

THE CONSUMERS' CONVENIENCE DIMENSIONS IN PERFORMING FOOD  
ONLINE PURCHASE AND ITS LOGISTICS LEVEL OF SERVICE

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## **DEDICATION**

This thesis is dedicated to my Abah and Mak, who really wished me to further my study. It is also dedicated to my fiancé who patiently waited for me to complete this.

Thanks for all the pray and support. Besides, this is for everyone who pray and challenge me for this.

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## **ABSTRACT**

Information communications technology (ICT) has contributed to the development of online shopping activity and has impacts on urban freight transport, travel behavior, and travel cost. A person's motivation to perform online purchasing may be due to the smooth purchasing process including the ease of choosing date and time of delivery, and its service quality. Due to busy lifestyle and time limitation, most of people tends to order for online food delivery (OFD) service. This study aims to measure the level of service for ready-to-eat food delivery among the consumers, and the consumers' convenience dimensions where it specifically focuses on the logistics aspect. This study involved total 169 students and staffs of UTM main campus who have purchase any ready-to-eat food via online within past 60 days. The objectives of this study are to identify the consumers' convenience dimensions in deciding for food online purchasing specifically in logistic-related dimensions, to measure the logistics level of service for the food door-delivery among the consumers, and to recommend for food logistics enhancement based on the current level of service measured by consumers. Online and face-to-face survey was conducted to complete this study. This study found that food condition dimension is a significant dimension that influence consumers in making decision for OFD service. Besides that, this study has able to measure the logistics level of service for the food door-delivery among consumers where less than 50% of online food delivery service were able to perform at better than LOS C, a good performance at acceptable delay.

## ABSTRAK

*Information communication technology (ICT)* telah menyumbang kepada pembangunan aktiviti membeli-belah di atas talian and mempunyai kesan terhadap pengangkutan barangan bandar, tingkahlaku perjalanan, dan kos perjalanan. Motivasi seseorang individu untuk melakukan pembelian di atas talian mungkin disebabkan oleh kelancaran proses pembelian termasuklah kemudahan memilih tarikh dan masa penghantaran, and kualiti servis. Oleh sebab gaya hidup yang sibuk dan kekangan masa, kebanyakan masyarakat memilih untuk membuat tempahan perkhidmatan penghantaran makanan secara atas talian (OFD). Kajian ini adalah bertujuan untuk mengukur tahap perkhidmatan bagi penghantaran makan yang sedia untuk dimakan dalam kalangan pengguna, dan dimensi kemudahan pengguna yang hanya memfokuskan pada aspek logistik. Kajian ini melibatkan seramai 169 orang pelajar dan staf kampus utama UTM yang telah melakukan pembelian secara atas talian bagi makanan yang sedia untuk dimakan dalam tempoh 60 hari. Antara objektif kajian ini adalah untuk mengenal pasti dimensi kemudahan pengguna yang berkaitan dengan logistik dalam membuat keputusan bagi pembelian makanan secara atas talian, untuk mengukur tahap perkhidmatan logistik bagi penghantaran makanan ke rumah, dan mencadangkan penambahbaikan perkhidmatan logistik berdasarkan kepada tahap perhidmatan semasa yang telah diukur oleh pengguna. Kaji selidik secara atas talian dan bersemuka telah dijalankan bagi menyelesaikan kajian ini. Kajian ini mendapati bahawa dimensi keadaan makanan merupakan dimensi yang signifikan dalam mempengaruhi pengguna untuk membuat keputusan bagi perkhidmatan OFD. Selain itu, kajian ini dapat menemui bahawa perkhidmatan penghantaran makanan secara atas talian yang mencapai tahap lebih baik berbanding LOS C, iaitu perkhidmatan yang baik dengan waktu langkah yang boleh diterima adalah kurang daripada 50%.

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## **LIST OF ABBREVIATIONS**

A/E	-	Actual delivery time over expected delivery time
A/P	-	Actual delivery time over promised delivery time
OFD	-	Online food delivery
UTM	-	Universiti Teknologi Malaysia
V/C	-	Volume over capacity

## LIST OF SYMBOLS

$r$ value	-	Correlation Coefficient
$\chi^2$	-	Pearson's Chi-Square

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# CHAPTER 1

## INTRODUCTION

This chapter covers the introduction of this research topic entitled The Consumers Convenience Dimensions in Performing Food Online Purchase and its Logistics Level of Service. It will start with a discussion on research gap, problem statement, aim and objectives, and research questions.

### 1.1 Research Gap

Information communications technology (ICT) has contributed to the development of online shopping and it has become a trend which has an impact on urban freight transport (Jan and Visser, 2015), travel behavior (Shrivastava, 2012; Wee et al., 2013), and travel cost (Miyatake et al., 2016). Online shopping has obviously attracted lots of interest among researchers.

One of the studies found that consumers may be motivated to perform online purchasing if the process comes with an easy interface, good layouts, updated information, multimedia contents, effective search engines, e-catalogs, efficient navigation scheme, simple payment procedures and easy checkout process (Akhlaq and Ahmed, 2014). Another study carried by Ghajargar et al., (2016) found out that consumers looking for the possibility of choosing date and time of delivery, and the service quality when decided to purchase online. Alan et al., (2017) in other hands concluded that well-planned advertising strategies and promotional strategies will able to approach the targeted consumers as there is an effect of relationship proneness of consumers with online shopping firms on consumers' purchase intentions.



A successful of a business model is highly influenced by the service quality where it ensures the consumer's satisfaction (Vlassis, 2016; Al-Tit, 2015) and leads to consumer retention (Vlassis, 2016). A study discovered that consumer inclination to adopt any kinds of online shopping must be measured to assist the business to success and ensure consumer loyalty (Jiang et al., 2013). Consumer's dissatisfaction can become a threat to the provider, dissuading other potential consumers away from a particular service provider (Vlassis, 2016). In fact, it was agreed that the traditional rules of business model must be reformed for a good competition and in the way of offering a full-service industry (Vlassis, 2016).

Based on the previous studies, it was found that study which focus on the factors that able to ensure a consumer inclination in performing the online purchase specifically for the food item is still lacking. The study done was generally looking into the measures for any kinds of items (Jiang et al., 2013). In fact, an individual's preferences to perform online shopping, researchers did only discover in-depth regarding how good the website, payment process, and trust towards the retailer (Shrivastava, 2012) and less discussion on delivering process.

Another study has focused on the food business but only revealed on the advantages and disadvantageous of restaurant and delivery service provider partnership without considering the consumer's points of views (Vlassis, 2016). Besides that, research on the effect of service and food quality towards consumer satisfaction carried by Al-Tit, (2015) in the other hands, did only emphasized on the food purchase at the physical shop rather than online purchasing.

Therefore, this has shown that there is still no study done that link consumer expectation with food delivery level of service. This study will discover the convenience dimensions to ensure consumer's inclination to perform online purchase specifically on the food item, together with the logistics level of service for the food delivering process. Table 1.1 and Table 1.2 summarize the study area of previous studies together with the gap.

Table 1.1: Research gap

Author	Study Area Condition		Research Gap
	Scope	Findings	
(Akhlq and Ahmed, 2014)	Contribution to the theories of consumer acceptance of technology/global online shopping.	<ul style="list-style-type: none"> <li>▪ Significant factors of performing online shopping – perceived enjoyment, perceived ease of use and perceived risk.</li> <li>▪ Insignificant factors – legal framework and distrust.</li> <li>▪ Getting ahead of consumers’ preferences and needs.</li> </ul>	<p>The convenience dimensions that ensure consumer’s inclination to perform online purchasing specifically on food item;</p> <p>The current logistics level of service for the available food delivery provider.</p>
(Shrivastava, 2012)	Contribution of ICT: <ul style="list-style-type: none"> <li>▪ Reduce the need to travel</li> <li>▪ Influence travel mode of choice</li> <li>▪ Change driver behavior</li> <li>▪ Change vehicle behavior</li> </ul>	<ul style="list-style-type: none"> <li>▪ One of the role of ICT is to reduce the need to travel – home working, video conferencing and synthetic environments.</li> <li>▪ Internet shopping with door delivery was mentioned as increasingly popular and has potential to reduce the need to travel under synthetic environments.</li> </ul>	
(Jan and Visser, 2015)	Impacts of online shopping on transport: <ul style="list-style-type: none"> <li>▪ Needs on physical journey to shop</li> <li>▪ Time saving</li> <li>▪ Logistics</li> <li>▪ Effect on the traditional retail</li> </ul>	<ul style="list-style-type: none"> <li>▪ A physical journey to shop is called off, but journey to collection point/ shop elsewhere is made and sometimes further away.</li> <li>▪ Time saving and enable another activity.</li> <li>▪ In terms of logistics, goods are no longer bundled in a freight vehicle but by courier service to home or parcel collection point.</li> <li>▪ Traditional retail will be affected.</li> </ul>	
(Wee <i>et al.</i> , 2013)	Impacts of ICT (specifically in terms of PC usage, mobile device and infrastructure-related information) towards: <ul style="list-style-type: none"> <li>▪ Transport component</li> <li>▪ Land use component</li> <li>▪ Temporal component</li> <li>▪ Individual component</li> <li>▪ Interactions</li> </ul>	Impacts of ICT towards transport component will be in terms of reducing travel resistance in the following ways: <ul style="list-style-type: none"> <li>▪ Beneficial to traveler, reducing access time as traveler able to access travel information before the trip.</li> <li>▪ Providing en-route information.</li> <li>▪ Providing information about the road network or about train option.</li> </ul>	

Table 1.2: Research gap (continue)

Author	Study Area Condition		Research Gap
	Scope	Findings	
(Ghajargar <i>et al.</i> , 2016)	User's habits, requirements and perception regarding the existing innovations in door delivery service.	The most important factor that drives users to purchase online is the cost value.	<p>The convenience dimensions that ensure consumer's inclination to perform online purchasing specifically on food item;</p> <p>The current logistics level of service for the available food delivery provider.</p>
(Alan <i>et al.</i> , 2017)	Consumer's individual factors' effect on consumer perceived usefulness of online shopping and user satisfaction.	Consumer's relationship proneness of online shopping websites among individual factors has the strongest effect on consumer purchase/ behavioral intention of online shopping websites. The consumer perceived usefulness has the strongest effect on consumer's purchase intention.	
(Miyatake <i>et al.</i> , 2016)	<ul style="list-style-type: none"> <li>▪ Effects of online shopping on retailer's cost and consumer's cost;</li> <li>▪ Effects of delivery manners on retailer's cost and consumer's cost.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Online shopping type achieve the lower cost in both retailer's and consumer's side.</li> <li>▪ When consumers designate combined delivery or pick up point, it can be also save the cost for delivery.</li> </ul>	
(Jiang <i>et al.</i> , 2013)	<ul style="list-style-type: none"> <li>▪ Key convenience dimension of online shopping.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The five dimensions of online shopping convenience are access, search, evaluation, transaction and possession/ post-purchase convenience.</li> </ul>	
(Vlassis, 2016)	<ul style="list-style-type: none"> <li>▪ The effects of partnering with food logistic service providers on the business model and strategy of restaurants;</li> <li>▪ The effects of this new service on the restaurant industry.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Partnership has increased revenue and free marketing/ visibility are the main benefits of the partnership;</li> <li>▪ The new service has affected the business model and strategy where it has reformed the traditional rules of the full-service restaurant industry.</li> </ul>	

## 1.2 Problem Statement

Technology is beneficiary in this globalization period as it shortened the distances between continents, countries, cities, and people (Akhlaq and Ahmed, 2014). Internet browsing has changed an individual behavior and has encouraged the individual to spend more time online, averagely 6 hours a day in the year 2017 (Akhlaq and Ahmed, 2014; Kemp, 2018).

A study found that food is the top six global e-commerce spent by category where the total annual amount spent on the consumer e-commerce categories around the world is \$139.7 billion (Kemp, 2018), where it is categorized as food and personal care. The top five categories would be fashion and beauty; electronics and physical media; toys, do it yourself items and hobbies; furniture and appliances; and travel including the accommodation expenditure(Kemp, 2018). Based on the Global Digital Report 2018, the percentage of Malaysia performing internet penetration is 79% of the urbanized population, regardless of the age group (Kemp, 2018).

Thus, it shows that internet helps the development of purchasing goods or service via online including food item. Conceptually, by buying goods or services via online, an individual does not need to perform a physical shopping which saves a journey to the shop (Jan and Visser, 2015) which incurring cost on time and financial and the items ordered will be delivered by a third party.

The empirical studies on online shopping and travel are scarce (Farag *et al.*, 2003), especially on the food item. Most of the recent studies only covered on the impacts of online shopping towards the business operators and logistics (Jan and Visser, 2015) without discussing on the consumer's point of views; and revealed the preference factors of online shopping in the perspective of perceived enjoyment, ease of use and risk (Akhlaq and Ahmed, 2014) without measuring the consumer's convenience dimensions related to the logistics aspect.

Thus, this study was designed to address the unanswered aspect such as what are the logistic-related dimensions considered by a consumer to perform a food online purchase? Consequently, identify the performance indicator of food delivery process measured by consumers.

This study is important as it contribute to the improvement of logistics performance by satisfying the consumers' expectations in the food delivery industry in case of UTM main campus as the study area to represent the Skudai area. The outcome of this study will able to influence the food business operation especially in enhancing the logistics service performance based on the consumer's perspective.

Ready-to-eat food become the subject matter for this study on e-commerce delivery service due to the needs of an easy access into ready-to-eat food for daily consumption especially among the busy individual who have less time to go out for food and restricted access to travel for that.

### **1.3 Aim**

The aim of this study is to measure the level of service for ready-to-eat food delivery among the consumers, and the consumers' convenience dimensions where it specifically focuses on the logistics aspect.

## **1.4 Objectives**

In order to achieve the design aim of this study, the objectives of the research are as follows :

- RO1 To identify the consumers' convenience dimensions in deciding for food online purchasing specifically in logistic-related dimensions;
- RO2 To measure the logistics level of service for the food door-delivery among the consumers;
- RO3 To recommend for food logistics enhancement based on the current level of service measured by consumers.

## **1.5 Research Questions**

The research questions for this study are:

- RQ1 What are the convenience dimensions do consumer experience in the setting of food online purchasing?
- RQ2 What is the level of service for the food door-delivery measured by consumers?
- RQ3 What can be recommended to enhance the food logistics level of service?

## **1.6 Scope of Study**

This study is mainly focus on the students and staffs of Universiti Teknologi Malaysia (UTM) main campus as the respondents. This study is approaching both students and staffs who ever purchase ready-to-eat food item and request for delivery to home, campus, or workplace within 60 days from the day respondents received the questionnaire.

## 1.7 Significant of Study

Recently, e-commerce development has successfully developed including the food and beverages market where it was found that this sector has contribute to approximately US\$207 million revenue for Malaysia by the year 2018 and expected to grow up to US\$511 million of revenue by the year 2023 (The Statistics Portal, 2018a); The Statistics Portal, 2018b). The consumer food service market in Malaysia has increased from the years 1999-2003 by 16% amounting to 20,235 units and food home delivery or take-away during that time has increased by 60% of the unit due to the busy and compact lifestyle among Malaysian (Yusof *et al.*, 2016).

A growth of e-commerce food market and its high demand by the consumers due to recent lifestyle in Malaysia have made this study become significant. In order to support the growth and satisfy the consumers need on food door delivery especially among the busy individual, it is very important to look the recent logistics level of service on the consumer's perspective. The expected outcome of this study will able to influence the food business operation especially in enhancing the logistics service performance but it is based on the consumer's perspective.

If the recent delivery service has able to satisfy a consumer, there is a space for the e-commerce food market to keep growing in the future and reach the target set. However, if the current delivery service has not able to satisfy a consumer, a service improvement is urgently necessary. The improvement must not only based on the business operator's perspective, but the consumer's perspective as well, as consumer is the one who need to satisfy. Thus, this study is significant to support the e-commerce food market growth and fulfill the demand on food among the busy individual in UTM main campus, representing the Skudai area.

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