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**CUSTOMER CONTINUITY USE OF ONLINE FOOD DELIVERY
SERVICES AFTER THE PANDEMIC**

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Abstract

Prior to the pandemic, it was difficult for small and medium (SME) food vendors in the food service industry to determine the most efficient distribution method for their products to consumers. The food delivery platform has increased client numbers and revenue for food service businesses. Throughout the COVID-19 outbreak, online food delivery services have become increasingly popular. The study applies the Theory of Planned Behavior (TPB) to investigate the adoption and retention of online food delivery services after the pandemic. This study used the quantitative methodology, with an online questionnaire as the data collection tool. This study successfully gathered 60 online food delivery users in the area. The finding indicates that using the TPB framework is valid and reliable for understanding online food delivery services' adoption and continuance use. Besides providing a summary of the conclusion, the study demonstrates that TPB could be utilized to assess the adoption of online food ordering platforms among food merchants.

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Keywords: Skill mismatch, online job analysis, online job data, measurement issues

1. Introduction

The unexpected outbreak of the pandemic Coronavirus (COVID-19) started in the year 2020 and has profoundly affected the entire world. Accordingly, many states and local orders in Malaysia issue staying at home and forcing food services to close down or limit their operations. Thus, it severely impacts the restaurant industry, such as job losses and the worst sales compared to other sectors. For instance, more than thirty thousand restaurant workers and restaurants/bars were laid off, and their consumption fell to its lowest level since January 1980 (Bernama, 2022).

As restaurants struggle to find a way out to survive, online food delivery (OFD) services have grown in popularity in recent years, delivering food and beverages directly to customers' doorsteps. OFD refers to online food ordering thru several mobile apps and websites using the internet based that can connect customers with participating restaurants. According to a representative of GrabFood, even though the application of OFD exists and has evolved before, there is a 7.5% rise in new riders and a 37% increase in rider applications, 25% of new merchant partners and over 8,000 businesses signed up during the pandemic. Some new players, such as Warong Rider delivery service, were developed to boost small businesses and create job opportunities for local people (Bernama, 2022).

Other than that, the impact of the health crisis has challenged the health system, economy, food supply and people's lifestyles. During the previous Covid-19 pandemic, there was growing concern about the role of OFD service, which a group of researchers has explored. Among the focus investigations related to OFD service are motivation use (Ali et al., 2021), customer perception (Ali et al., 2021; Candra et al., 2021; Hong et al., 2021; Tan et al., 2021), continuance use (Tran, 2021; Zanetta et al., 2021), customer loyalty and satisfaction (Prasetyo et al., 2021; Yusra & Agus, 2020) and dietary concern (Bates et al., 2023; Matsungo & Chopera, 2020; Zhao et al., 2020).

Since OFD services impacted business development, this paper explores the adoption and continuance use of OFD services after the pandemic among OFD users focusing on Kuala Terengganu. The chosen location was identified as a low urbanization area due to low to middle income and minimal development. Understanding consumer behavior in OFD will give restaurant operators a broader perspective for strengthening their online presence.

2. Literature Review

2.1. Growth online food delivery services

There are numerous e-commerce models, such as B2B, C2C, B2C and O2O (online to offline) (Kang et al., 2014). O2O is an information and communication technology-based business concept where customers order items or services online and pick them up at a physical location (Shang & Yang, 2015). In the setting of OFD, it refers to the method by which the food is arranged and distributed to the customer just after the order issuance through online.

The expansion of the internet has made food delivery services a global phenomenon, with nearly every country having at least one influential food delivery platform. China dominates the online foreign exchange business, followed by the United States and the growing economies of India and Brazil, which are experiencing tremendous growth (> 9% CAGR) (Table 1) (statista.com, 2022).

Table 1. Forecast revenue of online food delivery in major nations

| Country | Forecast revenue in 2022 (Mil USD) | Annual growth rate (CAGR 2022-2026) | Market's largest delivery segment | The volume of the largest delivery Category (mil US\$) | Platform | User anticipated by 2026 |
|-----------|------------------------------------|-------------------------------------|-----------------------------------|--|-------------------------------------|--------------------------|
| India | 13.99bn | 11.92% (expected 21.95bn) | Restaurant to consumer | 9.57bn | FoodPanda, Swiggy, Zamato, Ubereats | 529.5m |
| China | 158.20bn | 6.61% (expected 204.20bn) | Platform to customer | 141.70bn | Meituan, Eleme | 871.4m |
| Brazil | 3.41bn | 9.42% (expected US\$4.89bn) | Restaurant to consumer | 2.72bn | iFood, HelloFood | 96.9m |
| Indonesia | 1,136.0m | 9.33% (projected 1,623.0m) | Restaurant to consumer | 612.90bn | Delivery Hello, Justeat | 35.8m |
| Malaysia | 336.30m | 9.83% (projected 489.4m) | Restaurant to consumer | 197.30bn | GrabFood, FoodPanda | 12.8m |

Food delivery has become a thriving market for Indian e-commerce businesses. Rapid urbanisation, connected to skilled migration to metropolitan areas and exposure to urban lifestyles, has contributed to the amazing growth of India's food delivery and restaurant business (Thamaraiselvan et al., 2019). India's market is worth \$15 billion amid an exponential growth phase (Kanteti, 2018). The food delivery industry is hugely competitive, and the growth of OFD through digital platforms has made the big players in business and entrepreneurship notice. Zomato, Swiggy, Food Panda, and UberEats are some renowned 'food aggregators' feeding Indian cities online and making significant profits. Numerous OFD website portals and mobile applications enable the Indian customer to compare the prices and ratings of multiple food outlets and restaurants serving the same cuisine and choose from various options (Gera et al., 2018).

From another point of view, the growth of online food delivery services has been facilitated by the successful popular online food delivery platforms like Uber Eats, FoodPanda, GrabFood and many more. These online food delivery systems provide a variety of services, such as presenting consumers with a selection of food options, accepting orders and delivering them to the food producer, processing payment, coordinating food delivery, and enabling tracking features. Nevertheless, the advances of mobile technology and the development of payment and delivery infrastructure have been crucial driver in the explosion of O2O e-commerce. By the end of 2020, fifty per cent of the global population will have access to mobile internet services. There were 5.2 billion smartphone connections in 2019 (Li et al., 2020).

From the economic eyes, OFD service provides earning opportunities. From a sociological and environmental perspective, OFD service affects consumers' relationships with their meals, public health outcomes, and traffic systems. It also significantly generates plastic and food waste and increases carbon footprint. The effects of these three pillars were examined in depth in a study by Li et al. (2020). Even though there is a critic the harmful effects of online food delivery services, improvised strategies to counter the negative and promote good aspects of online food delivery services must be taken by stakeholders to ensure sustainability, like biodegradable food packaging (Oliveira et al., 2021).

2.2. The scenario of OFD service during COVID-19 pandemic

In China, online food delivery service sales are soaring amid a pandemic. The OFD services are increasing as 'live streaming' becomes a medium that offers extra food-related information and might potentially resolve customers' concerns about food safety and strengthen the local food network (Du & Kim, 2021).

In Vietnam, food ordering apps like Grab, Nowfood, Baemin increased significantly in traffic as people used these applications to order food and household items. This demand is expected to increase during the pandemic when people are advised to limit their physical activity in crowded locations to reduce disease transmission (Tran, 2021).

In Malaysia, when the movement control (MCO) order was executed in March 2020, there was a 7.5% increasing in new riders and a 37% increase in rider applications. According to a report by GrabFood, the online revenue of merchant partners increased by 25% during the health crisis, and over 8,000 businesses joined the platform. New players, such as Warong Rider delivery service, were also developed to boost small businesses and create job opportunities for local people (Bernama, 2022).

The online food delivery industry has extended worldwide, with large multinational businesses dominating the market. With the increasing number of sales, the rising of apps user, opening a new channel of business income stream and the ability to create job opportunities, the online food delivery service industry is promising a new business evolution of food delivery. The COVID-19 phenomenon has made it possible for restaurants to change the focus of their operations to include food delivery. The system allows customers to order from a wide range of food providers listed on the portal, utilizing inventive techniques to deliver food, developing their websites for delivery, concentrating their menus on delivery, and optimizing their menus.

2.3. Conceptual framework

The theory of planned behavior (TPB) was initially developed by Ajzen (1985). This classic theory in the world of psychology has been utilized and debated since the early 1990s. The previous Theory of Reasoned Action (TRA) by Ajzen (1985) stated behavioral intentions could only be predicted when the behaviour is under the individual's voluntary control. However, further study argues that the TRA theory has not yet been able to explain entirely behaviours that are not under one's control. Thus, the concept of the Theory of Reasoned Action was expanded by this theory, which consists of four components: attitudes, subjective norms, perceived behaviour, and behavioural intention. The theory of planned behaviour was created to overcome the limitations of TRA. The element of perceived behavioural control was incorporated. While TPB and TRA have determined that a person's behaviours are influenced by their behavioural goals, TPB employs a component of perceived behavioural control to determine how they feel while acting in accordance with their behavioural intents.

Since the outcome's behaviour can be predicted by the existing factors affecting an individual's willingness in technology acceptance, TPB appears to be more applicable to explain an individual's desire to use technology. As a result, prior academics have demonstrated a considerable interest in studying customer adoption of online food delivery applications using the theory of planned behaviour (Ajzen,

1985). A current study by Tran (2021) examines the effect of subjective norms, social isolation, perception of food safety, food delivery, and behavioural intention to use on the continuance use of mobile food delivery applications.

The TPB model's primary objective was to predict preferences and behaviour. Numerous earlier studies utilised the TPB model in an environment of a health crisis. For example, they are evaluating online food delivery satisfaction and loyalty (Prasetyo et al., 2021), intentions of consumers to utilise food delivery apps (Wen et al., 2022), consumers' food safety knowledge during COVID-19 (Soon et al., 2021), consumer behaviour and continuance use of mobile food delivery (Tran, 2021) and so on. This proposed model does not include all three variables proposed by the author. Rather than focusing on "intention" and "behaviour", the author used only one main variable which is the subjective norm to see the relationship with other variables because it has been shown to have significant impacts on behavioural intention (Heidari et al., 2018). Previous research suggests that subjective norms effectively determine consumer behaviour (Al-Swidi et al., 2014; Bronfman et al., 2021; Ham et al., 2015). In this study as shown in Table 1, researchers suggest the TPB model to evaluate the continuing usage of online food delivery services in the post-pandemic setting.

2.4. Subjective norms, convenience, motivation, food delivery platform, promotion and discount, behavioural intention, continuance behaviour

2.4.1. Subjective norms

According to Ajzen (1985), subjective norms are precisely related to normative belief where the possibility that an individual will engage in a behaviour grows in direct relation to the individual's motivation to engage in the activity. It indicates that an individual's willingness and decision to participate are influenced by the group or community to which they belong. Formerly, it was differentiated by the support of social groupings such as family and friends. Tran (2021) found that people who observe others use mobile food delivery apps are more likely to apply by themselves.

H1: Subjective norms positively affect behaviour intention to use online food delivery services.

H2: Subjective norms positively influence post-pandemic continuation behaviour.

2.4.2. Convenience motivation

Digitalization has altered current lifestyles and business strategies. Digitalization enables users to perform online shopping, banking, remote working, and food orders anytime and from any location. According to Sundström and Radon (2016), convenience Individuals are motivated to use a given technology to the level they expect to reduce their required effort. The convenience of online purchases can reduce the time, energy, and effort required to purchase products or services. Based on a study by Yeo et al. (2017), time orientation positively affects convenience motivation. In the latest study by Allah Pitchay et al. (2022), optimistic and significant effects of social influence, information quality, price-consciousness, and time-consciousness on attitudes toward online food delivery services. increased the probability of using the app.

H1: The convenience factor influences the intention to use online food delivery services.

H2: The convenience factor positively promotes post-pandemic continuance behavior.

2.4.3. Food delivery platform

Davis et al. (1989) stated that any positive or negative feelings one may have about a particular behaviour have a causal link to intention. Childers et al. (2001) discover enjoyment is critical in forecasting customer attitude towards target behaviour. A few e-commerce research has found that enjoyment is a significant direct predictor of e-shopping intention (Childers et al., 2001; Vannisa et al., 2020). When customers feel helpful and pleasure in adopting technology, they intend to use it again in the future (Droogenbroeck & Van Hove, 2021).

H1: The enjoyment of online food delivery platforms influences behavioural use online food delivery services

H2: The enjoyment of online food delivery platform positively continuance use online food delivery services

2.4.4. Promotions and discount

The evolution of information and communication technology (ICT) provides organisations with new opportunities to create marketing strategies that emphasise customer acquisition and retention. In this sense, the efficiency of internet advertising is critical for businesses to get favourable customer responses. Hence, advertising features play a significant role (Lee et al., 2018). A study by Ray et al. (2019) stated that effective advertising sales promotion could improve the chances of using food delivery applications. The temptation of a promotion or discount could immediately influence consumers' purchase choices (Yap & Lee, 2020). Additionally, sale advertisements and discount activities can convince customers to switch brands, enhance purchases, and overspend. When it comes to influencing consumers' purchasing decisions, advertising that offers discounts is considered to be the most engaging (Chavadi & Kokatnur, 2009).

H1: OFD service promotion positively influences behavioural intention to use online food delivery services

H2: OFD service promotion positively continuance use online food delivery services

2.4.5. Behavioural intention

According to Hill et al. (1977), the behavioural intention was defined as a person's perceived possibility of executing a specific behaviour. Many researchers have found a strong link between attitude and behavioural intention regarding technology adoption (Chang et al., 2012; Ingham et al., 2015). Having established this, it is evident that attitude correlates positively with behavioural intention.

H1: The behavioural intention positively influences online food delivery service use.

2.4.6. Continuance behavior

Behaviour intention use is one of the variables that can be used to forecast consumers' continued usage behaviour (Bhattacharjee et al., 2008). Lin (2020) described continuance behaviour as a customer's intention to continue or discontinue use of a system that is dependent on a previous approved decision. Usage intention is demonstrated when customer enjoys the benefits of online food delivery services. During

a pandemic, customers have limited options due to social distancing and isolation. During post-pandemic, people are free to return to normal life and dine-in restaurants with SOP.

H1: The behavior intention promotes the continued use of online food delivery services positively.

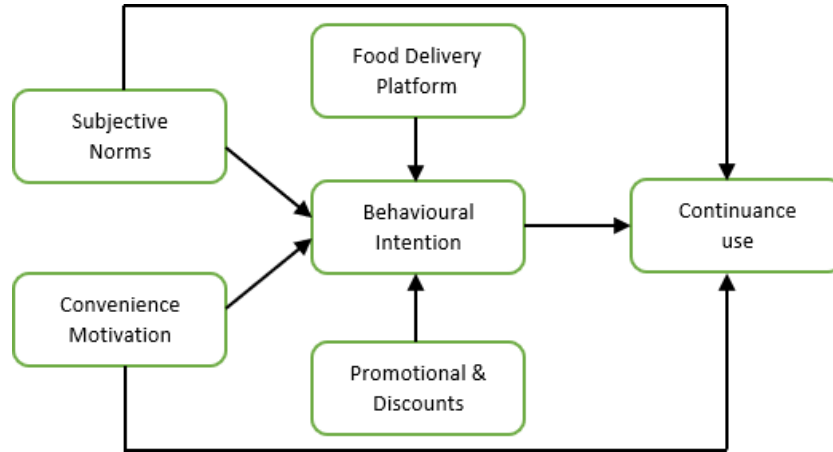


Figure 1. The conceptual framework

3. Research Methodology

3.1. Research design

Online surveys have shown to be a helpful tool for gathering data for academic research. The choice of an online survey has many benefits, including anonymity, broad geographic coverage, low cost, and the ability to reduce interviewer bias against the interviewee (Nayak & Narayan, 2019). This study used a survey of past and current online food delivery service users to acquire data for the hypothesis. To collect data for this study, an instrument a questionnaire was used. A set of questionnaires was employed and distributed via Goggle Form. The questionnaire comprises of three parts: (Part A) demographic, (Part B) specific question about their location during previous movement control order (MCO) and (Part C) factors of adoption and continuance use.

3.2. Participants

A total of 60 respondents who had an experience using OFD service during previous pandemic were involved in this study. The respondents consist of user from location in Kuala Terengganu. Kuala Terengganu was selected due to geography and the rate of urbanization in this area still not meet the standard of Malaysia's rate urbanization (Athukorala & Narayanan, 2018). The majority income population in this area is illustrated from low to middle income. To control the validity of sample, there are specific question will be stated to represents respondents which are local residents or working adults in Terengganu. The respondents must also have an experience adopting and using any online food delivery services, especially during pandemic in 2020-2022. Only completed answer will be counted as respondents for this study. The result of this study will be beneficial to local business, home based business who might depend on online food delivery as one of the income streams when the pandemic hit last March 2020.

3.3. Measurement items

The study utilized a five-point Likert scale that range from 1 (strongly disagree) to 5 (strongly agree). The adapted questions as shown in Table 2.

Table 2. Measurement Items

| Variables | Code | Questions | Sources |
|--------------------------|------|--|------------------------|
| Subjective norms | S1 | My close friends and family support my decision to order food via mobile apps that offer delivery services. | (Al Amin et al., 2021) |
| | S2 | My family and friends agree with my choice to use food delivery applications to buy food. | |
| | S3 | My close family and friends consider it a great idea for me to purchase food via food delivery applications. | |
| Convenience motivation | C1 | I can access online food delivery service anytime. | (Chang et al., 2012) |
| | C2 | I can access meal delivery services online from anyplace. | |
| | C3 | I feel online food delivery service is convenient for me to use in English and Malay. | |
| Food delivery platform | F1 | I enjoy using the online platform for food delivery. | (Kyungyul Jun, 2022) |
| | F2 | It's fun to use the online food delivery service. | |
| | F3 | It's fun to use the web platform for food delivery. | |
| | F4 | It's exciting to use the web platform for food delivery. | |
| Promotions and Discounts | P1 | Offers like "buy one, get one free" appeal to me more. | (Dipanti Joshi, 2021) |
| | P2 | After learning about various sales promotions, I'm more likely to purchase online meal delivery. | |
| | P3 | I encourage others to use or purchase from online meal delivery programmes after taking advantage of deals or discounts. | |
| | P4 | I order food regularly because of tempting sales promotion offers. | |
| Behavioural Intention | B1 | I intend to recommend to my friend use food delivery apps | (Tran, 2021) |
| | B2 | I am committed to utilising food delivery applications. | |
| | B3 | I plan to use meal delivery apps on special occasions (e.g.: birthday event) | |
| Continuance Intention | I1 | If given the opportunity, I would order food online. | (Tran, 2021) |
| | I2 | I expect I will continue use online food delivery services. | |
| | I3 | I'll use the apps for meal delivery in the future. | |
| | I4 | I will maintain use food delivery apps even after pandemic | |

4. Result and Discussion

Table 3 presents the demographic characteristics of this survey's respondents. 75% of the population is composed of females, whereas only 25% of the population is male. The participants' ages ranged from 18 to 20 (78.36%), 21 to 23 (20%), and 24 and older (1.67%). The majority of respondents (53.3%) utilise

online food delivery (OFD) once per week, followed by twice per week (33.3%) and more than twice per week (13.3%).

Table 3. Demographics traits of respondents

| | Respondents' Profile | Frequency | Percentage |
|--------------------------------|------------------------|-----------|------------|
| Gender | Female | 45 | 75% |
| | Male | 15 | 25% |
| Age | 18-20 | 47 | 78.3% |
| | 21-23 | 12 | 20% |
| | 24 and above | 1 | 1.67% |
| Online Food Delivery Frequency | Once a week | 32 | 53.3% |
| | Twice a week | 20 | 33.3% |
| | More than twice a week | 8 | 13.3% |

4.1. Reliability test

A reliability test measures a variable's internal consistency. Based on the Table 4, the internal consistency of each variable was very reliable, and the Cronbach alpha value ranged from 0.817 to 0.941, according to the reliability test results. Table 5 shows that all independent variables used in this study explain 86.9 percent of dependent variable which is the continuance intention.

Table 4. Descriptive statistics & reliability analysis

| | No of Items | Mean | Skewness | Kurtosis | Cronbach α |
|-----|-------------|------|----------|----------|-------------------|
| SN | 3 | 3.57 | -0.457 | -0.592 | 0.886 |
| CM | 3 | 4.35 | -0.801 | -0.140 | 0.817 |
| FDP | 4 | 4.20 | -0.349 | -1.330 | 0.941 |
| PD | 4 | 4.07 | -0.519 | -0.333 | 0.840 |
| BI | 3 | 3.78 | -0.925 | 1.211 | 0.934 |
| CI | 4 | 3.95 | -0.869 | 0.767 | 0.937 |

Table 5. Model summary

| Model | R | R Square | Adjusted R Square | Std Error of the Estimate |
|--|-------|----------|-------------------|---------------------------|
| | .932a | .869 | .857 | .33804 |
| Predictors:(Constan) | | | | |
| Behavioral_Intention Food_delivery_Platform, | | | | |
| Convenience_Motivation | | | | |
| Subjective_Norm, Promotion_Discount | | | | |

Table 6. Coefficient matrix

| Model | | | Standardized Coefficients beta | t | Sig. | |
|-------|------------------------|--------|--------------------------------|-------|--------|-------|
| 1 | (constant) | 00.245 | 0.324 | 0.755 | .453 | |
| | Subjective_Norm | -0.164 | 0.098 | -.142 | -1.664 | .102 |
| | Convenience_Motivation | .045 | .102 | .032 | .439 | .662 |
| | Food_delivery_Platform | .046 | .089 | .037 | .518 | .606 |
| | Promotion_Discount | .341 | .117 | .303 | 2.927 | .005 |
| | Behavioral_Intention | .683 | .080 | .735 | 8.551 | <.001 |

Table 7. Result of hypothesis testing

| Hypothesis Path | Standardised Coefficients | P-value | Result |
|-----------------|---------------------------|---------|-------------|
| SN -> CI | -.142 | .102 | Not support |
| CM ->CI | .032 | .662 | Not support |
| FDP -> CI | .037 | .606 | Not support |
| PnD -> CI | .303 | .005 | Support |
| BI -> CI | .735 | <.001 | Support |

Table 6 and Table 7 show the findings of the study. Based on the findings from this research were found that three independent variables were not supported, and two variables were support.

5. Conclusion

Based on Table 8, the beta value shows subjective norms are not statistically significant because its P-value is greater than the usual significant level of 0.05. This means that the influence of subjective norms is not affected towards continuance use of food delivery platforms. During this study, the norms do not influence in continuance of purchase of online food delivery in Kuala Terengganu. This could be supported by the economy of people in this area, which consists of low to middle income. This category illustrated as more traditional lifestyle or the geographical area in Kuala Terengganu which is some areas are limited for internet access (Adam et al., 2021).

The coefficient showed a low correlation for variable convenience motivation and food delivery platform. The statistical P-value is 0.662 and 0.606, respectively. The value indicated there is no correlation between the variable and the dependent variable. By the constraint of internet access, consumers tend to look for another option rather than an online food delivery service (Yeo et al., 2017). Hence, the customers can just stay home and prepare their meals.

In contrast, for promotion, discount, and intention, the p-value is significant for the continuance use of online food delivery services (Xia et al., 2021). In another study on mobile coupons, there are meaningful relationships between purchase and promotion (Xia et al., 2021). Hence, marketing strategy includes promotions still looking by users.

A better understanding of the intention to use the OFD service in Kuala Terengganu is important for business operators and home-based businesses. However, some challenges related to the service especially access for the internet can bring uncertainty to service providers such as GrabFood and business retailers. In part of this study, the limitation of survey respondent may affect the statistical results. It could be enhanced better in sample of population in the future. Last but not least, this study examined continuance use of food delivery services in Kuala Terengganu after the pandemic. The findings also benefit for future research to investigate and develop useful assessing tools for future discoveries.

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