# Determinants of Thai Health Food Restaurant Customer Satisfaction

**Sommanasak Phadungjit[a], Puris Sornsaruht[b], Paitoon Pimdee[(✉)c]**

[a] Doctoral Student, KMITL Business School, King Mongkut's Institute of Technology Ladkrabang (KMITL), Bangkok, Thailand
[b] Assistant Professor, KMITL Business School, King Mongkut's Institute of Technology Ladkrabang (KMITL), Bangkok, Thailand,
[c (✉)]Associate Professor, School of Industrial Education and Technology, King Mongkut's Institute of Technology Ladkrabang (KMITL), Bangkok, Thailand, paitoon.pi@kmitl.ac.th

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**Abstract:** Numerous factors contribute to today's consumer desire for healthy food and beverages. These include aging Asian and Western societies, urbanization, a fast-paced lifestyle, rising incomes, food safety problems, and the rise in obesity, diabetics, and other potentially harmful health problems.Thus, researchers set out to investigatehow marketing communications (MC), value recognition (VR),and customer trust (CT) contributed to Thai health food restaurants' customer satisfaction (CS). From August 2019 to September 2019, the researchers surveyed 66 health food restaurants in Bangkok, Chiang Mai, and Khon Kaen during three service periods. Every fifth customer was randomly selected and asked to fill out the questionnaire, from which the survey achieved a 96.80% response rate (484 questionnaires). The structural equation model (SEM) analysis between variables influencing CS was conducted utilizing a latent variable LISREL 9.10path analysis and a  goodness-of-fit (GOF) assessment. Results showed that the influence of the three constructs on CS was shown to be most influenced by MC (TE = 1.00), VR (TE = 0.52), and CT (TE = 0.37). Two independent variables influenced CT. These were MC (TE=0.99) and VR (TE=0.58). For VR, only the independent variableMC (TE=1.00) had an influence. Finally, the variance of the factors influencing CS ($R^2$) was 100%, with the factors influencing CS being MC, VR, and CT, respectively.

**Keywords:** Customer trust, healthy brands,marketing communications, Thailand, value recognition

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## Introduction

Numerous factors contribute to today's consumer desire for healthy food and beverages. These include aging Asian and Western societies, urbanization, a fast-paced lifestyle, rising incomes, food safety problems, and obesity, diabetics, and other potentially harmful health problems (Peters, 2017). This is consistent with reports from the International Bottled Water Association (2018), in which it was stated that as both Asian and western citizens age, there is a growing worry among individuals concerning obesity, heart disease, diabetes, and other health matters(Na Thalang et al., 2021).

In Asia, health and wellness millennials are leading the way as new lifestyle status symbols, and if you reside in a first- to the third-tier Chinese city, studies show the chances you are into healthy living is high (Cerini, 2016), with the Chinese health and wellness market in 2020 reaching $70 billion (Wu et al., 2014).

Thailand has also been identified as a health & wellness market to watch, as domestically, it has been recognized as having a strong demand for healthy food and an extensive range of fine brands from local vendors local brands (Sirikeratikul, 2016; W&S Market Research, 2015). Similarly, in a recent Thai health study, 45% of those surveyed said they usually often ate healthy food (Figure 1). Also, in Vietnam, 48.2% stated they sought out healthy food items, and in Indonesia, this number was 28.8%.

As restaurant entrepreneurs, Roman and Reichel (2019) have added that not only are nutritional menus the right thing to do—they also make good business sense. However, finding restaurants serving health-conscious consumer dishes has been challenging in Thailand's recent past. However, this is being reversed, and finding health-conscious diners is becoming easier for residents and tourists living and visiting Bangkok. Most serve vegetarian dishes or use pure organic products, with many Bangkok chefs taking pride in using local products that are bio diversified while working closely with local farmers (Constable, 2019). Some also advertise achieving no carbon footprint and giving back to their local community.

Thus, 'healthy' food and cuisine match many tastes, with consumers looking beyond their waste lines when searching for 'health food restaurants.' Therefore, the authors had to broaden the scope of their investigation into

other aspects on the trail to establish '*customer satisfaction*' (CS) within the Thai health food restaurant sector. Across the globe, fast food and social media use in ordering and researching products has become the rage, thus another critical aspect for restaurant entrepreneurs to understand as they market their brands.

One element which is a re-occurring theme throughout the literature is a restaurant's marketing communications (MC) abilities, which with the advent of social media, has had its meaning and forms expanded with the advent of new technological innovations. Usually, MC has included advertising, promotion and news, sales staff support, and public relations and direct marketing (Kitchen & Burgmann, 2015). However, consumer lifestyle changes have created a need for entrepreneurial innovation, opening online sales and marketing channels. These new customer relationship management (CRM) technologies can also increase sales by introducing new dishes and brands to give consumers more choices (Sirikeratikul, 2016).

Park (2009) has also stated that for restaurants to obtain clear brand value recognition (VR), entrepreneurs must provide clear value, convenience, and healthy alternatives to their customers over their competition. This is consistent with David Brier, which stated in a Forbes article that consumer VR begins when an organization company offers a product or service that is not readily available, which is all scarce or in short supply (Olenski, 2015). Another critical aspect of the discussion concerning CS is the amount of trust consumers place in the safety of the food placed before them. Figueiras (2017) has pointed out that young Chinese consumers put little faith in Chinese officials and regulatory agencies to ensure their food safety. The newer digital generation wants quality brands with verified supply chains (Peters, 2017).

Customer trust (CT) within the hospitality sector has also been stated to directly affect hotel employee effectiveness and a guest's loyalty (Skogland & Siguaw, 2004). Delgado-Ballester (2004) also stated that CT in a brand is dependent on the expectation of brand reliability and the vendor's good intentions.

Furthermore, according to Kaplan and Norton (1996), numerous studies have suggested that customer satisfaction (CS) should be used when evaluating an organization's performance as well as an indicator in Balanced Scorecard (BSC) studies. This is consistent with BSC research from Silk (1998), who reported that 60% of the Fortune 1000 companies had used the BSC and CS as performance evaluators. Therefore, we believe there can be no doubt about the importance of CS, but for this study, the authors wanted to highlight what factors from an Asian health food restaurant customer and entrepreneur's perspective were essential for CS.

Oliver (1999) has suggested that consumer loyalty and customer satisfaction are linked inextricably and that CS will lead to a brand's loyalty, leading to a firm's higher profits. Andaleeb and Conway (2006) have reported that CS comes from frontline employees, price, and food quality within the restaurant sector. This is consistent with Kottler and Armstrong (2010) and their addition of 'price' to the four P marketing mix discussion. In small Jordanian restaurants, food and service quality positively affected CS (Al-Tit, 2015). In Korean small, fast food-food restaurants, Ahn (2015) reported that food quality was also a significant factor in a restaurant's CS.

Therefore, from the brief introduction inspired by a literature and theory review, the following objectives and six hypotheses were created:

## Objectives

1. Tostudythedeterminingfactorsinfluencing Thai health-food restaurant customer satisfaction (CS).
2. To use initial confirmatory factor analysis (CFA) to confirm the aspects of the variables used in the subsequent SEM to determine the interrelationships and final effects on Thai health-food restaurant customer satisfaction (CS).

## Conceptual hypotheses

The synthesized literature review determined that CS is made up of various factors. However, for this research, we used marketing communications (MC), value recognition (VR),and customer trust(CT). From this, the authors conceptualized these six hypotheses.

H1: MC positively and directly influences VR.
H2: MC positively and directly influences CT.
H3: MC positively and directly influences CS
H4: VR positively and directly influences CT.
H5: VR positively and directly influences CS.
H6: CT positively and directly influences CS.

## Methods

### Population and sample

The population for the research was identified from 66 health food restaurants in Thailand in 2019. Initially, a target of 500 customers was established, which was taken from sample size theory and non-response sampling error discussions (Dillman et al., 2013; Schumacker & Lomax, 2010).

### Research tools

The research instrument used a survey questionnaire which contained five parts, in which part 1 used eight items about the diner's personal information, which included their gender, age, relationship status, occupation, and income. Additionally, there were two items to indicate the day(s) of the week in which they chose to eat at a health food restaurant and how many times per week they ate at a health food restaurant.

The survey from parts 2 through 5 made use of a five-level Likert type agreement scale to determine the restaurant patron's opinions about each of the survey items, with '5' indicating a 'strong agreement,' '3' indicating medium agreement, and '1' to show 'strong disagreement.' Additionally, feedback was obtained from five experts and the pre-test of 30 questionnaires. Cronbach's α was also used for item reliability and was determined to be from 0.72 – 0.94 (Table 2), ranked as 'good to excellent' (Tavakol & Dennick, 2011). In part 2, there were five items for MC, part 3 contained four questionnaire items for VR, part 4 contained four items concerning CS, and finally, part 5 had four items on CT.

### Data collection

The authors assembled a team of graduate assistants to collect data from 500 Thai fast food restaurant customers from August 2019 to September 2019. This team was sent to 66 health food restaurants in Bangkok, Chiang Mai, and Khon Kaen during three service periods throughout the day. Every fifth diner was selected randomly and asked to answer the questionnaire, of which a 96.80% response rate was obtained. From the initial 500 questionnaires collected, 484 questionnaires were free of response error and suitable for data analysis.

### Ethics clearance

Ethics approval for the study was obtained from the King Mongkut's Institute of Technology Ladkrabang (KMITL),Human Ethics Committee before consultation with the five experts involved in questionnaire review, the pre-test sample group of 30 restaurant patrons, and the final sample group of 484 restaurant patrons (Pimdee, 2020). Upon initial contact with each individual, the study's objectives were outlined, and each participant was assured the information obtained was confidential, and no identities would be disclosed.

### Data analysis

The initial CFA and final SEM were conducted with LISREL 9.1 between the variables influencing a Thai health food restaurant's CS. The details of the goodness-of-fit (GOF) criteria, supporting theory, and testing results are presented in Table 1.

## Results

### Thai health food restaurant diner characteristics

The results showed that 51.03% were female. The survey range of the customer's ages turned out to be very interesting as only 8.68% were between 31-40 years of age, while younger and older customers were in the majority. Also, 67.77% indicated they were single, while 45.66% indicated they had an undergraduate degree. Also, 39.88% indicated they were still studying, which would support the statistic that 36.36% made less than 10,000 baht per month ($330).   Also, as might be expected due to being students with low incomes, 55.58% reported that they only ate at health food restaurants one or fewer times per week.

**Results from the CFA**

In Table 1, we can see the analysis results of the GOF conducted prior to the SEM.

**Table 1.**GOF testing results

| Criteria Index | Criteria | Supporting theory | Values |
|---|---|---|---|
| Chi-square: χ2 | $p \geq 0.05$ | Rasch (1980). | 0.90 |
| χ2/df – degrees of freedom | $\leq 2.00$ | Byrne et al. (1989) | 0.56 |
| RMSEA - root mean square error of approximation | $\leq 0.05$ | Hu and Bentler (1999) | 0.00 |
| goodness of fit index (GFI) | $\geq 0.90$ | Jöreskog et al. (2016) | 0.99 |
| adjusted goodness of fit index (AGFI) | $\geq 0.90$ | Hooper et al.(2008) | 0.98 |
| root means square residual (RMR) | $\leq 0.05$ | Byrne (2010) | 0.01 |
| standardized root mean square residual (SRMR) | $\leq 0.05$ | Byrne (2010) | 0.01 |
| normed fit index (NFI) | $\geq 0.90$ | Schumacker and Lomax (2010) | 0.99 |
| comparative fit index (CFI) | $\geq 0.90$ | Schumacker and Lomax (2010) | 1.00 |
| Cronbach's alpha (α) | $\geq 0.70$ | Schumacker and Lomax (2010) | 0.72-0.94 |

**CFA results**

Anderson and Gerbing (1998) have suggested that when analyzing both the internal and external latent variables, a multi-step approach helps analyze each separately. Therefore, Table 2 presents the results of this analysis.

**Table 2.**Construct and observed variable CFA results

| Construct | α | AVE | CR | Observed variables | loading | $R^2$ |
|---|---|---|---|---|---|---|
| MC | 0.72 | 0.48 | 0.70 | Advertising (x1) | 0.28 | .18 |
| | | | | Staff sales (x2) | 0.71 | .50 |
| | | | | Sales promotion (x3) | 0.92 | .84 |
| CS | 0.94 | 0.71 | 0.91 | Service location (y5) | 0.80 | .67 |
| | | | | Customer service (y6) | 0.90 | .81 |
| | | | | Product and service quality (y7) | 0.81 | .65 |
| | | | | Value of goods and services (y8) | 0.86 | .74 |
| CT | 0.88 | 0.60 | 0.82 | Service reputation (y9) | 0.73 | .53 |
| | | | | Product quality (y10) | 0.77 | .59 |
| | | | | Reliable (y11) | 0.82 | .67 |
| VR | 0.92 | 0.53 | 0.77 | Products (y12) | 0.68 | .45 |
| | | | | Image (y13) | 0.71 | .50 |
| | | | | Psychological (y14) | 0.79 | .61 |

Table 3 shows each latent variable's correlation coefficients under the diagonal in bold, supporting the SEM's reliability as all factors showed proper levels of internal consistency, as their construct reliability was between 0.55 and 0.92 (Bollen, 1987). Also, the average variance extracted (AVE) and the $\sqrt{AVE}$ are shown.

**Table 3.**Construct analysis results

| Constructs | MC | CS | CT | VR |
|---|---|---|---|---|
| MC | **1.00** | | | |
| CS | .70** | **1.00** | | |
| CT | .60** | .81** | **1.00** | |
| VR | .76** | .87** | .74** | **1.00** |
| AVE | 0.31 | 0.74 | 0.62 | 0.60 |
| Construct reliability | 0.55 | 0.92 | 0.83 | 0.82 |
| $\sqrt{AVE}$ | 0.56 | 0.86 | 0.78 | 0.77 |

**Sig. $\leq .01$

**Correlation decomposition**

Testing was also accomplished to obtain the values from the correlation decomposition by use of the direct effect (DE), indirect effect (IE), and the total effect (TE) (Bollen, 1987). From this, a determination was made that all the SEM's constructs positively influenced a Thai health-food restaurant's customer satisfaction (CS). Furthermore, the amount of variance one variance shares with other variables in the analysis, which in this case for CS ($R^2$), is 100% (Kim & Mueller, 1978). Moreover, the influence of the three constructs on CS was shown to be most influenced by MC (TE = 1.00), VR (TE = 0.52), and finally, CT (TE = 0.37). Two independent variables influenced CT. These were MC (TE=0.99) and VR (TE=0.58). For VR, there was only one independent variable with influence, which was MC (TE=1.00). Finally, Figure 1 shows the final SEM testing, and Table 4 details the results from testing the six hypotheses.
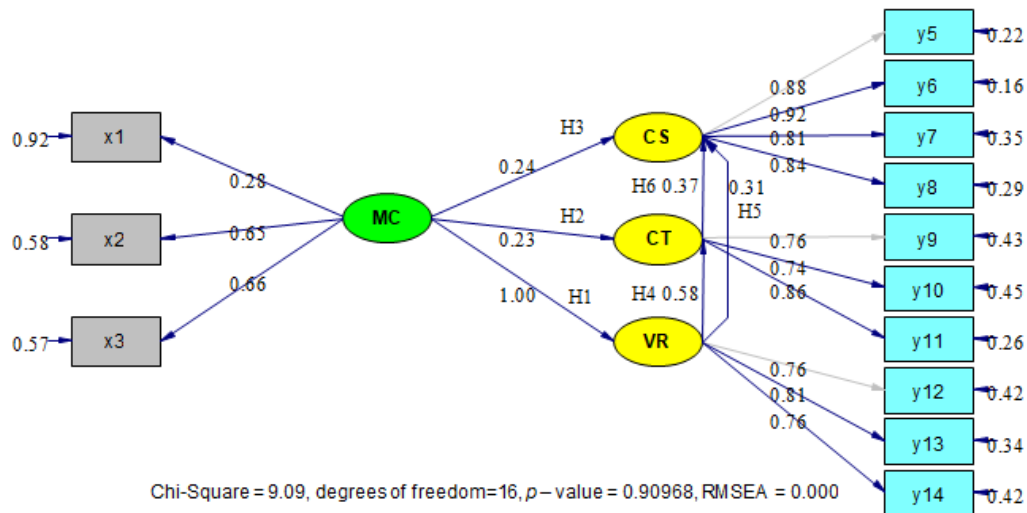
**Figure 1.**SEM of variables influencing CS



Chi-Square = 9.09, degrees of freedom=16, $p-value$ = 0.90968, RMSEA = 0.000

**Table 4.** Final hypotheses testing results

| Hypothesis statement | Correlation coefficients | t-test values | Validity |
|---|---|---|---|
| H1: MC positively and directly influences VR | 1.00 | 11.01** | Valid |
| H2: MC positively and directly influences CT | 0.23 | 2.26* | Valid |
| H3: MC positively and directly influences CS | 0.24 | 2.62* | Valid |
| H4: VR positively and directly influences CT | 0.58 | 5.31** | Valid |
| H5: VR positively and directly influences CS | 0.31 | 2.51** | Valid |
| H6: CT positively and directly influences CS | 0.37 | 3.37** | Valid |

*Note.* *Sig. $\leq$ .05, **Sig. $\leq$ .01

**Discussion**

Affirmation of health food restaurant customer satisfaction (CS) came from the study's SEM analysis with the TE values of the related constructs MC, VR, and CT were 1.00, 0.52, and 0.37, respectively. Additionally, the GoF assessment for common variance was calculated at 100% ($R^2$), with all six hypotheses found to be supported from the LISREL 9.1 SEM results shown in Table 8.

Furthermore, the study's descriptive analysis results from the four latent variables MC, VR, CS, and CT showed that respondents felt they were slightly more in agreement with the items concerning the items for a CT as the mean ($\bar{x}$) = 3.35 and the standard deviation ($\sigma$) = .69. Close behind were items for VR with $\bar{x}$ = 3.34 and $\sigma$ = .60, items for CS with $\bar{x}$ = 3.24 and $\sigma$ = .66, and finally, items for MC with $\bar{x}$ = 3.24 and $\sigma$ = .52. Overall, there was 'median agreement' with the questionnaire items from the five-level survey agreement scale.

**Hypotheses testing**

Hypothesis H1 testing results showed a direct and very strong positive effect on the relationship from MC to VR with the correlation coefficient $r$ = 1.00, the t-value = 11.01, and the significance was $p \leq 0.01$ (Moore et al., 2013). From the data analysis, sales promotion) x3( and the staff's sales ability (personality) (x2) for MC were

shown to be essential variables to the study's health food restaurant customers with $\overline{x}$ = 0.92 and $\overline{x}$ = 0.72, respectively. This is consistent with other restaurant studies in which price and staff influenced a diner's value recognition (Andaleeb & Conway, 2006; Kara et al., 1995).

However, Hypothesis H2 testing results showed that although there was a direct effect from MC to CT, the effect was weak, with the correlation coefficient = 0.23, the t-value = 2.26, and the significance was $p \leq 0.05$. This result was almost identical in H3's relationship between MC and CS as the correlation coefficient = 0.24, the t-value = 2.62, and the significance was $p \leq 0.05$. Furthermore, the study's results are consistent with another study on Thai fast-food restaurants in which it was reported that the restaurant's staff's marketing communication skills played the most significant role in CS (Tangtatswas et al., 2019).

Moreover, Hypothesis H4 testing results showed a direct and moderate positive effect from VR to CT with the correlation coefficient = 0.58, the t-value = 5.31, and the significance was $p \leq 0.01$. However, Hypothesis H5 testing results indicated that the relationship between VR to CS was weak but positive with the correlation coefficient = 0.31, the t-value = 2.51, and the significance was $p \leq 0.01$. The support for these two hypotheses findings comes from Hong Kong, in which multiple studies compared CS between Asian and Western travelers (Choi & Chu, 2000; Torres & Kline, 2006). Both research groups determined that travelers from Asia place the most importance on value, with Western guests valuing room quality most for CS.

Additionally, Hypothesis H6 testing results showed a direct but weak positive effect from CT to CS with the correlation coefficient = 0.37, the t-value = 3.37, and the significance was $p \leq 0.01$.

Finally, the study's observed variables for customer satisfaction (CS) showed the importance of *customer service* (y6) and the *value of goods and services* (y8) with $\overline{x}$ = 0.90 and $\overline{x}$ = 0.86, respectively. This is consistent with a Norwegian hotel study from Gundersen et al. (1996), which also determined that food/beverages and reception and housekeeping were the most significant, explaining 80% of the variance in CS.

**Conclusion and Implications**

The authors determined the importance of the underlying factors concerning a Thai health food restaurant's customer satisfaction (CS). After the initial identification from the theory of three related latent variables (MC, VR, and CT), both a CFA and SEM were used to find the interrelationships and the variables affecting CS. Results showed a significant and positive influence of marketing communications (MC) on a Thai health food restaurant's CS. Furthermore, the variance of the factors influencing CS ($R^2$) was 100%, with the factors influencing CS being MC, VR, and CT, respectively.

Although research confirms that personal contact with staff and the management entrepreneur(s) is highly influential in CS, 'personal contact' methods have expanded into the technological realm and now include social media platforms and the never-ending use of smartphones. It seems now that aversion to these technological marvels is a sure death-wise for a restaurant entrepreneur in modern Asian society. Furthermore, research has estimated that over 150,000 restaurants in Thailand, and competition are fierce. Many new establishments fail within a short period from their start-up, so great attention to CS is of critical importance.

**Limitations**

The small geographical sample could potentially be a limiting factor in the study. There is no doubt that Asian and Western diners view the physical facility and their staff interactions differently, so this could also be a limiting factor. Social media has also become an area within the restaurant sector lacking significant research. Also, as society's age and healthy food patrons retire, is 'delivery speed' still of great importance? However, this is very timely and original in its scope and identification of the growing importance of Thai health food restaurants, whose sector is expected to grow significantly.

**Acknowledgment**

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