THE FUTURE OF ENTOMOTOURISM: THE SUSTAINABLE BUGS APPETITE

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Abstract

Food tourism gained its popularity due to people preference on travelling to a certain location for attending food festivals or sampling various delicacies. Such phenomenon promoted entomotourism especially on food and eco-tourism sector that emphasize the traditional values such as cultural and traditional respect, authenticity, and sustainability. The study aims to investigate the motivational factors which affect the domestic tourists in experiencing entomotourism particularly in searching for insect-based product during their travel. However, there is still a paucity of empirical research on edible insects, aimed towards domestic tourists, thus giving this study academic significance by closing knowledge gaps in the specific area of edible insect consumption acceptance and motivation among tourists to promote entomotourism as a form of unique gastronomy experience. Quantitative analysis was implemented to achieve the research objectives where a sample size of 240 respondents was collected in Klang Valley, Malaysia. Structural Equation Method was then used to validate each construct to find the factors that contribute to the tourist's behaviour. The study provides a summary of core motivators characterizing the acceptance and consumer intention to search for insect-based food during their travel. This paper has the potential to generate societal benefits (food security), environmental (sustainable production methods and reduce in meat consumption) and health (nutritious). Furthermore, the result will help the agri-entrepreneur in producing, developing, and marketing edible insects-based products as a potential tourist attraction and a new marketing platform for food tourism in Malaysia.

Keywords: Consumer Behavior, Edible Insects, Entomotourism, Entomophagy, Food Tourism

1. Introduction

Food tourism is vital to the expansion of tourism industry due to increase of market segment of tourists who regard food intake as a delightful travel experience. Food tourism has potential to revive the tourism industry especially for travel destination in Southeast Asia like Malaysia. Since the outbreak of Covid-19 pandemic, domestic tourism performance in Malaysia for 2020 decreased dramatically in terms of visitor arrivals and total expenditure, with -44.9 percent and -60.8 percent, respectively (Department of Statistics Malaysia, 2021).

According to Hall & Sharples (2003), food tourism can be defined as a visit to a restaurant or the consumption of food in a way that differs from normal daily diet and usually away from home. Food tourism cannot be distinguished from other forms of tourism since gastronomy is part of a journey despite not the primary purpose. As a result, it is vital to distinguish tourists in terms of food tourism such as those who regard food intake as an inescapable part of the travel experience, and those who plan their trips based on food in order to achieve the desired gourmet experience.

Food tourism has never been well-known in Malaysia, but it is slowly gaining popularity because of new technology, greater access and increased awareness. Malaysia's related businesses have taken many steps to support the expansion of culinary tourism, with the goal of making Malaysia an international destination for foodies. The Malaysian government has been committed to promote ecotourism since 1996, when the National Ecotourism Plan was first introduced (Salman

et. al., 2021). Ecotourism was highlighted in the Eighth Malaysia Plan, with the government launching 20 ecotourism initiatives totalling RM 14.2 million across the country (Salman et. al., 2021). The country's ecotourism development is being bolstered by the implementation of the National Ecotourism Plan (2016–2025). Photography, observation, entomophagy and other insect-related recreational activities were included in the ecotourism subsector (Lemelin, 2013). The practise of consuming edible insects as a substitute for other foods is known as entomophagy (Anankware et al., 2015) and edible insects are crucial for regional food tourism's long-term development (Wang, 2016).

Previous entomophagy research mostly concentrated on the benefits and risks associated with eating insects as food in Western countries (Rumpold, & Schlüter, 2015). In fact, it was discovered that diminishing the appearance of insects and incorporating them into existing food products can enhance western consumers' perceptions of insects as acceptable foods (Mishyna et. al., 2019). Furthermore, studies in the field of consumer behaviour pertaining to the consumption of insect-based products focus primarily on consumers' receptiveness (Myers & Pettigrew, 2018) and readiness (Verbeke, 2015) to consume insect-based products; instead of individuals' consumption acceptance experience and the factors influencing the formation of these intentions. Some research examined the impact of insect addition on the processing behaviour of products or the end product characteristics and palatability (Meshulam-Pascoviche et al., 2022). While most literature acknowledges that entomophagy is prevalent throughout Asia, individual countries have not been studied in depth. In fact, little is known regarding tourists' current consumption intentions when it comes to edible insects since most research on food consumption in Malaysia focused on organic food (Pang et al., 2021), green food (Putten and Nair, 2019), and genetically modified food (Mahdi and Zin, 2018).

Despite all of these advantages of edible insect production and consumption, people in Asian societies have little or no regards on eating insects naturally; and perceive revulsion or aversion toward insects as a possible food (Jensen and Lieberoth, 2019). There is still a paucity of empirical research on edible insects aimed at tourists, giving this study academic significant by filling knowledge gaps in the specific area of edible insect consumption acceptance among visitors, hence promoting entomotourism as a sort of unique culinary experience. As a result, the goal of this research is to examine on tourists' travel behaviour and attitudes on consuming edible insects through survey, and to make recommendations for enterprises or restaurants seeking to promote insect-based products in Malaysia. The study also able to raise public awareness about the importance of insects and their preservation. Marketers can use the information gained from this study's findings to develop tourist-friendly insect-based product development and marketing strategies.

2. Literature Review

Consumer acceptance and behaviour are broad concepts, and no single theory can explain why people accept or reject a product (Lensvelt and Steenbekkers, 2014). Consumer acceptance and behaviour can be used to a variety of sectors; in this case, it is applied to innovative food technologies and food products, as outlined by Siegrist (2008). Insects as food might be considered as a novel or revolutionary sort of cuisine in Malaysian society, yet it should be noted that a variety of goods can be manufactured with insects or insect-based substances. Insects as food are a re-emerging diet in most of Malaysia, while they are popular in Borneo communities such as Sabah and Sarawak.

Insects are not simply ‘one form of food’, but also a delicacy and ingredient (Lensvelt and Steenbekkers, 2014). Liu et al. (2020) recruited participants who have a history of eating insects and discovered the concept of disgust towards insects (Schaufele et. al., 2019). According to the study, the main barrier to insect eating experience is lack of opportunity (Dagevos, 2021), with earlier research indicated that insect phobia is a higher barrier compare to dislike eating insects among Chinese consumers (Liu et al., 2020). Furthermore, consumers with insect consumption

experience indicated a higher readiness of eating insects in the future (Sogari et al., 2019; Hopkins, et al., 2022). The improved model for understanding tourists' travel behaviour to consume edible insects during their travel is shown in Figure 1.

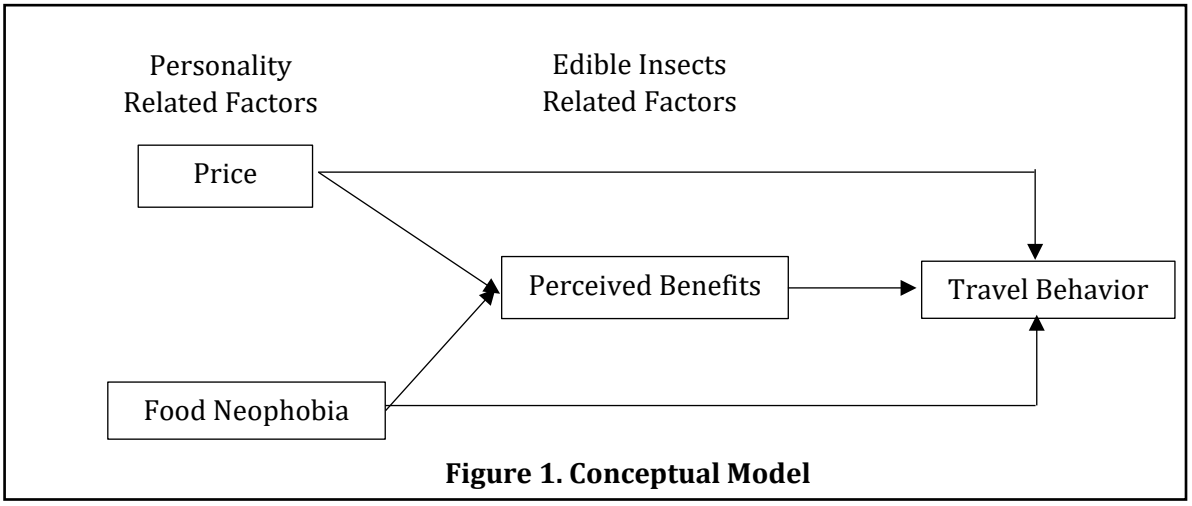

Figure 1. Conceptual Model

The modified conceptual model exhibits the behaviour of consuming edible insects during their travel that includes price and food neophobia with perceived benefits as the mediator that influence consumer travel behaviour (Siegrist and Hartmann, 2020). Five hypotheses were designated to distinguish the relationship between the five constructs and travel behaviour from a different perspective.

2.1 Price

The first factor in this study is the price as a product must have reasonably priced and of good quality (Hoek 2010; Siegrist 2008). Pricing is expected to have a considerable influence on purchasing behaviour of consumer because consumer will buy less when the price is high. Products that sell for lesser cost are expected to sell in greater volume (Sadiq et al., 2020). According to Huo et al. (2021), several study on consumer behavior indicated that pricing has relevant influence on customer buying pattern.

H_1. Price has a positive influence on consumers' travel behaviour to search for edible insect while travel.

H_2. Price has a positive influence on consumers' perceived benefits towards edible insect.

2.2 Food Neophobia

Food neophobia is a fear-based behaviour in which a person refuses to eat novel foods and avoids any potentially unsafe food sources (Guidetti et al., 2018). Food neophobia is a significant factor since it can have a detrimental impact on a person's diet (Wassmann et al., 2020). Because disgust influences a person's food preferences, higher levels of food disgust and distaste sensitivity are linked to a lower behavioural intention (Mancini et al., 2019).

H_3. The food neophobia has a negative influence on consumers' travel behaviour to search for edible insect while travel.

H_4. The food neophobia has a negative influence on consumers' perceived benefits towards edible insect.

2.3 Perceived Benefits

According to Barsics et al., (2017), knowledge on the food product's naturalness and benefits is critical for the majority of European citizens when it comes to insect-based foods. Insects' nutritional makeup has piqued the interest of health professionals such as nutritionists and

physicians, in addition to being a delectable food commodity (FAO, 2010). According to Berger et al (2018), edible insects can be an alternate source for animal protein. This is supported by ethical consumers who are less likely to have issues on replacement for animal protein. Insects were regared as a good source of protein and other nutrients. Sogari et al. (2017) stated that people are motivated to consume insects when they have a favourable perception. This is because such perception on eating insects become a strong motivator for those who are concern on diet.

H_5. The perceived benefits have a positive influence on consumers' travel behaviour to search for edible insect while travel.

3. Methodology

Using quantitative and cross-sectional details, this study utilizes the four primary constructs by Siegrist and Hartman (2020) which consist of 14-item questionnaire, and with modifications to fit the scope of this study. The questionnaires were fine-tuned based on recommendation by experts from the field of food marketing and agribusiness during pre-test. The final version of the questionnaire was then pilot tested with 30 Malaysian for internal consistency. The measurement was validated using Cronbach's Alpha, which measures the item's reliability for each construct. Nunnally and Bernstein (1994) recommended that the Cronbach's coefficients should exceed 0.6 in order to establish the reliability of the items in the final questionnaire. The survey mainly consists of statements measured with a five-point Likert scale ranging from strongly disagree (represented by scale of 1) to strongly agree (represented by scale of 5). Existing items were gauged with each of the key variables in the study. The socio-demographic information of the respondents was included at the end of the questionnaire. Moreover, Lensvelt & Steenbekkers (2014) measurement items were adopted. A structured questionnaire was used to collect data from youth aged 18 to 30 years' old in Klang Valley, Malaysia. Purposive sampling was used in this study since there is no published list of sampling frames for youth that employ a probability sampling approach. The respondents were filtered before the survey to exclude respondents who are not between the ages of 18 and 30 years' old. A total of 300 young people were approached, but only 240 respondents provided complete responses. Others were disregarded due to lack of knowledge on entomophagy. From this research, the modified model of consumers' travel behaviour towards edible insects while travel included price, food neophobia and perceived benefits. To determine the structure of the variables and the correlations among the variables in the data set, an exploratory factor analysis (EFA) was conducted using a different sample size of 30 respondents, as recommended by Field (2013). To evaluate the hypotheses of existing theories, confirmatory factor analysis (CFA) and structural equation modelling (SEM) with a sample size of 240 are analyzed by using AMOS. These analyses are crucial in determining the measurement of construct, the factor structure, and the relatedness of each construct (Hair et al., 2013).

4. Results

4.1 Descriptive Analysis

From **Table 1**. the percentages of male and female responders were 67.9% and 32.1%, respectively. In terms of personalities, 30.0% of the respondents are kind and willing to help (agreeableness), 25.4% are always open to new experiences (openness), 22.1% indicated always plan ahead (conscientiousness), 17.1% are sociable, energetic, and talkative (extraversion), and only 5.4% indicated vulnerable or temperamental (neuroticism). Surprisingly, 52.2% of consumers are interested in traveling to a location that serves edible insects, 42.9% of consumers are more comfortable eating bugs if they were hidden and only 10.4% of consumers are not particular on the bug. Furthermore, 29.6% of consumer would prefer insect as a snack, 21.7% prefer hidden form or powder form main entrée and 11.3% prefer powder form dish topping.

Table 1: Summary of Demographic Profile of Respondents (n=240)

Characteristic	Percentage (%)
Gender	
Male	32.1
Female	67.9
Personality	
Openness	25.4
Conscientiousness	22.1
Extraversion	17.1
Agreeableness	30.0
Neuroticism	5.4
Will you be interested to travel to a place/restaurant that serve edible insects?	
Yes	52.5
No	47.5
Would you be more comfortable eating bugs if they were hidden in the food somehow (ground up, covered in chocolate, etc.)?	
That might make me more comfortable if I couldn't see the bug in the food.	42.9
No, just knowing I was eating a bug would be too gross.	46.7
I don't care whether or not the bug is hidden, I'd eat it either way.	10.4
Will you be more comfortable to include edible insects in your diet, if it's in a different form such as _____?	
Snack	29.6
Appetizer	3.3
Side dish	9.6
Main entrée (Hidden form)	21.7
Main entrée (Whole insect)	4.2
Dish topping/ Garnish (Powder form)	11.3
Dish topping/ Garnish (Whole insect)	3.3
Dessert	6.7
Bread	0.8
Cereal	4.2
I'm ok with any form	5.4

4.2 EFA

Principal axis factoring (Promax) was used when analysing EFA on the 14 items with oblique rotation (Promax). Because factor inter-correlations are a regular practice in social science research, oblique rotation was chosen on the advice of Costello and Osborne (2005). This study adheres to Hair et al. (2013)'s significant factor loading criteria, which is based on the sample size. With a sample size of 100, the appropriate factor loadings for EFA for this study is 0.40. The following are the results of the statistical assumptions for EFA:

- Bartlett's test of sphericity is significant at p<0.01 (Field, 2013);
- Kaiser-Meyer-Olkin (KMO) value is 0.862 which is marvellous (Hutcheson and Sofroniou, 1999);
- Total of two items were eliminated due to communalities value lower than 0.5 (Field, 2013);
- Total variance explained is 74.91 percent, which is more than 50 percent (Podsakoff and Organ, 1986); and
- The variance for the first factor is 32.427 percent, which is <50 percent (Podsakoff and Organ, 1986).

4.3 Measurement Model Assessment and CFA

4.3.1 Model Fit Indicators

Table 2 lists the goodness-of-fit indicators for the measurement model and the acceptable levels for each. Hair et al. (2013) suggested that in structural equation modelling, at least one fitness metric from each category of model fit be used. The three categories of fitness indices are parsimonious fit, incremental fit, and absolute fit. Based on absolute fit indices, the RMSEA and SRMR coefficients are both 0.077 and 0.076 indicating a good fit. Other indicators are fit with GFI: 0.943 and AGFI: 0.895. In addition, incremental fit indices imply that all tests are fit as the NFI and CFI computed are 0.942 and 0.965, respectively. Followed by TLI: 0.947 and IFI: 0.965 which indicate a good fit. Finally, parsimony fit indices deemed fit as only x^2/df value is fit (2.422). The PGFI (0.514) and PNFI (0.628) values are permissible, indicating that the model fits well. As the model overall fit is fulfilled, the measurement model for psychometric properties like convergent validity, indicator reliability, discriminant validity, and construct reliability can be investigated further.

Table 2. Goodness-of-Fit Indices for the Measurement Model

Name of Category	Name of Index	Adequate of Model Fit	Cited	Result	Fit (yes/no)
Absolute Fit Measure	GFI	> 0.90	Jöreskog and Sörbom (1993)	0.943	Yes
	AGFI	> 0.80	Jöreskog and Sörbom (1993)	0.895	Yes
	RMSEA	< 0.08	Steiger (1990)	0.077	Yes
	SRMR	< 0.08	Hu and Bentler (1999)	0.076	Yes
Incremental Fit Measure	NFI	> 0.80	Bentler and G. Bonnet (1980)	0.942	Yes
	CFI	> 0.90	Byrne (2010)	0.965	Yes
	TLI	> 0.90	Tucker and Lewis (1973)	0.947	Yes
	IFI	> 0.90	Bollen (1990)	0.965	Yes
Parsimonious Fit Measure	Chisq/df	1.00-5.00	Kline (2010)	2.422	Yes
	PGFI	> 0.50	James *et al.* (1982)	0.514	Yes
	PNFI	> 0.50	Bentler and G. Bonnet (1980)	0.628	Yes

Notes: df, degree of freedom; CFI, comparative-fit-index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual; GFI, goodness-of-fit; NFI, normed

fit index; AGFI, adjusted goodness-of-fit index; IFI, the increment fit index; TLI, Tucker-Lewis coefficient index; PNFI, parsimony normed fit index.

4.3.2 Construct Reliability

Individual Cronbach's coefficients for the four primary latent variables exceeded the acceptable level of 0.60 (range: 0.675–0.892). (Kannana and Tan, 2005; Nunnally and Bernstein, 1994). Furthermore, all composite reliability (CR) values (range: 0.742 to 0.885) were higher than the recommended threshold of 0.6 (Fornell and Larcker, 1981), showing construct reliability. As a result, all structures' Cronbach's alpha and CR were deemed error-free (see Table 3).

4.3.3 Indicator Reliability

High-loading constructs suggest that the associated indicators have a lot in common (Hair et. al., 2013). Indicators with loadings of less than 0.40 must be removed from the scale, whereas loadings of 0.4 to 0.7 should only be removed if doing so improves the CR or the average variance extracted (AVE) value (Hair et al., 2013). All of the items have loadings more than 0.5 (Hair et al., 2013), ranging from 0.587 to 0.897, and they all met the criteria without being removed from the scale.

4.3.4 Convergent Validity

Convergent validity refers to how well a measure correlates with other measures of the same construct, and AVE determines the convergent validity. When the AVE is equal to or greater than 0.50, the construct explains more than 50% of the variance in its indicators. If the AVE is less than 0.50, it means that the items have more errors compare to the variation explained by the construct (Hair et al., 2013). The AVE in Table 3 ranged from 0.515 to 0.72; indicating that the whole model construct is met since all AVE values exceeded 0.5 (Hair et al., 2013).

Table 3. Loading, Cronbach's Alpha, CR, and AVE

Construct	Items	Cronbach Alpha (>0.6)	Factor Loading (>0.5)	CR (>0.7)	AVE (>0.5)	Skewness	Kurtosis
Food Neophobia	NEO2	0.725	0.796	0.742	0.574	-0.365	-0.675
	NEO3		0.717			-0.270	-0.633
Price	PR1	0.675	0.734	0.819	0.515	0.100	-0.604
	PR2		0.702			-0.351	0.286
Perceived Benefits	PB1	0.892	0.861	0.885	0.720	0.232	-0.492
	PB2		0.869			0.238	-0.585
	PB3		0.841			0.270	-0.413
Behaviour	ACCP2	0.820	0.736	0.882	0.622	0.334	-0.462
	ACCP3		0.807			0.406	-0.368
	ACCP4		0.821			-0.044	-0.833

4.3.5 Discriminant Validity

Discriminant validity is used to determine the distinctiveness of the construct by empirical standards and capture phenomena that are not represented by other constructs in the model (Hair et al., 2013). In addition, Fornell and Larcker's (1981) criterion was used as proxy to determine discriminant validity. The correlations between the four primary constructions are smaller than the square root of the AVE calculations, as seen in Table 4. A good discriminant validity was shown since the constructs are proved to be link to the respective indicators after comparing with other constructs (Hair et al., 2013).

Table 4. Discriminant Validity by Fornell-Lacker Criterion

	ACCP	PB	PR	NEO
ACCP	0.788			
PB	0.723	0.850		
PR	0.544	0.494	0.717	
NEO	-0.394	-0.344	-0.033	0.757

Notes: ACCP (travel behavior); PB (perceived benefits); NEO (food neophobia); PR (price)

4.4 Structural Model Assessment

The structural model refers to the relationships between the constructs based on the link between exogenous and endogenous variables. The structural model determines how well empirical data supports the theory and decide whether the theory is empirically confirmed (Hair et al., 2013). **Figure 2** shows the outcomes of the research structural model in AMOS (version 21) graphics.

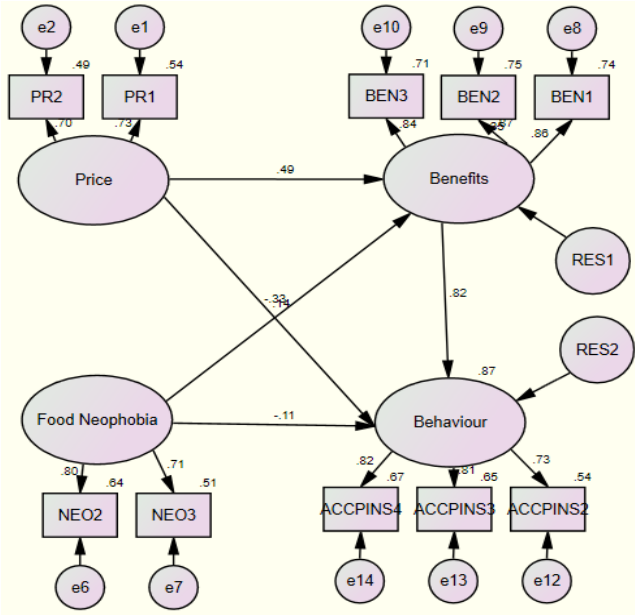

Figure 2. Research Structural Model Results

4.4.1 Hypothesis Tests

SEM examined the relationship between price, perceived benefits, food neophobia and travel behaviour. The hypotheses for this study are evaluated as shown in Figure 2. In addition, Table 5 exhibited the structural model assessment which stipulated the establishment of hypotheses testing. The analysis showed that all paths to the latent variables were significant at the level of 0.01 and 0.05, except for the path of the food neophobia do not affect tourist's travel behaviour. The results also show that there is no relationship between food neophobia and tourist's travel behaviour.

As shown in Table 5, the product price poses a positive influence on travel behaviour (β= 0.175, p= 0.05), and perceived benefits (β= 0.668, p= 0.01) towards tourist's travel behaviour. Consumer conscious price variable has been reported as the major influence in their purchase intention

(Levrini & Santos, 2021). The result was identical to the study done by Zhao et al. (2021) whereby product pricing had a statistically significant relationship with the buyer decision process.

In contrast, the main predictors influencing tourist's travel behaviour were the perceived benefits (β= 0.762, p= 0.01) where if the tourist understand the benefits of edible insects, it will increase the chance for them to consume edible insects (Siegrist, 2008). Despite consumers' moral motivations to consume natural products, Carfora et al. (2021) found that, due to a lack of a clear legal framework, it is difficult to measure whether natural products may reduce the environmental impact of food consumption or improve the nutritional profile of the diet. According to Berger et al (2018), consumers perceived edible insects as an alternative source of animal protein as one of the benefits of entomophagy as well as environmental benefits. This is also supported by ethical consumers who are less likely to have issues with this meat replacement for animal protein. The food neophobia in this study had a negative sign towards tourist's travel behaviour (β= -0.344, p= 0.01). This means that consumers are more likely to travel to a place or restaurant which sell edible insects if they dare to eat unfamiliar foods and avoid any possible dangerous and life-threatening food sources. The result is similar to Wassmann et al., (2020) where respondents with a lower level of food fear and who are continuously on the search for new and innovative food products, such as insects, are more inclined to look for edible insects while travelling.

Next, the coefficient of determination, R^2, indicates the amount of variance in the dependent variables that can be explained by the independent variables. According to Hair *et al.* (2013), R^2 exceeding 0.75 is deemed substantial with an acceptable power above 0.25. Figure 2 shows the results of R^2 obtained from the structural model. They indicated that the price, food neophobia and perceived benefitd were able to explain 87 per cent of the variance for the likelihood to travel to a place which that serve edible insects.

Table 5. Structural Path Analysis Result

	Dependent Variable		Independent Variable	β	S.E.	C.R. (t-value)	Decision
H_1	ACCP	←	PR	0.175	0.084	2.088**	Supported
H_2	PB	←	PR	0.668	0.123	5.414***	Supported
H_3	ACCP	←	NEO	-0.104	0.055	-1.900	Not Supported
H_4	PB	←	NEO	-0.344	0.087	-3.977***	Supported
H_5	ACCP	←	PB	0.762	0.077	9.866***	Supported

Notes: ACCP, travel behaviour; PB, perceived benefits; NEO, food neophobia; PR, price; CR, critical value. ***Significant at 0.01, ** Significant at 0.05

5.Conclusion

Due to the scarcity of empirical research on entomotourism (edible insects), this study provides academic value by filling knowledge gaps in the area of edible insect consumption acceptance among tourists, thereby promoting entomotourism as a form of unique gastronomy experience. Motivation of tourists is a broad notion that influences their travel behaviour; there is no single theory that can explain why consumers accept or reject a product (Lensvelt and Steenbekkers, 2014). As a result, the goal of this research is to create an improved model that can quantify tourists' acceptability and motivation for entomotourism in Malaysia.

Malaysia's National Agrofood Policy 2011-2020 (NAP4) aims to restructure the country's agriculture industry to be more dynamic, innovative, and sustainable. NAP4's goals include ensuring adequate food supply, expanding agrofood into a sustainable business and raising

agricultural entrepreneurs' income levels. The findings of this study can be used to develop a national agrofood policy and suggest a programme in Malaysia to feed people with alternate sources such as insects (entomophagy). Through the promotion of Malaysia as an ecotourism destination, entomophagy tourism may contributes to the National Tourism Policy (DPN) 2020-2030 and National Ecotourism Plan (2016-2025). Moreover, the findings of this study may encourage the formation of local entrepreneurs in the entomotourism industry.

The population of this study mainly consists of consumers from Klang Valley, Malaysia. Therefore, future research can focus on the different states in Peninsular Malaysia, Sabah, and Sarawak to formulate different marketing strategies for tourism due to its diversity in people and culture. The present study enriches the body of knowledge by modifying the Siegrists Model to better understand the impact of price, food neophobia and perceived benefits towards travel behaviour. Therefore, future researchers can explore from different perspectives, such as examining the personality related factors (trust and food disgust); edible insect related factors (perceived naturalness and disgusted evoked) and covid related factors (perceived severity and perceived susceptibility to predict consumers travel behaviour due to health behaviour).

The modified Siegrist's Model incorporared the perceived benefits as the moderating factor influencing other variables, while the proposed modified model provided a theoretical formulation for future studies in food marketing. The element was proposed and validated using a second-order model effect, which contained four order constructs. Through the utilization of AMOS, EFA, CFA and SEM was analysed to examine the relationship between the variables of the modified model. The study is justified as it supports the content suggested in the literature regarding price, food neophobia and perceived benefits. Here, the perceived benefits is critical for the comprehensive tourist travel behaviour and its role is essential in determining the variance of price, food neophobia and travel behaviour. Besides, the perceived benefits has a positive moderating effect on price and food neophobia.

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