Intention to Use Online Food Delivery Service in Malaysia among University Students

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Abstract
Online food delivery (OFD) service becomes more prevalent in Malaysia. OFD has advantages for consumers where it entices many people to utilise it in their daily life. Instead of purchasing food from a physical, consumers can purchase food through online platform and use the delivery service. In the era of information technology (IT), people from all walks of life are able to order food with one click away from their devices. This has lightened much work especially for busy working consumers. This research aimed to investigate the consumers’ intention to use online food delivery service in Malaysia. A total of 290 online questionnaires were received for data analysis. The finding of the study indicates that time saving and prior online purchase experience are major predictors of OFD. However, the perceived usefulness and price saving were found insignificant. Restaurants should improve their OFD service to attract more consumers. Convenience of information stored enable consumers to reuse OFD service.

Keywords: Online food delivery, intention to use, time saving, price saving, perceived usefulness

Introduction
Physiological needs (food, air, drink, shelter, clothing, warmth, sex and sleep) are the utmost important biological necessity in one’s life (McLeod, 2018). Nowadays, it is easier for consumers to obtain food with numerous approaches such as going to the physical store or order from the website. There is a great deal of food delivery services in Malaysia by ordering through online or downloading the mobile applications (apps.). Dazmin and Ho (2019) stated that there are two types of food delivery service provided in Malaysia which are retailers and restaurant intermediaries. For instance, retailers are generally indicating the fast food industry such as McDonald’s (MCD), Kentucky Fried Chicken (KFC) and Pizza Hut do provide delivery service by charging additional transportation fee.

The exponential growth of online food delivery (OFD) application starts up in Malaysia within these few years and it is deemed as the liaison of restaurant which gives delivery services for
a vast array of restaurants. Figure 1 shown the exponential growth of 18.6% increase on Malaysia Online Food Delivery Market from 2017 to 2020 (USD Million). This means that the driving force of the OFD services industry may be due to technology adoption and consumer lifestyle changes, which support the growth of the market.

With the help of the Internet and mobile technology, OFD services can be easily accessed through mobile devices or computers, which greatly encourage consumers to use OFD services in their daily food consumption. The consumers enjoy these applications and their delivery services because it brings greatest convenience in their daily lives. According to Pang (2017), Foodpanda was the first application of food delivery service in Malaysia since 2012 followed by DeliverEat, Honestbee, Dahmakan and so forth. All these applications are being aggressive in providing food delivery service for consumers (Kong & Bizhive, 2018). Therefore, it is necessary to explore the factors that influence Malaysian university students’ intention to use OFD services.

At the same time, the trend of consuming foreign food is going viral in Malaysia. There are many Korean and Japanese restaurants emerging in Malaysia and they have lure many consumers. Existence of these restaurants will always be the preferred choice of consumers. They want to follow the trend to try all these new cuisines regardless how hard they need to access it. These restaurants are trying to solve such issues by providing food delivery service through ordering in their particular website as well as the food applications (Chavan, Jadhav, Korade, & Teli, 2015). Therefore, there will be more potential consumers to give it a try on their foods by just using the food delivery service as it indeed brings a great convenience to them.

Nowadays, people especially the university students tend to stay home and browse the website all day long during their leisure time. Cooking meals can be hassle for them. Owing to they are having insufficient time while dealing with tasks in their academic lives. They will simply cram themselves by going for vending machine to buy food or get food whenever it is accessible easily or order online food delivery as an alternative. Therefore, the purpose of this study is to figure out the tendency of university students to enjoy OFD service in their daily life.

![Figure 1. Malaysia Online Food Delivery Market, 2017-2025 (USD Million)](source: Adroit Market Research (2019))

**Theoretical Background**

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According to Madden, Ellen and Ajzen (1992), Theory of Reasoned Action (TRA) is the model of Ajzen and Fishbein. TRA is deemed as immediate antecedents to behaviour. It is the function of vital information or beliefs about the likelihood that performing a certain behaviour that will affect specific outcomes. Dividing the beliefs antecedents to behavioral intentions into two, there are behavioral and normative. The behavioral belief tend to influence the attitude of consumers while the normative belief will influence the consumers’ subjective norm. Hence, both of it will have an impact on behavioral intention and lead to actual behavior towards the entire process.

Meanwhile, according to Mathieson (1991), Theory of Planned Behaviour (TPB) provides detailed information that can perform better to guide development. It is an extension of TRA. The objective of TPB is to study the attitude and behavioral intention of consumers (Ajzen, 1985). This TPB will focus on the behaviour of consumers and their interest in something.

According to Salunkhe, Udgir and Petkar (2018), Technology of Acceptance Model (TAM) is an extension of TRA which if user decides to act then the user will act freely without any limitations. TAM is to apply but it is only providing very general or basic information on users' opinions about a system (Mathieson, 1991). The primary objective towards the development of TAM is to study the acceptance of new technology from consumers’ point of view. TAM regards perceived usefulness and perceived ease of use of new technology as the two vital factors influencing users’ intention to use technology. Therefore, TAM model was adopted in this study. The TAM model is appropriate because consumers require to order food online through websites or mobile apps. Hence, perceived usefulness, price saving, time saving and prior online purchase experience are the predictors of university students’ intention to use OFD services.

**Literature Review**

**Intention to use OFD service**
Behavioural intention defines a person’s probability to take a given action or a consumer inclination to pay for the system hereafter (Brown and Venkatesh, 2005; Dwivedi, 2005; Venkatesh and Brown, 2001). Prediction of consumer purchase behavior was used as a type of purchase intention which is part of behavioural intention. Thus, “intention is assumed to capture the motivational factors that influence behaviour; they are indicators of how hard people are willing to try, of how much of an effort they are planning to exert, in order to engage in a behaviour” (Ajzen, 1991; Mafe´ et al., 2010). Olorunniwo et al (2006) mentioned that there is a correlation between behavioral intention and customer experience. According to Ghajargar, Zenetzini, and Montanaro (2016), demand for home delivery service is rising due to online shopping as this service is having the coverage of large geographic area. In applying this service into food and beverage (F&B) industry, food delivery service is also gradually used by many people especially university students. The creation of online business such as food ordering through online platform has already be ubiquitous especially in the hustle and bustle city. Therefore, in this study, intention to use OFD service is refers to a person who has an intention to purchase food and beverage through online delivery platform such as GrabFood and Foodpanda (Yeo et al., 2017).

**Time Saving**

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Meuter et al (2003) defined time saving is the most vital factor to impact consumers’ motivation to use the technology-based self-service. According to Bashir et al (2015) and Settle & Alreck (1991), an individual will look for alternatives to save time when he or she finds that time is insufficient to do daily tasks such as work and leisure activities. In today’s era that brimming with competences and challenges, people are living in the fast-paced environment to pursue their ideal life. They have to live in this hustle and bustle city within a long time which lead them unable to run their daily activities as usual. The consumers will have perceptions that the more an app can save their time or be used as quickly as possible, the easier the app can be used (Prabowo and Nugroho, 2018). It can take the example pertain to the common lifestyle or livelihood of major university students. Also, spending time to eat outside is considered time consuming and luxury activity (Dazmin & Ho, 2019). They will avoid it since wastes a lot of precious time especially towards university students. Other than cooking by themselves, the only way for them to enjoy their meal is implementing OFD service. As promised by the food delivery applications or websites, they will deliver the food to customers on time as they are committing the mission of being speedy.

According to Maimaiti, Zhao, Jia, Ru, and Zhu (2018), online food delivery service is convenient and user-friendly than the traditional system because orders placed by customers can be easily viewed and recorded through a mobile application or website. By using online food delivery service to order food, it can enable the university students to reduce time on finding something to consume. Besides, according to Dazmin and Ho (2019), having meal in the physical store is considered as time consuming. Hence, it will affect the intention of university students to use to use OFD service in their daily life in Malaysia.

H1: There is a positive relationship between time saving towards intention of university students to use OFD service.

Price Saving
Price is the cash value an individual must offer in trade for a service or a product in a purchase treaty (Nagle et al, 2010). Darke et al (1995) stated that price saving through price discounts is a concern for consumers as they are concerned on the money spent where customers can reserve via these discounts. For university students, it is a pretty good deal for them to subscribe it as they can save more money for other purposes. Sometimes, the certain websites or applications will also offer a lot of promotion deal by implementing price discount on the meal that they ordered (Yeo et al., 2017). By using this subscription of OFD service, the university students can enjoy more promotion deal and save more money spend on the foods. Moreover, OFD services able to reach customers in different geographical location according to different restaurants that provide delivery service to that particular place (Goh et al., 2017). Using OFD service by ordering through websites or applications, they can reduce their barriers like spending unnecessary transportation cost to get themselves to the physical store.

Other than that, in transforming from Goods and Services Tax (GST) to Sales and Services Tax (SST) in 1 September 2018 (Ram, 2018), the consumers have to pay more on the 10% of service charge and 6% of service tax to the restaurant if they decide to dine in. Therefore, the overall expenditure on eating out will be higher including the extra charges implemented by the restaurant other than the price of meal ordered. On the contrary, there will be exemption...
on extra service charge required by the restaurant if use OFD service. As a compare, the university students will take the cost of eating into consideration since they will always choose for lower price (Yeo et al., 2017). By having the invention of to use OFD service, consumers can enjoy lower price of foods by using website or mobile application to order food and use delivery service as mentioned by Prabowo and Nugroho (2018).

H2: There is a positive relationship between price saving towards the intention of university students to use OFD service.

**Perceived Usefulness**

According to Kim et al (2004), perceived usefulness is defined as consumer’s perception about shopping via websites will enhance the performance of the shopping process such as searching for information, price comparison and orders placement and tracking via the web will enhance the efficiency and efficacy of shopping process. In this modern age of technology advancement, we are surrounded by high technology encompass the smart devices like smartphone, tablet and laptop. In order to keep pace with the times, there are mickle restaurants started to have the creation of their own company website or mobile application to enable people to order food through online and use the delivery service instead of solely provide in offline store service. According to Pigatto, Machado, Negreti, and Machado (2017), the evolving of specialized companies in providing online delivery services that enable customers to choose their preferred food or restaurant quickly and easily as comparing with another eatery stores or restaurants. Hence, it has attracted people’s attention to use this OFD service. In the entire process, they are perceiving usefulness on the OFD service (Shang & Wu, 2017).

Similarly, according to Prabowo and Nugroho (2019), the younger generations nowadays are willing to try on OFD service. It is because they are inquisitive on how the OFD service actually works for them. Throughout the process, they will realise that everything is new to them as they have use this OFD service before by just placing order of the food and they can wait for it to be delivered to their homes. They perceive it as useful of ordering food through online platform to use the delivery service. They enjoy using the OFD service (Maimaiti et al., 2018).

H3: There is a positive relationship between perceived usefulness towards the intention of university students to use OFD service.

**Prior Online Purchase Experience**

In line with Chen et al (2010), online acquisition brings the meaning of the objective of each consumer to buy online items. Huang (2012) stated that an individual’s online experience encompasses participation, rational procedure, flow and schema. In line with Prabowo and Nugroho (2018), they stated that a user who used to practise online buying is referred as having prior online purchase experience. By having prior online purchase experience, it will affect the customers’ decision whether they are having the intention to use that products or services for the second time. It goes without saying that having prior online purchase experience is linked with the repurchase intention of the consumers (Prabowo & Nugroho, 2018). If they used to experience decent service, it will incur them to use that service again. In contrast, they will probably not be interested to use it for the second time once they went through a bad experience. It is undeniable that experiences from past satisfactory will influence
their decision making on the repurchase intention (Yeo et al., 2017). Whenever the university students have no idea on what to consume during their free time, they can consider using OFD service as they used to do this before. By having the prior experience towards ordering food from online platform, they will be more confident in using those methods in the entire process of placing order.

In accordance with Prabowo and Nugroho (2018), prior online purchase experience is related to the repurchase intention of consumers. Since they used to use the OFD service from certain websites or mobile applications of a restaurant, then they will have some basic knowledge on the entire process of OFD service. Then, they will be rest assured to use the food delivery service by placing order of food through online platform based on their previous satisfaction on using the OFD service. Hence, it will generate trust and confidence of the consumers towards OFD service (Akar & Nasir, 2015). It will incur their intention to use OFD service for the second time as well.

H4: There is a positive relationship between prior online purchase experience towards the intention of university students to use OFD service.

![Figure 2. Conceptual Framework](image)

**Research Methods**

OFD services are mainly concentrated in urban areas. The unit of analysis is university students who are the users of OFD service living in the Klang Valley (Kuala Lumpur and Selangor) of Malaysia, and they are the targeted population in this study. In order to achieve the objective of this study, quantitative research was adopted. A convenience sampling technique was adopted due to sampling frame is not available. Online survey was used for data collection. A total of 300 questionnaires were collected, of which 290 was usable for data analysis after data cleaning and removing outliers. Prior to the distribution of questionnaires, pilot test was conducted to verify the consistency and reliability of variables. Section A consists of the demographic profile of respondents about their basic personal information. In this section,
simple-dichotomy questions were designed so that the respondents can choose the answer from the given alternative options. It can be defined as fix alternative or close ended question.

Besides, Section B consists of four different parts which are imposed to evaluate the independent variables that including time saving, price saving, perceived usefulness and prior online purchase experience. While Section C focuses on the dependent variable that the intention to use OFD service in Malaysia. For both Section B and C, Five-point Likert Scale rating will be implemented to identify their tendency towards agreeableness and disagreeableness on the questions asked.

In this study, the relationship between the variables was analysed by multiple regression statistical test. The data collected was also tested for normality and linearity. The results show that there is no issue with the normality of the data, and the data is within the acceptable range of skewness and kurtosis.

**Results and Discussion**

The demographic of participants in this survey is shown in Table 1. Gender wise, most of the female consists of 59.3% while male contributed 40.7%. The participants were within the age range of 18-20 (17.60%), 21-23 (67.2%), 24-26 (10.7%), and was followed by 27 and above (4.5%). All the respondents were educated which consist of pre-university (10.3%), diploma (14.1%), undergraduate (69.7%) and postgraduate (5.9%). In terms of the frequency to use online food delivery (OFD), most of the respondents use OFD once a week that consists of 57.9%, followed by twice a week 23.1%, and more than twice in a week which consists 19%.

<table>
<thead>
<tr>
<th>Respondents' Profile</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>118</td>
<td>40.7</td>
</tr>
<tr>
<td>Female</td>
<td>172</td>
<td>59.3</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>51</td>
<td>17.6</td>
</tr>
<tr>
<td>21-23</td>
<td>195</td>
<td>67.2</td>
</tr>
<tr>
<td>24-26</td>
<td>31</td>
<td>10.7</td>
</tr>
<tr>
<td>27 or above</td>
<td>13</td>
<td>4.5</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-university</td>
<td>30</td>
<td>10.3</td>
</tr>
<tr>
<td>Diploma</td>
<td>41</td>
<td>14.1</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>202</td>
<td>69.7</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>17</td>
<td>5.9</td>
</tr>
<tr>
<td>OFD frequency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>once a week</td>
<td>168</td>
<td>57.9</td>
</tr>
<tr>
<td>twice a week</td>
<td>67</td>
<td>23.1</td>
</tr>
<tr>
<td>more than twice a week</td>
<td>55</td>
<td>19.0</td>
</tr>
</tbody>
</table>

**Table 1. Demographics traits of Participants**

**Data Analysis**

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Reliability test measures the internal consistency of variables. The reliability test results showed that the internal reliability of each variable was high, and cronbach alpha value was between 0.742 to 0.828.

**Table 2. Descriptive Statistics & Reliability Analysis**

<table>
<thead>
<tr>
<th>No of Items</th>
<th>Mean</th>
<th>Kurtosis</th>
<th>Skewness</th>
<th>Cronbach α</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS</td>
<td>4</td>
<td>3.77</td>
<td>0.05</td>
<td>-0.497</td>
</tr>
<tr>
<td>PS</td>
<td>3</td>
<td>3.16</td>
<td>-0.48</td>
<td>0.05</td>
</tr>
<tr>
<td>PU</td>
<td>4</td>
<td>3.74</td>
<td>-0.27</td>
<td>-0.25</td>
</tr>
<tr>
<td>PE</td>
<td>3</td>
<td>3.67</td>
<td>-0.24</td>
<td>-0.35</td>
</tr>
<tr>
<td>BI</td>
<td>3</td>
<td>3.80</td>
<td>0.20</td>
<td>-0.60</td>
</tr>
</tbody>
</table>

The two out of four predictors’ were found to be significant in clarifying the intention to use online food delivery service. The $R^2$ of 0.545 indicates that the four predictors describe about 54.5%. The Anova table also shown that the F-value of 85.21 is good enough to be recognised statistically and P-value is significant at <0.05.

Table 6 exhibits the largest β coefficient (0.405) for Prior Online Purchase Experience (PE) which shows that this is the strongest predictor in explaining the Intention to Use Online Food delivery Service in Malaysia. The ranking for the five predictors is PE, TS, PU and PS.

**Table 3. Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.738a</td>
<td>0.545</td>
<td>0.538</td>
<td>0.52797</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), PE, PS, TS, PU

**Table 5. Coefficient Matrix**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>95.012</td>
<td>4</td>
<td>23.753</td>
<td>85.212</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>79.444</td>
<td>285</td>
<td>0.279</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>174.456</td>
<td>289</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: BI
b. Predictors: (Constant), PE, PS, TS, PU

**Table 6. Coefficient Matrix**
Table 7. Results of Hypothesis Testing

<table>
<thead>
<tr>
<th>Hypotheses Path</th>
<th>Standardized Coefficients</th>
<th>P-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS→BI</td>
<td>0.27</td>
<td>0.000</td>
<td>Supported</td>
</tr>
<tr>
<td>PS→BI</td>
<td>0.08</td>
<td>0.089</td>
<td>Not supported</td>
</tr>
<tr>
<td>PU→BI</td>
<td>0.12</td>
<td>0.061</td>
<td>Not supported</td>
</tr>
<tr>
<td>PE→BI</td>
<td>0.40</td>
<td>0.000</td>
<td>Supported</td>
</tr>
</tbody>
</table>

The findings from this research were found that two independent variables were supported and two independent variables were not supported.

Conclusions

Based on Table 7, the beta value shows that the prior online purchase experience has the highest beta value which is 0.40. It means that the intention of university students to use OFD service is expected to increase for every point increase in prior online purchase experience. In other words, university students tend to look for platform that is more convenient and easier to operate (Yeo, 2017) and give them better use experience. This will lead to the users to reuse the same platform each time when they want to purchase food online. Once they experience the service is good, they will have an intention to use the OFD service again. Also, they might share their experiences with friends and show them the way to use OFD service.

The beta value shows that time saving has the second highest beta value of 0.27. Sultan and Uddin (2011), mentioned that OFD actually save time for consumers to look for food and waiting time at a restaurant. Besides, by using OFD, consumers are able to access to the media at anytime and anywhere to look up for various types of food and price comparison (Yeo, 2017). Hence, time saving is an element to motivate consumers to use OFD services (Sultan and Uddin, 2011). OFD service providers have to make sure that the food will reach their
customers on time to prevent customers from looking for alternatives. Based on the findings in this research, time saving is one of the vital factors that affect intention of university students to use OFD service. It is because they can just stay at home and do their own stuff while waiting for their orders to be delivered.

In contrast, perceived usefulness has the beta value of 0.12. According to Celik and Yilmaz (2011), consumers will consider to use the platform if it is easy to use and without worries. By few clicks on the websites or mobile applications, university students can order their food and use the delivery service without spending too much time. Especially for those who are living far from the eatery, OFD service is more useful to them. However, the results of this study is inconsistent with previous studies. Reasons being, when it comes to delivery issues, it is not only delays, but also the quality and quantity of food, packaging and unpleasant behavior of delivery personnel. Maintaining good quality becomes very challenging for delivery. Mishandling order and long waiting time often result in orders being cancelled. The difference between what is served in a restaurant and what is delivered to customers’ doorsteps can sometimes cause exasperation to consumers. In addition, consumers equate food quality and delivery directly with the usefulness of online order delivery. In addition, online order delivery that does not meet the needs of consumers, will lead to consumers’ perception of online order delivery is not useful.

Lastly, price saving has the lowest beta value of 0.08. There are reasons for this insignificant result. Firstly, transportation fee is generally calculated once using OFD service. Consumers are still inclined to pay for the benefits though the prices paid by the consumers are considered high as compared to traditional purchases (Prabowo and Nugroho, 2018). Thus, the price that initially set will be a little high as compared to those stall that operate by the roadside. Sometimes, it is required them to add on the food to enjoy free delivery by ordering food from websites or applications and use OFD service. In order to enjoy the free delivery service, they are so-called forced to buy additional items to their existing order. Therefore, it will cause the local and foreign university students to deem OFD service is not a price saving way for them to enjoy food by using OFD service.

A better understanding of the intention to use OFD service in Malaysia is important to policymakers and stakeholders in Malaysia. OFD service not only emerging in Malaysia but also contributes to the country’s digital economy. However, the industry faces a number of challenges, such as an uncertainty during the Covid-19 and competition between OFD service providers such as GrabFood and food retailers with their own delivery services. Policymakers may need to establish better guidelines and initiatives to drive the growth in OFD service industry. The research findings also benefit the stakeholders especially the service providers and software developers.

Price saving and perceived usefulness of OFD service apps were found no effect on the intention of Malaysia university students to use these apps. This implies that, with the apps, users still have to wait longer for their food to arrive at their doorsteps. At times, the information of food and beverage delivered to consumers is different from what they expected. Thus, this has disappointed the users which lead them to find the apps useless. Therefore, stakeholders are suggested to reconsider these two factors in order to improve the brand image of OFD service.

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apps and information quality control. Moreover, promotion and initiative to increase the popularity of OFD service are needed to rebuild users’ confidence in order to expand the growth of this industry.

References


