

Lunchtime on the go: Understanding street food consumption habits of office workers in cities in Vietnam

Nguyen Van Phuong^{1,5}, Tran Thi Truc², Hoang Ngoc Quang³, Pham Ngoc Huong Quynh^{4*}

^{1,2,3,4}VNU University of Economics and Business, Vietnam National University, Hanoi, Vietnam; vanphuong@vnu.edu.vn (N.V.P) tructt@vnu.edu.vn; (T.T.T) quanghn1903@vnu.edu.vn; (H.N.Q) quynhphamnh@vnu.edu.vn; (P.N.H.Q).

⁵O.P. Jindal Global University, Sonapat, Haryana, India.

Abstract: This study aims to explore the factors influencing street food consumption habits by analyzing the data collected from 572 office workers in the inner districts of Hanoi, Da Nang, and Ho Chi Minh City using Partial Least Squares Structural Equation Modeling (PLS-SEM) and the Theory of Planned Behavior (TPB). The analysis emphasizes the significant roles of convenience, peer influence, food quality, and health perceptions in shaping consumer behavior. Convenience and accessibility, along with social recommendations, are identified as strong determinants, while food quality and health perceptions reflect consumers' concerns about sensory attributes and health implications. Although personal eating habits have a less pronounced impact, they still contribute to consumption patterns. The findings suggest several implications for policymakers and businesses. Policymakers should focus on enhancing the availability and safety of street food, including streamlining vendor permits and improving infrastructure. Public health initiatives should educate consumers about health risks and promote healthier options. For businesses, leveraging social influence through targeted marketing and investing in food quality and health benefits can enhance consumer engagement and market appeal. However, the study's focus on a specific demographic may limit the generalizability of the findings. Further research across diverse populations is recommended to validate these insights.

Keywords: Convenience and accessibility, Food quality, Health perceptions, Street food consumption habits.

1. Introduction

Street food is recognized as an essential cultural element, vividly portraying the culinary landscape of countries worldwide [1, 2]. In Vietnam, street food plays a crucial role, contributing to spreading the typical traditional cuisine and creating a connection between vendors and customers [3, 4]. From bustling streets of major cities to old rural towns, this informal culinary form creates a vivid picture of Vietnamese culture and daily life [5-7]. Deeply embedded in the country's social fabric, street food provides a wide array of affordable and accessible meals that cater to various tastes and preferences [8, 9].

For office workers in Vietnam's large and fast-paced cities, street food is important for meeting their daily dietary needs [8, 10]. Due to limited lunchtime, they often rely on the food outlets available in office buildings and look for meals that are both quick and delicious [11]. Consequently, office workers frequently opt for street food because of its convenience and variety. Street food vendors offer office workers accessible and affordable meal options that suit their busy lifestyles [12, 13].

While street food is very popular in Vietnam and is an important part of office workers' lives, there are still potential risks [12, 14, 15]. Food safety remains a significant concern, especially in developing countries like Vietnam, where food safety regulations and enforcement can be lacking [16]. Issues such as poor hygiene, unsafe food processing, and unclear ingredient origins can pose serious health risks WB [17]. To develop effective interventions and improve food safety practices in the street food sector, especially among the growing white-collar population in Vietnam's rapidly urbanizing cities, it is necessary to understand the factors influencing street food consumption habits [18].

This study analyzes the lunchtime habits of office workers in major cities in Vietnam, aiming to provide insights into their street food consumption patterns. Using quantitative research methods and applying Partial Least Squares Structural Equation Modeling (PLS-SEM) techniques, the study evaluates the interaction of multiple factors affecting office workers' street food choices.

This article focuses on analyzing the impact of individual factors, including food safety awareness, personal preferences, income level, and age, as well as environmental factors such as convenience, price, social influence, and surrounding environmental conditions. The objectives of the study are: (i) To identify the main motivators and deterrents to street food consumption among office workers by understanding the relative importance of factors such as food safety concerns, taste preferences, convenience, and affordability in shaping their choices. (ii) To explore the potential relationship between individual perceptions, social influence and environmental factors in promoting street food consumption, exploring how peer influence and perceived hygiene of street food stalls interact with individual preferences and perceived risk. (iii) To provide valuable insights for policymakers, public health officials, and street food vendors to inform the development of targeted interventions, regulations, and educational programs to promote safe food handling practices and reduce risks associated with street food consumption.

This paper contributes to the growing body of knowledge on street food consumption patterns, particularly in the context of Vietnam's urban workforce. By illuminating the complex interplay of factors influencing lunch choices, this study provides valuable insights to promote both the cultural significance and safety of street food in Vietnam.

2. Literature Review

This literature review examines existing research on street food consumption, focusing on factors influencing consumer choices, with a particular emphasis on office workers. It examines both individual factors, such as food safety awareness, personal preferences, and demographic characteristics, and environmental factors, including convenience, affordability, social influence, and surrounding environmental conditions.

2.1. Theoretical Framework

The study employs the Theory of Planned Behavior (TPB) as a guiding theoretical framework to investigate the determinants of street food consumption habits among office workers. The TPB postulates that an individual's intention to engage in a specific behavior is the primary determinant of that behavior. This intention is shaped by three key constructs: attitude toward the behavior (an individual's positive or negative feelings toward consuming street food), subjective norms (the perceived social pressure to engage in or avoid the behavior), and perceived behavioral control (an individual's perception of their ability to perform the behavior) [19]. Factors such as convenience and availability, while not explicitly part of the original TPB model, can be seen as contributors to perceived behavioral control, as they facilitate easier access to street food.

This study extends the TPB by incorporating health perceptions and satisfaction as mediating variables. Health perceptions are proposed to moderate the relationship between convenience/price and

street food consumption habits, reflecting that concerns about health risks can influence decisions [20, 21]. The inclusion of satisfaction, aligning with the expectancy-value framework, suggests that positive experiences with street food, such as enjoying its quality or social aspects, can reinforce the behavior and foster repeat patronage [22, 23]. By integrating the TPB with the concept of satisfaction, this study aims to provide a more comprehensive understanding of the factors influencing street food consumption habits among office workers.

2.2. Street Food Consumption Habits

Street food consumption habits encompass the behaviors and patterns exhibited by consumers when they choose to purchase and consume food from street vendors or stalls [1]. These habits are frequently influenced by convenience, price, and unique taste, and can be embedded in local culinary traditions. Growing concerns regarding food safety and health also exert a notable influence on these habits, as consumers become increasingly aware of the origins and quality of ingredients. Furthermore, growing concerns about food safety and health can have a strong impact on these habits, as consumers become more concerned about the origin and quality of the food. The boom in the street food industry, especially in urban areas, highlights the growing demand for such food options [24]. This trend reflects the blend of cultural diversity and changing consumer demands, where food quality, variety, and authenticity are increasingly prioritized.

2.3. Food Safety and Risk Perceptions

Food safety is a major issue in street food consumption. Studies have consistently shown that consumers' perceptions of food safety have a strong impact on their food choices [21, 24, 25]. For example, research has shown that people with high concerns about food safety tend to consume less street food. Factors influencing these perceptions include hygiene standards at food stalls, food handling procedures, and concerns about the origin of ingredients. Research in Vietnam, in particular, has highlighted the rise in food-related illnesses due to street food consumption and emphasized the need to improve hygiene practices [16, 18].

2.4. Personal Preferences and Taste

Beyond safety, personal preferences, taste, and cultural familiarity play a crucial role in food choices [26, 27]. Street food offers a wide variety of flavors and cuisines, often catering to local tastes and preferences rooted in the culinary traditions of Vietnam. Studies have shown that individuals are more likely to consume street food they find appealing, enjoyable, and aligned with their cultural palates [14, 20, 28]. This highlights the importance of understanding the nuanced culinary landscape and diverse taste preferences of specific target groups, such as office workers in Vietnamese cities, who may be seeking familiar and comforting flavors during their busy lunchtime routines.

2.5. Convenience and Affordability

For office workers in bustling urban centers, convenience, and affordability are vital factors that heavily influence their lunchtime choices. Street food vendors often cater to the needs of this demographic by offering quick, easy, and satisfying meal options, particularly in fast-paced environments where time is limited. Research has consistently shown that the proximity of street food stalls to workplaces, the short waiting times, and the availability of takeaway options all contribute significantly to the popularity of street food among office workers [29-31]. Furthermore, street food is commonly perceived as a more affordable alternative to other dining options, making it an attractive choice for budget-conscious individuals who seek value for their money during their busy workday lunches [24, 32, 33].

2.6. Social Influences and Environmental Factors

Social influences, such as peer pressure and social norms, can also significantly impact food choices. Studies have consistently shown that individuals are more likely to consume street food if their colleagues, friends, or family members do so regularly [28, 34, 35]. This highlights the importance of social networks and group dynamics in shaping food consumption patterns. The presence of peers and loved ones who periodically enjoy street food can create a sense of social acceptance and normalization, making an individual more inclined to try and adopt these food choices. Furthermore, the surrounding environment, including the cleanliness of food stalls, the presence of seating areas, and the overall ambiance, can influence perceptions of quality and attractiveness, ultimately impacting consumer choices [20, 36, 37]. The visual appeal, comfort, and overall atmosphere of the street food environment can shape how consumers perceive the experience, affecting their likelihood of patronizing these establishments.

2.7. Research Gaps and Study Rationale

While existing research provides valuable insights into street food consumption, there is a need for more contextualized studies focusing on specific demographic groups, such as office workers in Vietnamese cities. This study addresses this gap by investigating the interplay of individual and environmental factors influencing lunchtime street food consumption among office workers in Vietnam. By employing a quantitative approach and utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM), this research aims to provide a comprehensive understanding of the factors driving these choices, ultimately contributing to the development of targeted interventions and policies promoting both the cultural significance and the safety of street food in Vietnam.

3. Hypothesis Development

This study aims to investigate the factors influencing street food consumption habits among office workers in major Vietnamese cities. Based on the literature review and the proposed research model, we formulate the following hypotheses:

3.1. Direct Effects

H₁: Convenience and Availability positively affect Street Food Consumption Habits.

The perceived ease of accessing and obtaining street food, such as the convenient location of stalls near workplaces, short waiting times, and availability of takeaway options, can positively influence office workers' intention to consume street food, which then leads to the actual behavior. This aligns with the concept of perceived behavioral control in the TPB [19]. Easily accessible street food stalls conveniently located near workplaces, coupled with short waiting times and the availability of takeaway options, are likely to attract these consumers who seek quick and effortless meal solutions during their limited lunch breaks [11, 38-40]. The ability to grab a meal on the go without the need to plan or sit down for an extended dining experience makes street food an appealing choice for office workers who value efficiency and flexibility in their lunchtime routines [15, 23].

H₂: Reasonable Price positively affects Street Food Consumption Habits.

Consistent with the TPB, affordability is a key driver of food consumption patterns, particularly for budget-conscious consumers. The perceived behavioral control component of the TPB suggests that an individual's perceptions of the ease or difficulty of performing a behavior can significantly influence their intention and actual behavior [19]. For office workers in Vietnam, the relatively low prices of street food make it an accessible and attractive option, allowing them to enjoy satisfying meals without straining their budgets during their busy workdays. Street food, often perceived as a more economical dining option compared to restaurants or cafes, is expected to be favored by office workers seeking value

for their money [13, 41, 42]. This is especially true for many office workers in Vietnam, where the cost of living and dining options can be a significant factor in their daily food choices. The relatively low prices of street food make it an attractive and accessible option for these individuals, allowing them to enjoy satisfying meals without straining their budgets during their busy workdays.

H₃: Peer Influence positively affects Street Food Consumption Habits.

Social influences, particularly from peers, can significantly impact individual choices. This aligns with the concept of subjective norms in the TPB, which suggests that the perceived social pressure from important referents, such as peers, can influence an individual's intentions and subsequent behaviors [19]. The prevalence of street food consumption among colleagues or friends can create a sense of normalcy and encourage similar behavior [28, 43]. Observing peers regularly enjoying and discussing the convenience, affordability, and enjoyment of street food can normalize this consumption pattern, making office workers more likely to adopt it themselves. The social acceptance and perceived social benefits of engaging in shared street food experiences with coworkers or friends can also positively influence individual decisions to partake in this behavior [34, 35].

H₄: Food Quality positively affects Street Food Consumption Habits.

Regardless of other factors, the perceived quality and taste of the food remain crucial determinants of consumption. Consistent with the concept of attitude in the TPB, the perceived quality and taste of the food remain crucial determinants of consumption, regardless of other factors. Street food vendors offering delicious, well-prepared, and visually appealing meals are likely to attract repeat customers and generate positive word-of-mouth referrals [24, 44]. The use of fresh, high-quality ingredients and skillful preparation techniques can enhance the overall dining experience, leading to greater customer satisfaction and a stronger likelihood of continued patronage. Furthermore, the presentation and aesthetics of the street food offerings can also play a significant role in shaping perceptions of quality and desirability, contributing to the overall attractiveness of these culinary options for office workers [45, 46].

H₅: Personal Eating Habits positively affect Street Food Consumption Habits.

Personal food preferences, willingness to try new foods, and existing eating habits significantly influence food choices. According to TPB, these personal factors, which represent an individual's attitudes and behavioral dispositions, can directly influence their intentions and actual behaviors related to street food consumption. Those who generally enjoy exploring new culinary experiences or have a preference for the variety and novelty offered by street food are more likely to engage in this consumption pattern [2, 22, 23]. Individuals with an adventurous palate and a willingness to experiment with different cuisines are more inclined to regularly patronize street food vendors, as the diverse array of dishes and flavors available in the street food scene can appeal to their desire for culinary exploration and discovery [22, 25].

3.2. Mediating Effects

H₆: Health Perceptions mediate the relationship between Convenience and Availability and Street Food Consumption Habits

While the convenience of street food offerings might drive initial consumption among office workers, ongoing concerns about hygiene and food safety can significantly influence their continued patronage of these establishments [20, 30, 47]. The perceived health risks and potential food safety issues associated with street food could moderate the positive relationship between the convenience and availability of these options and the long-term consumption habits of office workers. Lingering doubts about the cleanliness and sanitary practices of street food vendors, as well as worries about foodborne illnesses, might lead office workers to exercise more caution in their repeated visits, even if the initial accessibility and ease of access made street food an attractive lunchtime choice [15, 48].

H. Health Perceptions mediate the relationship between Reasonable Price and Street Food Consumption Habits.

Similar to convenience, the affordability of street food offerings might initially attract office workers as a more budget-friendly dining option compared to restaurants or cafes [13, 30]. However, lingering concerns about food safety and hygiene practices, often associated with lower-priced street food vendors, could counteract the positive influence of reasonable prices on these consumers' long-term street food consumption habits [21, 46, 49]. While the relatively low cost of street food may draw them in initially, ongoing worries about the cleanliness and sanitary conditions of these establishments could lead office workers to exercise more caution in their repeated visits, dampening the positive effect of price on their consumption patterns over time.

H_s. Satisfaction mediates the relationship between Food Quality and Street Food Consumption Habits.

High food quality is expected to lead to greater satisfaction with the dining experience, which in turn can further encourage repeat consumption of street food [25, 26, 46]. This hypothesis suggests that satisfaction acts as a mediating factor, strengthening the positive relationship between the perceived quality of the food and office workers' long-term street food consumption habits. The satisfaction derived from the overall dining experience, including the taste, freshness, and presentation of the street food offerings, can reinforce the positive influence of food quality on these consumers' repeated patronage of street food vendors [24, 27].

H_s. Satisfaction mediates the relationship between Peer Influence and Street Food Consumption Habits.

Positive experiences with street food that are shared and discussed within peer groups can amplify the influence of social factors on an individual's consumption habits [35, 44, 50]. This hypothesis proposes that the satisfaction and enjoyment derived from these shared street food experiences, when frequently discussed among peers, can further reinforce the positive relationship between peer influence and an individual's long-term consumption of street food. The social validation and camaraderie associated with these shared experiences may contribute to a strengthening of the link between peer influence and an individual's propensity to regularly consume street food [22, 23]. These hypotheses provide a framework for investigating the complex interplay of factors influencing street food consumption habits among office workers. By examining both direct and mediating effects, this study aims to provide a nuanced understanding of this phenomenon and contribute valuable insights for promoting safe and informed food choices within this vibrant culinary landscape.

The proposed research model is shown in Figure 1.

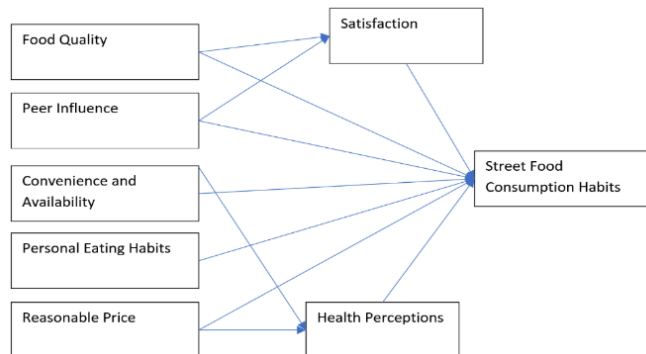


Figure 1.
Research model.

4. Research Methodology

4.1. Research Design

This study employs a quantitative research approach utilizing a survey technique to collect data from office workers in three major Vietnamese cities. The study model is analyzed using Partial Least Squares Structural Equation Modeling to examine individual and environmental factors influencing lunchtime street food consumption among the targeted demographic. The scale of variables and scale's source are described in Table 1.

Table 1.
Proposed scale table.

Factors	Coding	Observed variables	Source
Convenience and Availability	CA1	I can easily find street food vendors near my residence.	Ajzen [19]; Drewnowski and Monsivais [41] and Trinh, et al. [51]
	CA2	Street food is usually available when I need it.	
	CA3	The waiting time for street food is usually short.	
	CA4	Street food vendors are often open during the times I need.	
Reasonable Price	RP1	The price of street food is usually reasonable for my budget.	Thang and Bao Linh [9] and Bell, et al. [10]
	RP2	I find street food to be affordable.	
	RP3	Street food prices are generally lower compared to other options.	
	RP4	I am satisfied with the value I receive from street food.	
Peer Influence	PI1	My friends often encourage me to eat street food.	Stutter [4]; Higgs [34] and Levy, et al. [43]
	PI2	I often eat street food when I am with friends.	
	PI3	My friends' opinions affect my decision to eat street food.	
	PI4	I feel peer pressure to choose street food.	
Food Quality	FQ1	I feel the quality of street food is generally good.	Petrescu, et al. [20]; Morano, et al. [24] and Seo and Lee [46]
	FQ2	The street food I consume usually tastes good.	
	FQ3	I believe street food is made from fresh ingredients.	
	FQ4	I am satisfied with the quality of street food I usually eat.	
Personal Eating Habits	PEH1	I frequently eat street food as part of my eating habits.	Bell, et al. [10] and Buckley, et al. [38]
	PEH2	Eating street food is an important part of my diet.	
	PEH3	I choose street food due to personal habits.	
	PEH4	Street food fits well with my eating habits.	
	PEH5	I often adjust my eating habits to include street food.	
Health Perceptions	HP1	I worry about the health impacts of street food.	Petrescu, et al. [20]; Wang, et al. [21] and Levy, et al. [43]
	HP2	I feel that eating street food might pose health risks.	
	HP3	I consider health issues when choosing to eat street food.	
	HP4	I believe that street food hygiene practices affect my health.	
Satisfaction	SAT1	I am satisfied with my experience eating street food.	Cifci, et al. [22]; Ozcelik and Akova [23] and Joo, et al. [47]
	SAT2	I usually feel content after eating street food.	
	SAT3	I am pleased with the service and quality when eating street food.	
	SAT4	Street food often meets my expectations.	
Street Food Consumption Habits	SFCH1	I frequently eat street food for lunch.	Mohamad, et al. [26]; Ukenna and Ayodele [35] and Kim and Geistfeld [42]
	SFCH2	I spend a significant amount of money on street food each month.	
	SFCH3	Street food is a regular part of my diet.	

4.2. Sampling and Data Collection

Data were collected from 572 office workers residing in the inner districts of Hanoi, Da Nang, and Ho Chi Minh City. A combined sampling method incorporating both random and convenience sampling was employed. To collect information from participants, the research team used a questionnaire survey method. Before starting, participants were asked to provide their consent to participate in the study

through an interview process. In the instructions, participants were provided with detailed information about the purpose of the survey, including that the data collected would be used for research publications, ensuring the anonymity of respondents, and a commitment that only the research team would have access to and use the data. At the same time, participants were informed that participating in the survey was completely voluntary. This ensured compliance with ethical principles in research, creating trust and transparency for participants. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Ethics Committee of VNU University of Economics and Business.

The sampling process involved several steps. The first step is the Random Selection of Districts. Two districts within each city were randomly selected using the platform <https://www.random.org/>. The second step is the Random Selection of Wards. Within each selected district, three wards were randomly chosen using the same platform; (iii) Convenience Sampling: Face-to-face interviews were conducted at locations within the selected wards known for their high concentration of street food vendors.

4.3. Data Collection Instrument and Procedure

Data were collected through a structured questionnaire administered to respondents during face-to-face interviews. The questionnaire employed a 5-point Likert scale (1 - Strongly Disagree to 5 - Strongly Agree) to measure the various constructs under investigation. Before participating, respondents were informed about the study's objectives, the confidentiality of their responses, and their right to decline participation. A small token of appreciation was offered to those who agreed to participate. Each interview lasted approximately 20-30 minutes.

4.4. Data Analysis Techniques

Collected data were processed and analyzed using SPSS and SmartPLS. PLS-SEM was employed to test the proposed research model and evaluate the influence of various factors on office workers' street food consumption habits. To ensure the reliability and validity of the measurement scales, the following assessments were conducted: (i) Cronbach's Alpha and Composite Reliability were used to assess the internal consistency of the constructs; (ii) Average Variance Extracted was used to evaluate the convergent validity of the scales. Additionally, other PLS-SEM indicators, such as path coefficients, R-square (R^2), effect size (f^2), and predictive relevance (Q^2), were utilized to evaluate the overall model fit and test the research hypotheses.

5. Research Results

5.1. Characteristics of Responses

The data in Table 2 provides an overview of the demographic characteristics of 572 respondents. Most respondents are aged between 22 - 34 years, and the sample has a higher proportion of females than males. Over half of the respondents have a family income below 10 million VND per person, and a significant portion has attained a university degree or higher. The most common occupations among respondents are office staff and business owners.

Table 2.
Sample characteristics.

Characteristics	Responses	Percent (%)	Characteristics
Age	Below 22	119	20.8
	22-34	183	32.0
	35-55	165	28.8
	56 and above	105	18.4
Gender	Male	222	38.8
	Female	350	61.2
Family income per person	Below 10 million VND	315	55.1
	From 10-20 million VND	116	20.3
	higher 20 million VND	141	24.7
Education level	Below High School	67	11.7
	High School	116	20.3
	Vocational school	179	31.3
	University and higher	210	36.7
Occupation	Students	77	13.5
	Office staff	176	30.8
	Workers	108	18.9
	Business Owners	112	19.6
	Retired	38	6.6
	Other	61	10.7
Total		572	100.0

*Note: VND - Vietnam Dong.

Exchange rate 1 USD = 24.920 VND, Vietcombank, 30 July 2024.

5.2. Assessing the Hypotheses

Table 3 presents factor loadings for variables related to street food consumption habits. The Loadings for Convenience and Availability (CA) range from 0.751 to 0.778, indicating a strong impact of convenience and availability on street food consumption. Food Quality (FQ) loadings range from 0.722 to 0.783, highlighting the importance of food quality. Health Perceptions (HP) loadings from 0.775 to 0.792 significantly affect health perceptions. Peer Influence (PI) and Personal Eating Habits (PEH) have high loadings, from 0.706 to 0.893 and 0.855 to 0.925, respectively, suggesting a strong influence on consumption habits. Reasonable Price (RP) loadings range from 0.728 to 0.880, emphasizing the role of reasonable pricing. Finally, Street Food Consumption Habits (SFCH) loadings from 0.837 to 0.844 reflect that satisfaction significantly drives street food consumption.

Table 3.
Factor Loadings for Variables Influencing Street Food Consumption Habits

	Convenience and Availability	Food Quality	Health Perceptions	Peer Influence	Personal Eating Habits	Reasonable Price	Satisfaction	Street Food Consumption Habits
CA1	0.778							
CA2	0.769							
CA3	0.769							
CA4	0.751							
FQ1		0.759						
FQ2		0.722						
FQ3		0.783						
FQ4		0.774						
HP1			0.779					
HP2			0.775					
HP3			0.792					
HP4			0.776					
PEH1					0.891			
PEH2					0.855			
PEH3					0.925			
PI1				0.808				
PI2				0.706				
PI3				0.893				
PI4				0.711				
RP1						0.778		
RP2						0.728		
RP3						0.88		
RP4						0.82		
SAT1							0.791	
SAT3							0.804	
SAT4							0.788	
SFCH1								0.844
SFCH2								0.838
SFCH3								0.837

Table 4 displays Cronbach's alpha, composite reliability, and average variance extracted (AVE) for each factor. Personal Eating Habits show the highest reliability with a Cronbach's alpha of 0.873 and an AVE of 0.794. Health Perceptions and Peer Influence also exhibit strong reliability and validity. Reasonable Price and Street Food Consumption Habits show good performance with Cronbach's alphas of 0.816 and 0.79, respectively. The table reflects the robustness of these factors in analyzing street food consumption.

Table 4.
Reliability and Validity Metrics for Factors Influencing Street Food Consumption Habits.

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Convenience and Availability	0.767	0.77	0.851	0.588
Food Quality	0.757	0.762	0.845	0.578
Health Perceptions	0.786	0.787	0.862	0.609
Peer Influence	0.792	0.871	0.863	0.614
Personal Eating Habits	0.873	0.912	0.92	0.794
Reasonable Price	0.816	0.837	0.879	0.645
Satisfaction	0.708	0.71	0.837	0.631
Street Food Consumption Habits	0.79	0.791	0.877	0.705

The results from Table 5 show correlations between factors like Convenience and Availability, Food Quality, Health Perceptions, Peer Influence, Personal Eating Habits, Reasonable Price, Satisfaction, and Street Food Consumption Habits. Strong correlations are found between Street Food Consumption Habits and Peer Influence (0.626) and Health Perceptions (0.539). Personal Eating Habits have a high self-correlation (0.891) but low correlations with other factors. Reasonable Price moderately correlates with Food Quality (0.477) and Peer Influence (0.377).

Table 5.
Correlation Matrix of Factors Influencing Street Food Consumption Habits.

	Convenience and Availability	Food Quality	Health Perceptions	Peer Influence	Personal Eating Habits	Reasonable Price	Satisfaction	Street Food Consumption Habits
Convenience and Availability	0.767							
Food Quality	0.315	0.76						
Health Perceptions	0.325	0.257	0.78					
Peer Influence	0.271	0.341	0.376	0.783				
Personal Eating Habits	0.023	0.035	0.054	0.046	0.891			
Reasonable Price	0.346	0.477	0.338	0.377	0.066	0.803		
Satisfaction	0.252	0.301	0.304	0.494	-0.007	0.308	0.795	
Street Food Consumption Habits	0.52	0.507	0.539	0.626	0.114	0.538	0.538	0.839

The relationships between factors are described in table 6 and figure 2. The strongest effects are observed from Convenience and Availability (coefficient = 0.227, T-statistic = 8.441) and Peer Influence (coefficient = 0.283, T-statistic = 9.461) on Street Food Consumption Habits. Food Quality and Health Perceptions also have significant impacts with coefficients of 0.158 and 0.208, respectively. Personal Eating Habits shows a smaller but significant effect (coefficient = 0.071, T-statistic = 2.885). VIF values indicate minimal collinearity, with the highest being 1.523 for Peer Influence on Street Food Consumption Habits. The lowest VIF is for Personal Eating Habits affecting Street Food Consumption Habits (1.008), indicating minimal collinearity. Other relationships, such as Convenience and Availability with Street Food Consumption Habits (1.247) and Food Quality with Street Food Consumption Habits (1.394), show moderate collinearity.

Table 6.
Path coefficient and total indirect effect of the structural model.

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	VIF
Convenience and Availability -> Health Perceptions	0.236	0.239	0.05	4.717	0	1.136
Convenience and Availability -> Street Food Consumption Habits	0.227	0.227	0.027	8.441	0	1.247
Food Quality -> Satisfaction	0.15	0.152	0.043	3.482	0.001	1.131
Food Quality -> Street Food Consumption Habits	0.158	0.158	0.03	5.211	0	1.394
Health Perceptions -> Street Food Consumption Habits	0.208	0.207	0.024	8.749	0	1.295
Peer Influence -> Satisfaction	0.443	0.444	0.036	12.454	0	1.131
Peer Influence -> Street Food Consumption Habits	0.283	0.283	0.03	9.461	0	1.523
Personal Eating Habits -> Street Food Consumption Habits	0.071	0.072	0.025	2.885	0.004	1.008
Reasonable Price -> Health Perceptions	0.257	0.256	0.045	5.719	0	1.136
Reasonable Price -> Street Food Consumption Habits	0.145	0.145	0.036	4.089	0	1.486
Satisfaction -> Street Food Consumption Habits	0.186	0.186	0.028	6.515	0	1.398

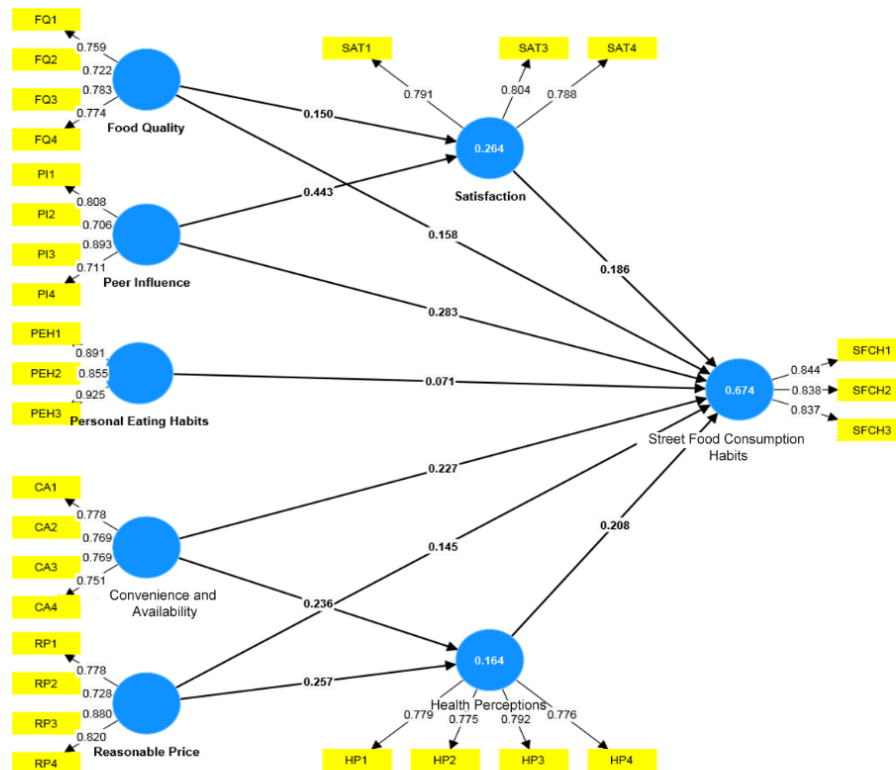


Figure 2.
Structural Model.

6. Discussion

The results (Figure 2) provide valuable insights into the significant drivers of consumer behavior. The analysis reveals that Convenience and Availability and Peer Influence are key determinants of street food consumption, with coefficients of 0.227 and 0.283, respectively, and high T-statistics (8.441 and 9.461). This underscores the critical role of accessibility and social factors in shaping consumer choices, which is consistent with existing literature. For instance, Drewnowski and Monsivais [41] emphasizes that convenience is a primary factor in food choice while Higgs [34] highlighting the influence of peer recommendations on consumer behavior.

Food Quality and Health Perceptions also exhibit significant effects on street food consumption, with coefficients of 0.158 and 0.208. These findings align with previous studies that underscore the importance of food quality and health considerations in consumer decision-making. Petrescu, et al. [20] find that perceived food quality is a crucial determinant of food choices, and Morano, et al. [24] demonstrate that health perceptions significantly impact food consumption patterns. This suggests that consumers are not only motivated by convenience but also by the quality and healthiness of the food.

The Personal Eating Habits variable, while still significant ($\beta = 0.071$, T-statistic = 2.885), shows a weaker effect compared to the other factors. This indicates that while personal habits do influence street food consumption, their impact is less pronounced. Bell, et al. [10] supports this observation, noting that personal eating habits are one of many factors affecting food choices, with varying levels of influence depending on the context.

The variance inflation factor (VIF) values indicate that multicollinearity is not a significant issue in this model. The highest VIF is 1.523 for the relationship between Peer Influence and Street Food Consumption Habits, which is below the commonly accepted threshold of 5 or 10 for problematic multicollinearity [52]. This suggests that the relationships between the variables are relatively independent, ensuring the reliability of the path coefficients.

The analysis highlights the complex interplay of convenience, social influence, food quality, and health perceptions in driving street food consumption. It reinforces the need for a multi-dimensional approach to understanding consumer behavior, where both practical considerations and social dynamics play crucial roles. These insights are valuable for developing targeted marketing strategies and interventions aimed at influencing consumer choices in the context of street food.

7. Conclusion, Implication, and Limitation

This article uses the data collected from 572 office workers residing in the inner districts of Hanoi, Da Nang, and Ho Chi Minh City, and Partial Least Squares Structural Equation Modeling (PLS-SEM), based on the Theory of Planned Behavior (TPB) to examine the factors influencing street food consumption habits. The results provide a comprehensive analysis of the factors influencing street food consumption habits, highlighting the significant roles of convenience, peer influence, food quality, and health perceptions. The results demonstrate that convenience and accessibility, along with social recommendations, are strong determinants of consumer behavior in the street food sector. Food quality and health perceptions also play crucial roles, reflecting consumers' increasing concern for both the sensory attributes and health implications of their food choices. Although personal eating habits have a less pronounced impact, they still contribute to consumption patterns.

The findings underscore several important implications for policymakers and businesses concerning street food consumption. For policymakers, the focus should be on enhancing both the availability and convenience of street food. This involves streamlining permit processes for vendors, improving the infrastructure that supports street food markets, and ensuring a fair distribution of vendors to meet consumer demand effectively. Additionally, it is crucial to enforce high standards of food quality and safety. Implementing regular inspections, requiring adherence to hygiene standards, and providing training on safe food handling practices are essential steps in maintaining these standards. Public health initiatives should also play a significant role, focusing on educating consumers about the potential health risks associated with street food and promoting healthier options. Awareness campaigns can highlight the benefits of choosing vendors who follow strict hygiene practices and offer nutritious choices, thus guiding consumers toward safer food consumption.

For businesses, leveraging social influence through targeted marketing and endorsements can significantly impact consumer engagement. Collaborating with influencers or utilizing social media platforms to promote street food offerings can enhance brand visibility and attract more customers. Investing in improving the quality and perceived health benefits of street food is also vital. Businesses should use high-quality ingredients, provide transparent nutritional information, and communicate the health advantages of their food. Such investments align with consumer preferences for healthier and higher-quality food options, boosting market appeal and competitive advantage. By addressing these factors, businesses can meet consumer expectations more effectively and improve their market position.

Overall, a coordinated approach involving both supportive policies and strategic business practices is essential to creating a safer, more appealing, and consumer-friendly street food environment.

The study, while providing valuable insights into factors influencing street food consumption habits, has a limitation. The data were collected exclusively from office workers residing in the inner districts of Hanoi, Da Nang, and Ho Chi Minh City. This may limit the generalizability of the findings to other demographic groups or geographic areas with different consumption patterns and behaviors. For instance, street food preferences and consumption habits might differ significantly between urban and rural areas or between different age groups and occupational categories.

Institutional Review Board Statement:

The Ethical Committee of VNU University of Economics and Business, Vietnam National University has granted approval for this study.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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