	0.637	0.642	0.530	0.499	**0.773**

Source: Self-made. The values in black on the diagonal are the square root of the AVE. Below Fornell-Larcker and above $HTMT_{0,90}$.

than 0.5 (Sarstedt et al., 2021). Therefore, the composite reliability (Rho_a and Rho_c) and the convergent validity (AVE) have been satisfactorily verified.

In relation to discriminant validity, both the Fornell-Larcker criterion and the Heterotrait-Monotrait (HT-MT) ratio were employed. The Fornell-Larcker criterion demonstrates that the square root of the AVE for each construct exceeded its correlations with other constructs within the model. Meanwhile, the HT-MT ratio values were found to be below 0.9. Consequently, the application of these criteria affirms the presence of discriminant validity (Table 3).

Structural model

The explanatory power is obtained by the coefficient of determination (R^2), and can be weak ($R^2 > 0.25$), moderate ($R^2 > 0.5$) or substantial ($R^2 > 0.75$) (Hair et al., 2014). Table 4 shows that the explanatory power of the GLI compound is moderate ($R^2 = 0.504$), while the other compounds have weak explanatory power. However, Table 4 highlights that the CCE variable explains 40.57% of the SAD variable, 39.43% of the COI variable, 13.72% of the GLI variable and 11.23% of the AFI variable. Also, it is highlighted that the AFI

Table 4. Explanatory power, predictive power, correlation, explained variance and effect size.

	R^2	Q^2	β	*ρ*	Explained variance	f^2(p.value)
SAD	0.406	0.399				
CCE			0.637	0.637	40.57%	0.712(0.000) – B. and Sig.
COI	0.395	0.388				
CCE			0.628	0.628	39.43%	0.672(0.000) – B. and Sig.
AFI	0.312	0.214				
CCE			0.237	0.474	11.23%	0.052(0.056) – S. and NSig.
COI			0.378	0.527	19.92%	0.131(0.020) – M. and Sig.
GLI	0.504	0.313				
CCE			0.243	0.565	13.72%	0.063(0.052) – S. and NSig.
COI			0.078	0.526	4.10%	0.009(0.523) – S. and NSig.
AFI			0.415	0.631	26.18%	0.237(0.002) – M. y Sig.
SAD			0.120	0.530	6.36%	0.018(0.422) – S. and NSig.
LOY	0.397	0.199				
CCE			0.072	0.457	3.29%	0.008(0.612) – S. and NSig.
SAD			0.227	0.499	11.32%	0.052(0.061) – S. and NSig.
GLI			0.426	0.587	26.01%	0.194(0.001) – M. and Sig.

Source: Self-made. NSig: No Significative; Sig: Significative; B.: Big effect; S.: Small effect; M.: Medium effect; Sig.: Significative effect; NSig: Non significative effect.

variable explains 26.18% of the GLI variable, which in turn explains 26.01% of the LOY variable. The COI variable explains 19.92% of the AFI variable. In line with the above, the effect size (f^2) contributes to explaining the degree to which an exogenous construct explains an endogenous construct in terms of R^2, so both measures are closely related (Benitez et al., 2020). Thus, Table 4 shows how the CCE variable generates a large and significant effect on SAD and COI. In turn, the COI generates a moderate and significant effect on the AFI; just like the AFI on the GLI, and the GLI with the LOY. Furthermore, the predictive relevance of the model was assessed utilizing Stone-Geisser's Q^2 criterion (Sarstedt et al., 2021). The outcomes garnered were uniformly above zero, indicating a degree of predictive relevance. Table 4 shows that the SAD variable has the highest predictive power.

Subsequently, the hypotheses were tested. The variance inflation factor (VIF) was less than 0.3 in this research, so there were no collinearity issues (Hair et al., 2019). The 95% confidence interval (CI) at the 5% significance level was tested employing a bootstrapping approach with 5000 resamples. Table 5 presents the principal outcomes of the model, revealing that eight hypotheses received support, whereas three did not. Thus, the CCE influences the AFI, the IOC, the GLI and the SAD. His relationship with the LOY has not been supported. Also, it has been supported that the IOC influences the AFI. Likewise, the AFI influences the GLI. Also, the influence of both the SAD and the GLI has been supported with the LOY variable.

The data in Table 5 show that there may be a multiple mediation effect in the relationship between the CCE and LOY variables (H8 = C'), because the direct relationship between CCE and LOY has not been supported (C'). On the other hand, if the relationship of the CCE has been supported, on the one hand, with the SAD ($H_7 = a_1$) and, on the other hand, the GLI ($H_3 = a_2$). Likewise, if both the relationship between the SAD and the LOY ($H_{10} = b_1$) and the relationship between the GLI and the LOY ($H_{11} = b_2$) have been supported. When all the above is true, mediation exists. Thus, the determination of a total

Table 5. Hypothesis contrast.

			95% IC		95% IC bias corrected		
Hypothesis	β	VIF	2.5%	97.5%	2.5%	97.5%	Results
H_1: CCE➔AFI	0.237^{SIG}	1.652	0.125	0.347	0.127	0.351	Supported
H_2: CCE➔COI	0.628^{SIG}	1.000	0.542	0.707	0.538	0.704	Supported
H_3: CCE➔GLI	0.243^{SIG}	1.989	0.124	0.363	0.125	0.363	Supported
H_4: COI➔AFI	0.378^{SIG}	1.652	0.234	0.505	0.239	0.507	Supported
H_5: COI➔GLI	0.078^{NSIG}	2.106	−0.025	0.184	−0.027	0.181	Rejected
H_6: AFI➔GLI	0.415^{SIG}	1.496	0.298	0.520	0.302	0.523	Supported
H_7: CCE➔SAD	0.637^{SIG}	1.000	0.534	0.724	0.522	0.717	Supported
H_8: CCE➔LOY	0.072^{NSIG}	1.915	−0.054	0.184	−0.049	0.188	Rejected
H_9: SAD➔GLI	0.120^{NSIG}	2.070	−0.015	0.236	−0.013	0.239	Rejected
H_{10}: SAD➔LOY	0.227^{SIG}	1.811	0.123	0.345	0.121	0.342	Supported
H_{11}: GLI➔LOY	0.426^{SIG}	1.582	0.311	0.531	0.315	0.535	Supported

Source: Self-made. CI: Confidence interval; Sig.: Significative; NSig: Non significative.

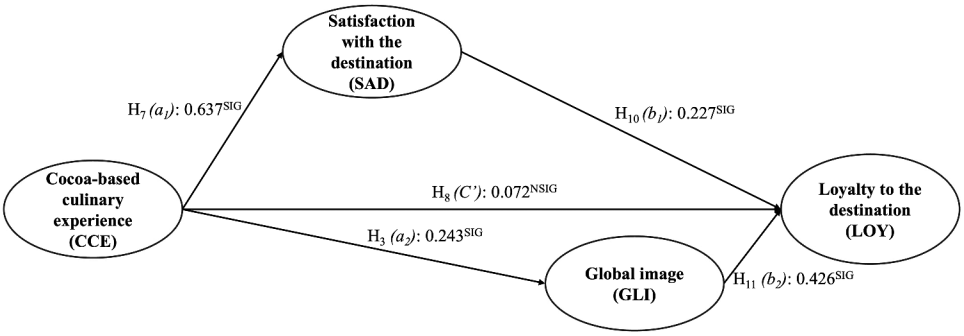

Figure 2. Multiple mediation model. Source: self-made. Sig.: Significative; NSig: Non significative.

mediating effect is given when the direct effect is not significant and the indirect effect is. Therefore, the results of our study indicate that mediation is total. In Figure 2, you can see the drawing of multiple mediation, extracted from the initial model (Figure 1) and with the alpha values, extracted from Table 5.

However, it has been decided to perform the VAF test. It was decided to carry out this process because some authors indicate that, in the case of small samples, some caution should be exercised when talking about total mediation when the direct effect is not significant and the direct effects are significant (Rasoolimanesh et al., 2021). To do this, first the indirect relationships were calculated using the SmartPLS software. Thus, the mediation of SAD in the relationship between CCE and LOY has obtained a mediation effect estimate equal to 0.145. For its part, the mediation of the GLI in the relationship between CCE and LOY has obtained a mediation effect estimate equal to 0.103. In this sense, Table 6 shows the results of the final relationships. The 2.5% and 97.5% percentiles were estimated for a 95% confidence level for each indirect effect, following the instructions of Riggs et al. (2023). Subsequently, the VAF values were calculated to ascertain the degree to which the mediation process elucidates the variance in the dependent variable. The VAF is calculated by dividing the indirect effects by the sum of the indirect effects themselves and the coefficient C' of the direct effects. In this way, a VAF of 66.8% has been obtained in the evaluation of the mediation of SAD in the relationship between CCE and

Table 6. Summary of mediation effects.

	Total effects		Direct effects		Indirect effects					
						95% Percentile Bootstrap		Bias Corrected		
	Coefficient	t	Coefficient	t	Estimated points	2.5%	97.5%	2.5%	97.5%	VAF
H_8=C'	0.457	7.195	0.072	1.176	0.386	0.272	0.508	0.274	0.511	–
a_1,b_1	–	–	–	–	0.145	0.077	0.233	0.078	0.233	0.668%
a_2,b_2	–	–	–	–	0.103	0.053	0.160	0.058	0.167	0.589%

Source: Self-made. a_1,b_1: Mediation of SAD in the relationship between CCE and LOY; a_2,b_2: Mediation of the GLI in the relationship between CCE and LOY.

LOY; Likewise, a VAF of 58.9% has been chosen in the evaluation of the mediation of the GLI in the relationship between CCE and LOY. The general rule indicates that if the VAF comprises between 20% and 80%, there is partial mediation. Therefore, according to the VAF, there is partial mediation of both the SAD and the GLI in the relationship between the CCE and the LOY.

Discussion and conclusions

The proposed conceptual model has been evaluated from the perspectives of tourists who had participated in a cocoa culinary experience in the Colonial Zone of Santo Domingo, a World Heritage Site. This study focused on CCE and how this variable can influence SAD, GLI and LOY. The results confirmed that eight hypotheses have been supported and three have not been supported. In this sense, the significant influence of the CCE on the AFI (H_1), the COI (H_2), the GLI (H_3) and the SAD (H_7) has been highlighted. These data are in line with those presented by Lai et al. (2021), who highlight that personal experiences and perceptions influence the image and satisfaction of a destination. In other words, the culinary experience with cocoa is a key element for the perception of the image and the general satisfaction of the tourist in Santo Domingo. This information is relevant, because more than 80% of tourists had already planned to visit gastronomic experiences with cocoa before their trip. This indicates that this gastronomic-cultural activity has the power of attraction prior to the tourists' trip. However, this study has not been able to verify the relationship between CCE and LOY (H_8). Although, it has been proven that GLI and SAD mediate the relationship between CCE and LOY. That is, although a direct relationship between the cocoa culinary experience and destination loyalty is not supported, it is suggested that these variables influence through destination satisfaction and overall perception. Previous studies had highlighted the importance of satisfaction with the destination in loyalty toward the same destination (Moral-Cuadra et al., 2023; Ullah et al., 2022). Therefore, the specific experiences enjoyed by a visitor could impact their general perceptions and feelings, which in turn determine their loyalty behaviors toward the destination, such as return intention and recommendation.

On the other hand, the relations between the IOC with the AFI (H_4), and the AFI with the GLI (H_6), have also been supported. This suggests the existence of a chain of influence where cognitive perceptions impact emotions, which in turn affect the global image of the destination. In other words, the formation of a tourist's image of a tourist destination is a multifaceted process, because the cognitive and affective components are fundamental and sequential to build their global image of the destination. That is, tourists first process information (cognitive image) and then develop their feelings and emotions toward the

destination (affective image), and both impact the final global image they have about the destination (Fu, 2019; Woosnam et al., 2020). Therefore, the IOC generates the basis on which tourists develop their emotions and affects (Huete-Alcocer & Hernandez-Rojas, 2022). In turn, if these emotions and affects are positive, GLI is improved (Kim et al., 2019). However, unlike other studies (Huete-Alcocer & Hernandez-Rojas, 2022), our results have not been able to verify the existence of influence between the COI and the GLI (H_5). This result could indicate that, although cognitive perceptions are important, affective aspects are the fundamental elements in the formation of the GLI in tourists interested in tourist experiences based on cocoa.

Furthermore, the relationships of the SAD (H_{10}) and the GLI (H_{11}) with the LOY have also been supported. This could indicate that general satisfaction and global perception of the destination are fundamental antecedents of the intention to return and recommend Santo Domingo. These results are with those obtained by other authors (Mora et al., 2021), where they identified that SAD is a fundamental antecedent in the perception of LOY. Likewise, these results promote the idea that the GLI, which encompasses both cognitive and affective evaluations of visitors, is relevant for the formation of positive behavioral intentions toward the destination (Huete-Alcocer & Hernandez-Rojas, 2022). On the other hand, it has not been possible to verify the influence of SAD on GLI (H_9). This could indicate that, although SAD and GLI are important antecedents of LOY, and mediators of the relationship between CCE and LOY, the relationship between the two is not direct. Therefore, both could be independent factors that contribute, individually, to LOY. Likewise, the relationship between SAD and GLI could be more complex and be mediated or moderated by other variables, such as tourist experiences or perceived value (Jeong & Kim, 2020).

The results of this study provide substantial support for the ECT, because it demonstrates how cocoa-based culinary experiences can influence tourist satisfaction and loyalty toward a cultural destination. The analysis confirms that culinary experiences improve the affective and cognitive perception of visitors, but also that they contribute, significantly, to the formation of a positive global image of the destination. This global image acts as a fundamental mediator between the tourist's specific experiences and his or her future loyalty to the destination. Specifically, tourist satisfaction with cocoa culinary experiences translates into a positive perception of the destination, which, in turn, strengthens the intention to recommend and revisit the place (X. Chen et al., 2020). Therefore, tourists' initial expectations, when met or exceeded through unique culinary tourism experiences, are critical to fostering a lasting relationship with the destination.

Theoretical implications

The findings of this research contribute to the literature, since it highlights the importance of culinary experiences, specifically the culinary experience with cocoa, in the formation of the tourist's image and satisfaction with the destination. It is the first time that a similar study has been done based on culinary experiences based on cocoa. In this context, the influence of the culinary experience on the affective, cognitive, and global image of the destination, as well as on tourist satisfaction, has been validated. This enhances the understanding of how emotional and cognitive components interact to form the overall perception of a destination. At the same time, it highlights the complexity of the relationship between the tourist's experience and his loyalty toward the destination, suggesting that this dynamic is mediated by image and global satisfaction. This helps provide a more detailed understanding of how specific experiences can influence loyalty. Therefore, the results of this research support previous theories about the importance of experiences in destination perception. However, it also challenges other theories, such as the direct relationship between specific experiences and tourist loyalty, suggesting that satisfaction and global image are fundamental in this relationship.

Although the direct hypotheses had already been supported in previous studies, the results of this research offer specific ideas for the context of tourism based on culinary tourism and, more specifically, on cocoa in the Dominican Republic. Thus, although the hypotheses themselves are based on established theories, the contextual application to cocoa-based gastronomic experiences provides new findings in several ways. Also, previous studies had considered some relationships in the model of our research (Liu & Tse, 2018; Moral-Cuadra et al., 2023), although our research integrates them all into a single model. Likewise, the study highlights the role of a specific local product, cocoa, highlighting its importance in shaping tourist experiences and destination loyalty. This differs from other studies that may focus on more generalized dining experiences. Furthermore, the study has verified the mediation of the destination image and satisfaction in the relationship between culinary experiences and loyalty. While these concepts have been examined before, their specific application and interactions within the context of culinary tourism present new dimensions of understanding for culinary destinations.

This study contributes to the ECT by highlighting the critical mediating role of destination image and satisfaction in the relationship between culinary experiences and tourist loyalty. Both satisfaction and destination image are highlighted as key determinants of loyalty, providing a deeper understanding of how specific experiences, such as culinary ones, impact future tourist behavior. Integrating the model with these mediators offers

a more holistic understanding of the process by which tourist experiences are transformed into loyalty. Furthermore, the study introduces a new dimension to the ECT, highlighting the relevance of emotional and cognitive components in the formation of loyalty. This inclusion allows for a more robust and comprehensive conceptualization of how visitor experiences, particularly those that exceed expectations, foster a long-lasting relationship with the destination.

Furthermore, the findings suggest that tourism marketing strategies should focus, in addition to product quality, on the design of emotionally and cognitively enriching experiences that promote a positive image of the destination. This approach would help, on the one hand, to optimize visitor satisfaction and, on the other hand, to maximize loyalty, reinforcing the destination's competitive position in the global tourism market. Therefore, the present study supports and extends the existing ECT, providing an improved conceptual framework that encompasses the complexity of interactions between expectations, experiences, satisfaction and global image, and their subsequent impact on tourist loyalty.

Practical implications

The results of this research generate different practical implications for the destination. In order to better understand these implications, they have been divided into general implications, applicable to other destinations, and specific implications, targeted at the destination studied. Regarding the general implications, it is essential to invest in the development of high-quality culinary products and experiences that highlight the authenticity of the local culture. This can include interactive workshops where tourists participate in chocolate making, guided tours of cocoa plantations, and cooking classes that incorporate cocoa into traditional recipes. In addition, it is necessary to develop marketing campaigns that highlight the unique aspects of cocoa-based culinary experiences. For this, social media, travel blogs, and collaborations with influencers could be used to broaden the reach and attract tourists interested in cultural and culinary tourism. In addition, collaborations with travel agencies and culinary schools can promote these experiences to a wider audience.

Implementing systems to regularly collect and analyze visitor feedback is also essential to continually improve the tourism experience. Furthermore, investing in staff training programs can ensure exceptional service, thereby improving visitor satisfaction and fostering loyalty. Developing mobile apps and digital guides that provide information on cocoa-based experiences, including routes, itineraries, and educational content on cocoa history and production, is also relevant. User-friendly online booking systems for tours and experiences can also increase convenience for tourists and streamline the booking process.

Regarding the specific implications for Santo Domingo, it would be interesting to develop a brand narrative that highlights the historical and cultural importance of cacao in Santo Domingo. Thus, the use of high-quality narratives and visuals, including videos and virtual reality experiences, could showcase cacao-based tourism offerings and attract tourists looking for authentic and enriching experiences. This could improve the image of the destination.

On the other hand, it is important to involve the local community of the Colonial Zone in the development and delivery of cocoa-based experiences. This creates a more authentic experience for tourists, and could provide greater economic benefits to the community. In this way, it is also essential to promote sustainable tourism practices that protect and preserve the environment and local culture, such as the use of eco-friendly packaging for cocoa products and supporting local farmers.

Organizing culinary events and festivals centered around cacao can be another effective strategy to attract more cultural tourists with gastronomic motivations to the city of Santo Domingo. These events could include cooking demonstrations, tastings, competitions, and cultural performances that celebrate the richness of cacao. To this end, it would be wise to encourage local restaurants to incorporate cacao into their menus, in order to create a cohesive culinary experience for tourists.

Limitations and future research

A first limitation is that a large part of the sample are tourists of local origin, because some foreigners did not speak Spanish or English. Therefore, visitors of German and French origin could not participate in the field work. This should be corrected in future studies. Because the relationship between COI and GLI has not been supported, this result could indicate that this relationship is indirect, and could be mediated by affective image. Therefore, it is suggested to apply the questionnaire to other experiences and destinations, to verify this result. Furthermore, in the future, we must continue to delve deeper into what we have called cocoa-based tourism, since our study is exploratory, and we must continue investigating the profile of tourists who consume these specific experiences.

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