

The Food Insecurity Issues in Gastronomy Tourism among Local and International Tourists in Malaysia

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ABSTRACT

The objectives of this study are to investigate the food security issues arising in gastronomic tourism, to verify the food insecurity experiences encountered by tourists, and to determine the tourists' dining satisfaction from the gastronomic tourism experiences in Malaysia. A quantitative approach was selected for this study. These issues were concluded from the data collection via questionnaire forms disseminated online through multiple social media platforms consisting of 250 participants of both local and international tourists visiting Malaysia. The Independent T-test and Mann-Whitney test were used as the main statistical test to establish if any tourist groups had food security-related issues during their visit. The results showed that local tourists are more likely to be affected by food security issues, food insecurity, and dining experiences. Overall, this study discovered that both local and international tourists have contrasting experiences in gastronomy tourism in Malaysia.

Keywords: dining satisfaction, food accessibility, food security, gastronomy tourism

INTRODUCTION

Food security, as articulated by the World Health Organization, is "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life". Nevertheless, the emergence of COVID-19, war, and significant climate change has adversely affected global food production and distribution, ultimately leading to a global food crisis. In the current landscape, emerging food security issues are causing the tourism industry to collapse. The issues consist of escalating food supply costs (Jalaluddin *et al.* 2022) and insufficient food supplies due to overdependency reliance on imported goods due to insufficient domestic production (Ahmed & Siwar 2013).

This study aims to address the pressing issue of food security within gastronomy tourism, particularly concerning the scarcity of food supplies in Malaysia. This scarcity has resulted in price surges and limited food accessibility, impacting local and international tourists. As

Hashim *et al.* (2019) outlined, the annual escalation of food expenses further exacerbates existing food security issues. Additionally, the growing number of tourists intensifies the severity of food security issues, and necessary governmental management is required to meet demands (Hashim *et al.* 2019) adequately. This study will help in recognizing the difficulties faced by both local and international tourists regarding food security-related issues, thereby revealing the current state of food insecurity in Malaysian gastronomy tourism in Malaysia.

The objectives of this study include investigating the food security issues in domestic tourism among local and international tourists, verifying the food insecurity experiences encountered by local and international tourists, and determining the tourists' dining satisfaction from the gastronomy tourism experiences in Malaysia.

In essence, this study strives to comprehend better the struggles local and international tourists encounter when it comes to food security and accessibility in Malaysia due to a variety

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of factors, including food supply scarcity due to livestock shortages, rising food prices driven by demand and supply imbalance, as well as the satisfaction (Gani *et al.* 2017) and contentment of visitors concerning food consumption and accessibility while visiting.

METHODS

Design, location, and time

A quantitative approach was adopted for this study as its research design since it aligned seamlessly with the study's objectives. Additionally, cross-sectional and non-experimental methods were utilised to determine emergent food security issues within the population. The study was conducted across the entirety of Malaysia, involving both local and international tourists. Data collection was expedited through the distribution of Google Form link via various social media platforms such as Facebook, Twitter, TikTok and YouTube. An informed consent was also been asked to the respondents before they continue to fill in the online Google Form.

Sampling

Quota sampling was selected to ensure that the respondents accurately represented local and international tourist groups by meeting the inclusion and exclusion criteria. The inclusion criteria for this study consisted of Malaysian citizens as local tourist respondents, foreign visitors to Malaysia as international tourist respondents, and the participants have consumed local cuisine during their Malaysian visit. As for the exclusion criteria, participants were excluded if they were Malaysians residing in other countries, foreigners residing within Malaysia, or participants who did not purchase or consume local cuisine. A sample size of 250 people, inclusive of both local and international tourists, was designated for the study, and the determination of sample size was facilitated through G*Power software for a two-tailed independent t-test, which indicated a minimum sample size of 210 individuals. To anticipate potential missing data during analysis, an additional 40 participants were included. The respondents' nationality was identified before approaching them to facilitate the grouping process.

Data collection

Data collection centered on a questionnaire as the primary source of data from the samples, and it was developed by adapting the questions from previous research. The questionnaire, consisting of 39 questions divided into 4 sections, utilized the Likert scale to inquire about the respondents' opinion regarding the food security situation where 1 (least valued) and 5 (most valued). Before distribution, a validity assessment was conducted on the questionnaire using Cronbach's alpha to ensure its appropriateness for distribution to respondents. The Cronbach's Alpha value obtained was 0.954, indicating a very high level of internal consistency for the scale used. This assessment was based on a total of 33 items.

Data analysis

The data were analysed using IBM SPSS 27. Categorical data was presented as frequency and percentages, whereas numerical data underwent descriptive analysis and was presented in mean and standard deviation or median and interquartile range depending on the normality distributions of the data. Independent t-test and Chi-Square or the Karl Fischer test were applied to achieve both objectives in this study. Not normally distributed variables were analysed using the Mann-Whitney test. The statistical significance for this study was $p < 0.05$.

RESULTS AND DISCUSSION

Based on the data gathered from the questionnaire, each section underwent individual analysis encompassing descriptive analysis, normality test, and inferential analysis, which were the independent t-test and the Mann-Whitney test.

Table 1 presents insights into the demographic backgrounds of the respondents consisting of their gender, age, education level, nationality, occupation, and average annual income.

Table 2 illustrates the mean score for attributes about food security issues with 'the food available is enough for the tourists to order during peak seasons' (4.16) receiving the highest rating while the lowest rated is 'the prices are reasonable' (3.44).

Mean difference in food security issues between local and international tourists which

Table 1. Characteristics of the respondents

Variables	n	%
Gender		
Male	97	38.8
Female	153	61.2
Age		
18–29	144	57.6
30–39	44	17.6
40–49	48	19.2
50–59	9	3.6
60 or older	5	2.0
Education level		
Primary	9	3.6
Secondary	20	8.0
Tertiary	221	88.4
Nationality		
Malaysian	208	83.2
International	42	16.8
Occupation		
Full-time	103	41.2
Part-time	4	1.6
Retired	6	2.4
Self-employed	35	14.0
Student	96	38.4
Unemployed	6	2.4
Average annual income (MYR)		
0	59	23.6
1–9,999	57	22.8
10,000–24,999	26	10.4
25,000–49,999	29	11.6
50,000–74,999	25	10.0
75,000–99,999	14	5.6
>100,000	40	16.0

MYR: Malaysian Ringgit

proved to be statistically significant ($p=0.022$; 95% CI: 0.03–0.41). The mean score attributed to international tourists (3.96) exceeded that of local tourists (3.74). This observation shows that the attributes associated with the food security

issues had a noticeable impact on local tourists.

The initial hypothesis noted that the food security issues in Malaysia were substantial, and the result of this study confirmed that hypothesis across various aspects such as the food prices, hygiene conditions, and the adequacy of the nutrient content of the food prepared. However, the study outcomes revealed that local tourists were facing challenges to a greater extent than international tourists as they were the ones taking the toll from the factors that contributed to the escalation of food security issues. In essence, the food security issues that are currently affecting gastronomy tourism in Malaysia have unfortunately become a discouragement to the local tourists from enjoying a vacation within their homeland.

The tourists were prompted to express their level of agreement concerning their encounters with food insecurity experiences during their visit to Malaysia. As depicted in Table 3, the mean score for the attributes in food insecurity experiences is revealed. Notably, the attribute with the highest mean score was ‘there are varieties of local specialities available’ (4.16), signifying positive feedback among tourists. In contrast, the lowest valued attribute was ‘all items from the menu are available when requested’ (3.44).

The outcomes of this study affirm that both local and international tourists encountered food insecurity during their stay. However, it is noteworthy that the local tourist group exhibited a lower mean score, indicating that they were vulnerable to these experiences compared to the international tourists. Several aspects fell below expectations in contributing to the gastronomic experience of the tourists, which led to the food insecurity experiences. This implies that the tourists within Malaysia were having a less pleasurable experience of the gastronomic scene in Malaysia as their needs in terms of food were not being fulfilled during their holiday, hence confirming the hypothesis.

The last section of the questionnaire asked respondents about their dining satisfaction while purchasing and consuming food in Malaysia. Table 4 shows the mean score for the attributes in dining satisfaction, where the highest rated being ‘As a whole, Malaysia is a good food tourism destination’ (4.38) and the lowest rated being ‘The food fulfils the dining experience in terms of hygiene and sanitation.’ (3.58).

Table 2. The mean score for the attributes in food security issues

Code	Items	Mean	SD
B1	The food available is enough for the tourists to order during peak seasons	4.16	0.85
B2	The food is available at any time of the day	4.10	0.87
B3	There is reliable access to a sufficient quantity of affordable nutritious food	3.77	0.93
B4	The food is safe to consume	4.02	0.82
B5	The food is prepared in hygienic procedures	3.50	0.84
B6	The prices are reasonable	3.44	1.08
B7	The food available is socially accepted in terms of the portion	3.82	0.88
B8	The food is nutritionally adequate for standard consumption requirements	3.55	0.88
B9	The weather affects the availability of food in commercial settings	3.58	1.07

Due to non-normal data distribution, the Mann-Whitney test was used to analyse dining satisfaction between local and international tourists. It shows the comparison of mean rank and sum of ranks between local and international tourist groups, which indicates that the international tourist group has a larger mean rank (156.21) than the local tourist group (119.30). The statistical significance of the Mann-Whitney U test ($p < 0.003$) between local and international tourists, indicating higher dining satisfaction among international tourists than local tourists.

The results revealed a Mann-Whitney U value of 3,078.00. The test statistic, denoted as Z, was found to be -3.020. This result was statistically significant, as indicated by an asymptotic significance (2-tailed) of 0.003. This suggests a notable difference in dining satisfaction between local and international tourists confirms the statistical significance of the Mann-Whitney U test ($p < 0.003$) between local and international tourists, indicating higher dining satisfaction among international tourists than local tourists.

As conveyed by the respondents, the evaluations of dining satisfaction illuminate

Table 3. The mean score for the attributes in food insecurity experiences

Code	Items	Mean	SD
C1	The food available caters to the needs of all ages	3.66	0.97
C2	There are varieties of local specialties available	4.16	0.80
C3	There are varieties of international choices of food on the menu at popular tourist destinations	3.90	0.93
C4	There is sufficient information to guide tourists on the accessibility to local food	3.55	1.02
C5	There is sufficient information to guide tourists on the accessibility to international food	3.61	0.98
C6	All items from the menu are available when requested	3.44	1.02
C7	The food catered is fit for the dietary requirement of the tourists such as vegan, vegetarian, halal, kosher, etc	3.56	1.03
C8	Food providers use varieties of cooking methods	3.92	0.86

Table 4. The mean score for the attributes in dining satisfaction

Code	Items	Mean	SD
D1	The food fulfills the dining experience in terms of hygiene and sanitation	3.58	0.86
D2	The food fulfills the dining experience in terms of taste	3.90	0.88
D3	The food is well presented.	3.70	0.87
D4	Comfortable eating surroundings	3.66	0.80
D5	Food spots are located in convenient places	3.82	0.85
D6	The food is rich in flavors	4.12	0.85
D7	The food is appealing to the human sense	4.02	0.85
D8	The food contributes to the quality of my visiting experience	4.14	0.81
D9	The food contributes to my eating pleasure	4.15	0.84
D10	The food adds to my visiting enjoyment	4.18	0.84
D11	The food experience in this country meets my expectation	4.06	0.85
D12	I will recommend Malaysian food to my friends and family	4.32	0.81
D13	I have a good impression of the food available in Malaysia	4.29	0.81
D14	I strongly remember my food experiences in this country during my vacation	4.26	0.82
D15	As a whole, Malaysia is a good food tourism destination	4.38	0.81
D16	I will revisit Malaysia for its gastronomy attractions	4.25	0.84

a distinct contrast between the experiences of international and local tourists. It was priorly speculated that both groups were satisfied with their dining experience, but the result showed a significant difference. It was deemed that some attributes listed under this variable, such as hygiene and comfort, were less agreeable to the local tourists, hence, the lower mean score.

The critical factor contributing to this difference seems to be the specific attributes associated with dining satisfaction, particularly hygiene and comfort. These elements were presumably less satisfactory to local tourists, reflected in their lower mean scores. This suggests that local tourists have different expectations or standards regarding these aspects of dining compared to international tourists.

This outcome indicates the importance of understanding and catering to different tourist groups' varied preferences and expectations.

These findings could be instrumental in tailoring services and improving overall customer satisfaction (Rimmington & Yuksel 1998) in the hospitality and tourism industry (Hall & Mitchell 2001). It emphasises the need for a nuanced approach to evaluate and enhance the dining experience, considering the diverse perspectives of both international and local visitors.

CONCLUSION

In conclusion, the study outcomes emphasise an imbalance of experiences between local and international tourists in gastronomy (Leong *et al.* 2017) tourism in Malaysia. The local tourist group sustained a major disadvantage in gastronomic tourism compared to the international tourists, as evidenced by the result. This imbalance can be disheartening, indicating that local tourists cannot fully appreciate and enjoy

their vacation within their homeland. In contrast, international tourists exhibit higher contentment and satisfaction with Malaysia's gastronomic (Mora *et al.* 2021) offerings despite the low number of respondents from various countries. In light of these findings, the authorities in the tourism sector must address the root causes of these issues and brainstorm mitigative actions to correct this situation, thus providing an enriching gastronomic experience for all tourists.

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DECLARATION OF CONFLICT OF INTERESTS

The authors have no conflict of interest.

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