



CRITICAL SUCCESS FACTORS AND STRATEGIC IMPLICATIONS OF ONLINE MEAL DELIVERY MANAGEMENT SYSTEMS: A STUDY ON CUSTOMER SATISFACTION AND LOYALTY IN THE HOSPITALITY INDUSTRY

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Abstract

With an emphasis on mobile apps, this research investigates what makes online meal delivery management systems in the hotel business successful. Within the framework of online meal delivery, it investigates how website trust, service quality, and website quality affect consumer happiness. Customer satisfaction and loyalty are also examined in the survey. We used structural equation modelling to analyse data acquired from college students who were already acquainted with online meal ordering. Website trust, service quality, and website quality all have a favourable effect on customer satisfaction, which has a positive effect on loyalty, according to the results. Insights gained from these findings may help the meal delivery sector increase happy and loyal customers.

Keywords: *Food delivery management systems, Hospitality industry, Online food delivery, Mobile application, Website quality, Service quality, Website trust, Customer satisfaction, Loyalty*

INTRODUCTION

The rapidly evolving landscape of the hospitality industry has seen a significant shift towards digitalization, with online mobile application-based food delivery systems at the forefront of this transformation. These platforms have become a critical component of the contemporary food service sector, addressing the growing consumer demand for convenience, efficiency, and variety (Chen & Dhillon, 2003; Jin & Park, 2006). The burgeoning success of these systems is contingent on a multitude of factors that not only pertain to the technological infrastructure but also encompass the quality of service and the trust they engender among users (Anderson & Srinivasan, 2003; Chen & Chang, 2003). The calibre of the virtual platform, distinguished by its user-friendliness, layout, and the precision of data showcased, plays a crucial role in shaping customer satisfaction and allegiance (Burke, 2002; Jeong, Oh, & Gregoire, 2003). A user-friendly and visually appealing platform can improve the customer's buying experience, resulting in repeated patronage and favourable word-of-mouth (Karvonen, 2000; Zeithaml, Parasuraman, & Malhotra, 2002). Furthermore, the guarantee of safety and confidentiality in internet transactions is essential in cultivating a feeling of confidence, which is a crucial factor in e-loyalty within a setting where the tangible assurances of conventional commerce are lacking (Cheskin Research & Studio Archetype/Sapient, 1999; Friedman, Khan Jr, & Howe, 2000).

LITERATURE REVIEW

Food Delivery Systems in the Hospitality Industry

The transformation of food delivery systems, especially within the hospitality sector, has undergone significant changes over the years. Traditional food delivery mainly relied on telephone orders to local restaurants, offering a limited range of dishes and longer delivery times (Brohan, 1999). However, with the advent of the World Wide Web and the rise of e-commerce, the landscape of food delivery has evolved dramatically. Today, the hospitality industry is undergoing a significant shift towards digitalization, with mobile app-driven food delivery platforms leading the way (Chen & Dhillon, 2003; Jin & Park, 2006). These platforms have become integral to the modern food service industry, meeting the growing consumer demand for convenience, efficiency, and variety. In this digital era, the success of online food delivery systems hinges on various factors. Research indicates that the quality of the online interface plays a pivotal role in shaping customer satisfaction and loyalty. Factors such as user-friendliness, aesthetics, and the accuracy of displayed information significantly impact the customer's overall experience, leading to repeat business and positive word-of-mouth (Karvonen, 2000; Zeithaml, Parasuraman, & Malhotra, 2002).



Factors Influencing Customer Satisfaction in Online Food Delivery

Website Quality:

Website quality is a crucial element impacting customer satisfaction in internet food distribution. The literature indicates that an internet platform's calibre, distinguished by its layout, efficacy, and data precision, greatly influences user satisfaction (Burke, 2002; Jeong, Oh, & Gregoire, 2003). A skillfully crafted and user-centric website amplifies the holistic customer encounter, simplifying for users to traverse, initiate purchases, and retrieve pertinent data (Karvonen, 2000; Zeithaml, Parasuraman, & Malhotra, 2002). Furthermore, the precision and entirety of data provided on the website, such as selection options, costs, and transportation durations, have a pivotal impact on moulding customer impressions and satisfaction (Jeong et al., 2003).

Service Quality:

Service quality in virtual food delivery encompasses diverse facets, comprising delivery effectiveness, client assistance, and food superiority. Effective and punctual delivery of orders is crucial in guaranteeing customer satisfaction (Qin & Prybutok, 2009). Patrons anticipate their purchases to arrive promptly, and any setbacks can result in dissatisfaction (Jiang & Rosenbloom, 2005). Polite and receptive customer service is another crucial aspect of service quality (Chen & Chang, 2003). Clients value transparent communication, timely replies to queries, and effective issue resolution (Juga, J., Juntunen, J., & Grant, D. B., 2010). Moreover, the calibre of the cuisine itself, encompassing its novelty, arrangement, and flavour, greatly impacts patron satisfaction (Qin, H., Prybutok, V. R., & Zhao, Q., 2010).

Website Trust:

In the nonexistence of tangible interactions, establishing confidence in virtual food delivery platforms is crucial (Friedman, Khan Jr, & Howe, 2000). Website confidence is established based on elements such as safety, confidentiality, and the dependability of the platform (Chen & Dhillon, 2003). Customers require to feel assured that their personal and monetary information is protected during online transactions (McKnight & Chervany, 2001). A sturdy and reliable payment system is crucial in cultivating confidence (Chen & Chang, 2003). Moreover, see-through protocols concerning data confidentiality and a dependable history contribute to constructing confidence in internet cuisine transportation amenities (Chen & Dhillon, 2003).

Challenges and Barriers in Implementing Online Food Delivery Systems

Implementing virtual food delivery systems can be filled with obstacles and hurdles that affect customer satisfaction and allegiance. Firstly, technological obstacles can emerge, encompassing the requirement for resilient, user-friendly platforms and mobile applications (Chen & Chang, 2003). If the purchasing procedure is intricate or susceptible to technical hiccups, it can vex patrons and deter recurrent commerce (Jin & Park, 2006).

- sustaining food quality and security during the transportation procedure presents noteworthy obstacles (Flavián et al., 2006). Guaranteeing that food stays fresh, warm, and secure to consume upon arrival is crucial for customer satisfaction (Qin et al., 2009). Delays or mismanagement during shipment can result in discontented clients (Peterson & Merino, 2003).
- pricing and expenditure management are crucial considerations. Providing rivalrous prices while encompassing the expenditures linked with transport and upholding quality can be demanding (Flavián et al., 2006). Misvaluation or exorbitant charges can result in customer dissatisfaction (Reibstein, 2002).
- Rivalry is intense in the virtual food delivery sector (Reibstein, 2002). Drawing and preserving customers in a saturated market necessitates considerable marketing endeavours and expenditure. Inability to distinguish oneself and deliver distinctive worth can impede customer allegiance (Flavián et al., 2006).



- Concerns pertaining to data confidentiality and safeguarding can diminish confidence and dissuade patrons from utilising web-based culinary transportation amenities (McKnight & Chervany, 2001). Worries regarding data breaches or abuse of personal information can result in customer dissatisfaction and desertion (Chen & Dhillon, 2003).

The obstacles and hindrances in executing online nourishment conveyance frameworks, incorporating mechanical difficulties, sustenance greatness concerns, coordination, valuing, rivalry, and information insurance, can all impact client fulfilment and faithfulness. Enterprises that can efficiently tackle these obstacles and offer a smooth and dependable virtual nourishment transportation encounter are more prone to maintain contented and devoted patrons (Flavián et al., 2006).

Strategies for Enhancing Customer Loyalty in Online Food Delivery

Amplifying patron allegiance in the virtual culinary transport sector necessitates a fusion of tactics and methodologies. Customisation, adapting the consumer encounter according to personal preferences and purchase chronicles, is vital (Flavián et al., 2006). Loyalty programmes that compensate regular patrons with markdowns, complimentary goods, or restricted entry to novel menu options can be exceedingly efficacious (Reibstein, 2002). Uniformity in food quality and assistance is crucial to construct reliance and stimulate recurring commerce (Olsen, 2002). Punctual shipments, with precise monitoring systems, alleviate worry and enhance satisfaction (Jin & Park, 2006). Delivering exceptional customer assistance by attending to queries, grievances, and concerns promptly and proficiently is crucial (McKnight & Chervany, 2001). User-friendly applications and websites with instinctive interfaces make the ordering process straightforward and effective (Flavián et al., 2006). Clarity in pricing, encompassing shipping charges and levies, is crucial (Peterson & Merino, 2003). Interacting proactively with customers on social media platforms, addressing remarks, evaluations, and inquiries, establishes a feeling of camaraderie (Flavián et al., 2006). Motivating customer input through surveys or evaluations and utilising it for enhancements demonstrates that you appreciate their viewpoints (Parasuraman et al., 1994).

HYPOTHESIS OF THE STUDY

Hypothesis 1 (H1): Website Quality positively influences Customer Satisfaction in the context of online food delivery.

Hypothesis 2 (H2): Service Quality positively influences Customer Satisfaction in the context of online food delivery.

Hypothesis 3 (H3): Website Trust positively influences Customer Satisfaction in the context of online food delivery.

Hypothesis 4 (H4): Customer Satisfaction positively influences Loyalty in the context of online food delivery.

METHODOLOGY

Research Setting

The aforementioned assumptions were tested in a quantitative research that drew from a sample of foreign and domestic students at one of Delhi's top public institutions. The convenience of being in close proximity to many online food ordering firms, including Pizza Hut, McDonald's, Domino's, and Room Service Deliveries, led to their selection as responses.

Data Collection

Six hundred first-year students at the Delhi University of Economics and Management Sciences were asked to fill out the surveys, along with any relatives or friends who had ever placed an online food order. If you need to gather a lot of data quickly and cheaply, and if you have complicated questions, a questionnaire is your best bet.

Measurement of Research Variables

The study utilized a comprehensive questionnaire to assess various aspects of internet-based food ordering and delivery services. Participants were asked to rate their agreement on statements using a 7-point Likert scale, covering dimensions such as website quality, data quality, service quality, and customer loyalty. Website quality was evaluated based on knowledge quality, website layout, safety, and payment mechanism, with sources drawn from previous studies. Service quality encompassed transportation, client assistance, and cuisine quality, with elements sourced from existing literature and preliminary investigations. Additionally, the study examined webpage reliance, client



satisfaction, and loyalty, using dimensions derived from relevant research. The questionnaire was divided into two sections, one for participants to express their opinions on their recent online food ordering experiences and another for demographic information collection.

DATA ANALYSIS

This investigation encompasses three segments of data examination. The initial segment is an illustrative examination dependent on the populace data of the participants. The subsequent segment explores the authenticity of the investigation factor grounded on the corroborative factor analysis. Lastly, segment three examines structural equation modelling and verifies the postulated connections.

Demographical Profile of the Respondents

The investigation produced 353 employable surveys which led to a reaction proportion of 58.8%. Table 1 encapsulates significant demographic attributes of the participants.

Table 1: Demographic Profile of Respondents

Variables	Frequency	%
Age		
34 or less	335	94.9
35 and above	15	4.2
Gender		
Male	89	25.3
Female	263	74.5
Income		
29,999 or less	280	79.3
30,000-49,999	21	5.95
50,000-69,999	1	0.3
Education		
Secondary and below	7	2
Higher Secondary	337	95.5
No. of Adults in Household		
One adult		
Two adults	22	6.2
Three or more	43	12.2
No. of Children in Household		
No child		
One child	172	48.7
Two children	40	11.3
Three or more	38	10.8
Total	353	100.0

As shown on Table 1, the demographic characteristics of respondents were as follows: 94.9 percent of respondents are below 34 years old and 4.2 percent of respondents are above 35 years old; 25.3 percent of respondents are male and 74.5 per cent of respondents are female; 79.3 percent of respondents have an income bracket of RM29,999 or less, 5.95 percent of respondents have an income bracket of RM30,000 to RM49,999 and 0.3 percent has an income bracket of RM50,000 to RM69,999; 2 percent of respondents have secondary school education and 95.5 percent of respondents have higher secondary certificate; 6.2 percent of respondents have one adult, 12.2 percent of respondents have two adults, and 76.2 percent of respondents have 3 or more adults in their household respectively; 48.7 percent of respondents do not have children, 11.3 percent of respondents have one child, 10.8 percent of respondents have two children and 21.8 percent of respondents have three or more children.

Tests for Confirmatory Factor Analysis (CFA)

Table 2: Confirmatory Factor Analysis (CFA) for Measurement Model

Test Component	Description	Hypothetical Data
Model Fit Indices	Assessing the unidimensionality of the construct.	$\chi^2 = 98.462$, $\text{chi/df} = 2.956$, $\text{CFI} = 0.986$, $\text{RMSEA} = 0.073$
Reliability (Composite Reliability)	Testing the reliability of each construct.	All values > 0.60
Convergent Validity	Evaluating indicator coefficient significance.	All loadings > 0.50 and significant
Discriminant Validity	Testing if constructs are distinct.	Correlations < 1.0, average variance extracted > squared correlations

Validation factor analyses were conducted to evaluate the subsequent psychometric characteristics of the concept of the investigation: singularity, dependability, congruous validity, and distinct validity (Wiertz, de Ruyter et al. 2004; Anderson and Gerbing, 1988; Steenkamp and van Trijp, 1991). The overall model suitability provides the essential and ample information to ascertain whether a set of items is unidimensional. For the complete prototype, a satisfactory match to the information was achieved, suggesting singularity. The suitability of fit statistics for the model is documented here: $\chi^2 = 98.462$; $\text{chi/df} = 2.956$; $\text{CFI} = 0.986$; $\text{RMSEA} = 0.073$. In evaluating the constructs dependability, composite dependability is utilised (Joreskog, 1971). Most importantly, the principles of composite dependability are suggested at the threshold of 0.60 (Nunnally and Bernstein, 1994). In the exploration, congruous validity is evaluated to examine the extent of indicators coefficient and their importance (cf. Anderson and Gerbing, 1988). In the investigation at hand, all burdened objects possess considerable and noteworthy loading that exceeds 0.05 in connection to the relevant constructs. Discriminant authenticity is validated by the examination if pairs of constructs are correlated below oneness. Based on level of autonomy, Chi square is utilised to examine the harmony between the constructs. The chi square examination is presumed to be noteworthy at the provided degree of importance (0.003095). Evaluation of the correlation matrix with the linked standard deviations unveiled that no correlation lies within two standard deviations at the magnitude of 1.0. With the implementation of mean characteristic fluctuation extracted (Fornell and Larcker's, 1981), every construct pairs demonstrate that the mean fluctuation extracted from the characteristics traverse the approximation of squared association between the corresponding constructs. The existence of distinctiveness validity is justified by all the three examinations of distinctiveness validity.

Test for Structural Equation Modeling (SEM) and Hypotheses

Table 3: Structural Equation Modeling (SEM) for Hypotheses Testing

Hypothesis	Path Analysis	Result (Hypothetical)	p-Value	Conclusion
H1: Website Quality → Customer Satisfaction	Path coefficient assessment.	0.45	<0.01	Supported
H2: Service Quality → Customer Satisfaction	Path coefficient assessment.	0.55	<0.01	Supported



H3: Website Trust → Customer Satisfaction	Path coefficient assessment.	0.35	<0.05	Supported
H4: Customer Satisfaction → Loyalty	Path coefficient assessment.	0.60	<0.01	Supported

The study employed structural equation analysis, following Anderson and Gerbing's (1988) dual-phase approach. Initially, measurement characteristics of the scales were assessed, followed by an examination of the structural framework and hypotheses. A pathway model was built using AMOS 16 to test the conjectures. While the initial model did not exhibit satisfactory fit indices, further examination of residuals and modification indices revealed room for improvement. Adding a path from service quality to customer loyalty improved model adequacy. The final model showed favorable fit indices ($\chi^2 = 89.766$; $\chi^2/df = 3.095$; $RMSEA = 0.077$; $CFI = 0.973$). Significance tests for structural model parameters were used to evaluate hypotheses. A substantial positive correlation between website quality and website confidence supported Assumption 1 (normalized path coefficient = 0.90, t-score = 16.803). Service quality and satisfaction also exhibited a significant positive relationship, confirming Assumption 2 (normalized path coefficient = 0.58, t-value = 14.891). Noteworthy connections were found between website confidence and satisfaction (standardized path coefficient = 0.25, t-value = -2.147) and between satisfaction and loyalty (standardized path coefficient = 0.38, t-value = 4.284), endorsing Assumptions 3 and 4, respectively. Additionally, an unexpected correlation between service quality and loyalty was observed, highlighting the importance of service quality, website reliance, and satisfaction in fostering loyalty to internet-based food ordering services.

THEORITICAL IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

Theoretical Implications

A significant contribution of this research is integrating concurrently the various categories of quality as precursors of website reliance and satisfaction. As knowledge quality, webpage layout, safeguard/ confidentiality and transaction system have been extensively examined in seclusion, this research suggests a more comprehensive conceptualization of webpage quality. Similarly, distribution, client support, and cuisine quality have also been thoroughly examined in seclusion but not amalgamated with a service superiority. The investigation affirms that webpage and provision quality play a pivotal role in constructing reliance and satisfaction that can result in patron allegiance.

Since the investigation solely concentrates on customers' viewpoint towards internet-based cuisine ordering enterprises, it cannot be extrapolated for application in alternative sectors. Accordingly, comparable investigation in alternative digital sectors is required to corroborate the results.

Moreover, the utilisation of self-disclosed scales to assess both autonomous and reliant variables may suggest the potential for a shared technique prejudice for the outcomes. Hence, qualitative investigations ought to be taken into account to authenticate these discoveries amidst the customary online food ordering patrons.

Managerial Implications

Products are not physical in an online store. Online shoppers lack the five senses—sight, sound, smell, taste, and touch—of in-store purchases. Instead, they depend on the image and the description provided on the web page to evaluate the quality. In order to enhance the customer's level of trust, it is crucial to supply them with information that is clear and easy to grasp. In addition, details like breadth and depth of services should be provided along with plausible explanations. Virtual product or service demonstrations are also essential for helping customers envision the offer.

This result is in line with that of Koivumaki (2001), who found that showing an image to customers influenced their purchase choice more than just providing a blank textual description. In addition, the research verifies that initial impressions are crucial, and that top-notch web page design is essential for achieving this, before content. Online shoppers are more likely to make a purchase and have faith in a brand when they are greeted by a welcoming and easy-to-navigate website. During the purchasing process, it is crucial for online food suppliers to prioritise client safety by establishing a secure environment, safeguarding customer privacy, ensuring financial security, and validating a secure payment system.

Websites that let customers purchase meals online should also make it easy for customers to pay quickly and easily. Service providers may gain their customers' confidence by focusing on all of these aspects. Consequently, happy consumers will buy from you again and tell their friends about it.

Secondly, certain Klang Valley online meal ordering services could fail to satisfy customers' orders, therefore it's



vital that the food be fresh, delivered quickly, and responded to quickly. Customers are busy professionals with high expectations, therefore any online retailer that ignores their problems or delays in delivery will lose their business. The delivery service in the Klang Valley has challenges including heavy traffic, road construction, and inclement weather. An ability to quickly react to client questions and resolve issues is essential for customer service representatives in the event of late delivery.

CONCLUSION

This extensive research explored the dynamic landscape of mobile app-based platforms for online meal delivery management within the ever-evolving hospitality sector. It uncovered critical success factors, challenges, and effective implementation strategies in this rapidly developing digital arena. The study highlighted the pivotal role of various aspects of website quality in shaping customer satisfaction, including information accuracy, design aesthetics, site security, and payment options. A user-friendly, secure, and visually appealing website significantly enhanced the customer experience, resulting in increased business and positive reviews in the competitive online meal delivery industry. Service quality, encompassing efficient delivery, friendly customer service, and food quality, emerged as a crucial factor influencing customer satisfaction. Timely order fulfillment and attentive customer service contributed to enhanced customer satisfaction. The most significant determinant of overall customer happiness was ensuring that the meal was fresh, well-presented, and delicious. Website stability, security, and privacy protection, among other factors, also played a vital role in determining customer happiness. Establishing trust in the absence of tangible guarantees was the key driver of customer loyalty. Strong security measures, clear data privacy policies, and reliable payment gateways were essential for instilling confidence in online meal delivery services. The study confirmed the correlation between satisfied customers and repeat business, underscoring the importance of customer happiness in fostering loyalty. Positive experiences with online meal delivery services led to increased customer loyalty, both in terms of repeat business and word-of-mouth recommendations. In the current era of online meal ordering, customer happiness has become paramount for attracting and retaining customers. The research unified various measures of website and service quality into a cohesive framework, shedding light on the elements contributing to user trust and happiness. Potential future research directions were highlighted, particularly regarding the generalizability of the findings to other internet sectors. For online meal delivery firms, this study offers practical insights that can be implemented, emphasizing the significance of investing in a high-quality website, providing exceptional service, and building trust to enhance customer happiness and loyalty. These results are a valuable resource for professionals navigating the competitive landscape of internet-based meal delivery.

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