Journal of Positive School Psychology
2022, Vol. 6, No. 3, 7018–7031 http://journalppw.com

A Peek at the Food Delivery Application Adoption Reluctance among Generation Y in Malaysia

Wong Lai Soon [1], K. Gengeswari [2], Khor Saw Chin [3]

[1,2,3] Assistant Professor, Universiti Tunku Abdul Rahman, Perak, Malaysia.
Email: [1] lswong@utar.edu.my, [2] gengeswarik@utar.edu.my, [3] sckhor@utar.edu.my

Abstract

This study explores the underlying reasons for reluctance toward the food delivery application (FDA) services among Generation Y. Both technological and non-technological aspects of the online food delivery (OFD) services were researched. Generation Y in Malaysia, having experience using FDA in the last three months, were approached using the judgmental sampling technique. Out of the 240 responses gathered through the Google Form survey, 35 were screened out. Result reveals a significant impact of social influence on the key determinants (i.e.feature of mobile apps and perceived risks) of adoption reluctance. However, these two key determinants had an insignificant and significant relationship with adoption reluctance. Additionally, experience has a weak moderation effect between adoption reluctance and its key determinants. This study provides a quick glimpse of Generation Y individuals' FDA adoption reluctance, especially during the COVID-19 pandemic. Furthermore, it explains 28.7 per cent of the respondents' adoption reluctance, which implies that other constructs could lead to their adoption reluctance. Finally, it extends the final version of the Technology Acceptance Model (TAM) by contributing additional empirical evidence on the crucial role of non-technological aspects, especially social influence, in affecting electronic consumer behaviour.

Keywords— Covid-19, Gen Y, Online delivery service, TAM, technology.

I. INTRODUCTION

Malaysia is a food paradise due to the influence of multicultural cuisines; the food industry constitutes a major national income. In 2018, the industry had a relatively higher annual growth rate of 7.6 per cent, with a market value of RM109 billion (Food & Beverages Industry Report, 2021). Though the Covid-19 pandemic has affected the industry with the restrictions imposed on the business operation, the industry players have quickly switched to an electronic platform to sustain their operations (Food & Beverages Industry Report, 2021). Although e-commerce in the food business has been there for years, the Covid-19 outbreak has accelerated the utilisation of electronic commerce (e-commerce) by all industry players, from lavish restaurants and fast-food chains to street food vendors (Shameen, 2021).

Pizza Hut was the global pioneer in launching the online food order transaction in 1994. The drastic growth in the online food ordering market has been subsequently championed by the smartphone penetration and sharing economy (Zakon, 2018). The online food ordering market typically comprises foods prepared by restaurants and independent people besides the groceries ordered online. The current study focuses specifically on Online Food Delivery (OFD), consisting of the delivery services for the prepared meals and food ordered online for direct consumption. Statista Market Forecast (2019) ascertained two common delivery service solutions available worldwide: Restaurant-to-Consumer Delivery and Platform-to-Consumer Delivery. While the Restaurant-to-Consumer Delivery (e.g., McDonald's) option involves the meal delivery directly by the restaurants, the Platform-to-

Consumer Delivery (e.g., GrabFood) option involves the meal delivery by the platform partners from partnering restaurants to the customers. Upon receiving the orders, food delivery apps process and send the orders directly to their partner/s. The order is completed when the delivery driver picks up the ordered items from the partner/s and sends them to the customer/s (Shameen, 2021). The key idea of this business model is to deliver the foods ordered online to the house at the convenience of customer/s.

The market study of restaurant delivery services revealed an optimistic figure for the global OFD market (Statista Market Forecast, 2019). The market's revenue is expected to grow at the rate of 10.01 per cent for 2021 – 2025, with 2897.1 million users by 2021. Additionally, the Platform-to-Consumer Delivery solution is expected to lead the market with a whopping sales volume of US$172,944 million by 2025. However, though the OFD segment is experiencing a sudden growth resulting from the covid-19 outbreak in the year 2020, the app's operators have reported a meagre profit of 90 US cents for every online order of US$36, which implies about a 2.5 per cent gross margin (Sharmeen, 2021). Such poor margin can be explained by the cost incurred in delivering services and organizing various promotional activities to overcome the customers' reluctance to use the apps.

To date, some customers are still reluctant to order food online, especially those unfamiliar with technology, who avoid trying out new things and feel uncertain about the various aspects of OFD services (Ghosh, 2020; Kaur et *al*., 2020). Anic et al. (2019) explained that online privacy concerns (OPC) significantly affect the users' attitudes towards online purchases, which can be seen from their unwillingness to provide their details to the food delivery apps. Furthermore, the higher charges imposed on the food prices and delivery fees are one of the major concerns raised by the users in using the OFD apps (Song *et al*., 2017). BBC News (2021) reported that the total cost of ordering food online through apps is at least 23 per cent higher than buying directly from restaurants. The same article cautioned the readers about the inconvenience resulting if the OFD transaction goes wrong. The users will be given only credit refunds instead of the money-back option. Collectively, various factors lead to the reluctance to use the OFD apps. For instance, less than 20 per cent of North American households use the OFD services regularly, even during the Covid-19 crisis (Shameen, 2021). It is worth noting that they prefer to cook at home rather than buy meals online. The same sentiment was shared by two-thirds of Malaysians who participated in the survey conducted by Rakuten Insights). The participants claimed they preferred not to use OFD apps, and the usage became less during the Covid-19 outbreak as they opted to cook for their loved ones (Muller, 2021).

Given the popularity and mixed responses towards OFD services, many studies investigated consumer behaviour in buying food online. Nevertheless, these existing studies are overly emphasizing the positive agenda of the OFD services, especially on its adoption, usage intention and acceptance (Sharma *et al*. 2021), and related technology-related aspects of OFD services (Kaur *et al*., 2021). Kaur et al. (2020) highlighted a gap within the existing studies that sideline the negative agenda of OFD services where the roots of reluctance towards or the non-adoption of OFD services are less explored. The current study intends to fill the gap by exploring the underlying reasons for reluctance toward the OFD services among Generation Y in Malaysia.

While TAM is primarily used to guide the theoretical stance of this study, the two key non-technological aspects, namely the social influence and users' past experiences, are also investigated. Conrsescu & Adam (2013) discovered that the opinion of others and the users' past experiences are the frequently investigated psychological factors resulting in the innovation resistance within numerous existing studies. The latest study conducted in Brazil on resistance to digital banking services had augmented the role of psychological factors

in positively contributing to the resistance (dos Santos & Ponchio, 2021). The current study intends to consider both technological and non-technological aspects to furnish detailed insights into consumer behaviour in OFD services.

The current study focuses on Generation Y individuals, also fondly known as Millenials. The notion of Kotler and Amstrong is adopted in the current study, where those born between 1977 and 1999 are accepted as respondents. The idea of Kotler and Armstrong is held valid and appropriate in the context of the Malaysian population (Ting *et al.*, 2018; San *et al*., 2015). IndexMundi, the online data portal, reported that the Malaysian population is dominated by individuals aged between 25 to 54 years old in 2020, with a 40.86 per cent share (IndexMundi Home, n.d.). Therefore, this study posits that the study's target population, Generation Y, currently 22 to 44 years old, represents a significant segment of this dominant age group. Typically, these individuals are seen as the "priority audience" of OFD services compared to others (Abd Rashid *et al*., 2016). They were found to be most willing to spend on food, including OFD orders, besides believing in the efficiency of the OFD apps (Abd Rashid *et al*., 2016).

II. LITERATURE REVIEW

TAM points out that perceived usefulness and ease of use represented the beliefs leading to IT acceptance (Davis, 1989). While Perceived Usefulness (PU) is the extent to which users believe that improvement in one's job performance results from using a particular system, Perceived Ease of Use (PEOU) is defined as the extent to which a user believes that the use of a system is effortless. Both PU and PEOU are affected by external constructs. In the final version of TAM, the attitude construct was removed because it was not fully mediating the effect of perceived usefulness towards behavioural intention (Davis & Venkatesh, 1996).

Sun and Zhang (2006) criticized that TAM has limitations in its explanatory power and inconsistencies between studies, thus calling for more research on moderating factors. They revealed that experience moderates its influences on behavioural intention (BI) and (i) PU and (ii) PEOU. Experience refers to the extent of knowledge and familiarity with the technology of interest (Sun & Zhang, 2006). In line with this, Castiblanco Jimenez *et al.* (2021) describe the experience as an individual's past interaction or exposure to a system and the accumulated knowledge gained by usage. Usage is more overwhelming for experienced than for inexperienced users. Meanwhile, it is worth noting that scholars are increasingly keen to comprehend the relationships existing between external constructs and PU and PEOU in extending TAM (Castiblanco Jimenez *et al*., 2021). Sun and Zhang (2006) reported that social influence is the least studied construct among external constructs for TAM. Nevertheless, it is considered an imperative factor in different models such as the theory of reasoned action (TRA), theory of planned behaviour (TPB), and Model of PC Utilization.

Based on the limitations of TAM and the discussion above, this study provides a comprehensive picture by incorporating Experience and Social Influence in addition to Perceived Risks and Features of Mobile Apps in examining the users' Adoption Reluctance toward the OFD services. Briefly, as depicted in Figure 1, this study deems that Social Influence affects the key determinants of Adoption Reluctance: Features of Mobile Apps and Perceived Risks. Additionally, experience modifies the relationship between Adoption Reluctance and the key determinants.

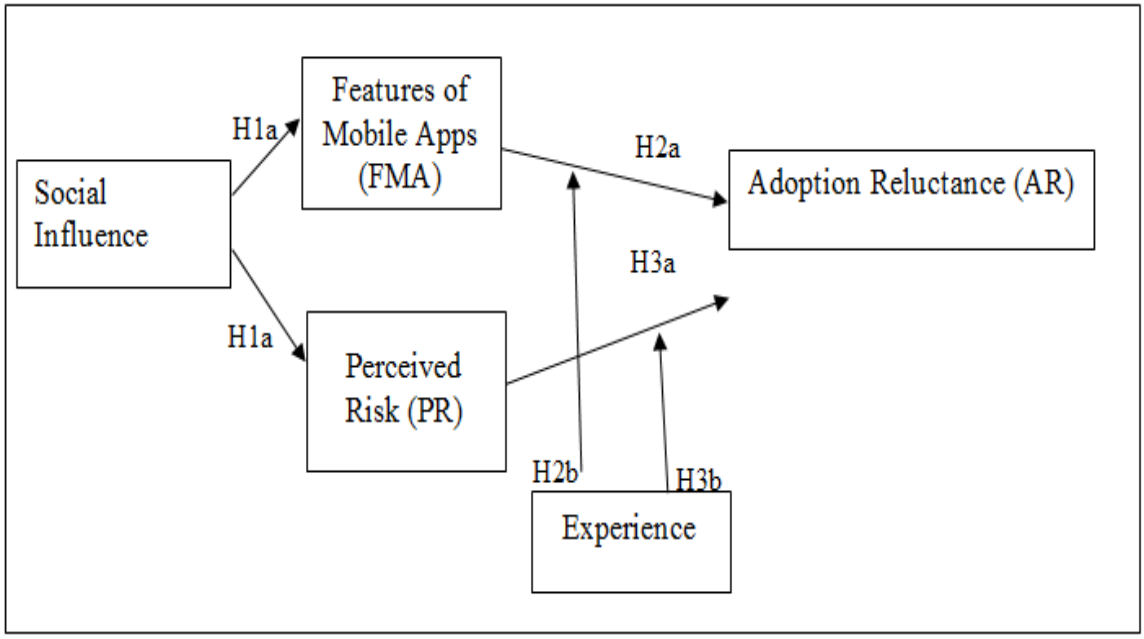

Figure 1: *Proposed Research Conceptual Framework*

Social Influence

Social influence is the extent to which the ideas coming from others may foster or impede technology adoption (Castiblanco Jimenez *et al*., 2021). It is seen as the buyer's perception of web shopping as referred by a group of people sharing similar needs and preferences. Also, consumers can be influenced by influencers in the online review sites, social network sites, websites or app reviews (Yeo *et al*., 2021). Social influence is reported as the most influential determinant of PU (Venkatesh and Davis, 2000). Castiblanco Jimenez *et al*. (2021) added that an individual might adopt a technology based on others' assertion of the convenience of using it instead of relying solely on their own emotions and beliefs. In other words, generation Y tend to consider web shopping as more valuable, based on the views and recommendations of individuals closest to them. Furthermore, the ratings and reviews of users are one of the essential triggers for apps discoverability, purchase, download and installation through app stores (Khalid *et al*., 2015).

Social influence may affect the perceived risk of consumers towards food delivery service. Consumers cannot check the food product when shopping online. Therefore, consumers tend to depend on online comments to obtain sufficient information and reduce their perceived risk level (Liu and Park, 2015). Online consumer reviews infer product quality and alleviate product uncertainty, helping consumers develop confidence in the final purchase decision (Hu *et al*., 2008). Venkatesh *et al.* (2012) pointed out that paid or fake reviews are imperative risks perceived by the users that hinder them from adopting food delivery apps. Therefore, the following hypotheses are postulated:

H1a: Social influence has a positive effect on features of mobile apps.

H2a: Social influence has a negative effect on perceived risk.

Features of Mobile Apps

Stoyanov *et al.* (2015) defined mobile apps as software that designed for hand-held, small and portable devices, such as smartphones and tablets. Additionally, Cho *et al.* (2019) insisted that mobile apps' quality attributes should be based upon user evaluation entirely. Scholars revealed that mobile app quality features would be essential to drive installations and boost adoption. Supporting this, Cho *et al.* (2019) says that it is important to develop mobile apps with essential set of quality attributes which include various food choices, reasonable

pricing, and convenient and trustworthy design. Price affects the adoption reluctance of food delivery apps. Concerns often arose about taste of food, price, and value for the money that spent. A broad price spectrum directly affects the mobile app businesses where Generation Y will be less willing to spend on higher-priced meals. Additionally, misleading and outdated information like items in the food vendor menu, prices, and minimum order fees can confuse the end-user. Kaur *et al.* (2020) supported that the confusing contents, complicated interface, slow in processing and other problems cause consumers reluctant to use the apps.

Complexity of food delivery apps poses challenges for end-users with limited knowledge and experience using the applications. Supporting this, Sun and Zhang (2006) argued that users would employ knowledge gained from earlier experience with similar technologies to form their intentions. On the contrary, users with limited cognitive capacity and experience of existing technology are more likely to be frustrated when dealing with an unfamiliar system and resisting its adoption. It is supported by Schnellbächer *et al.* (2015), who asserted that non-users refrained from the use of OFD services generally due to the perceived lack of skills required for using the online platform. In line with the above discussion, the following hypotheses are postulated.

H2a: Features of mobile apps have a negative effect on the adoption reluctance towards food delivery apps among Generation Y in Malaysia.

H2b: Experience moderates the relationship between features of mobile apps and adoption reluctance towards food delivery apps among Generation Y in Malaysia.

Perceived Risks

Baucer (1960) advocated the concept of perceived risk, which is defined as uncertainty and consequences associated with the actions of consumers. The author believes that consumers' purchase decision is affected by perceived risk. Stone and Gronhaug (1993) point out that perceived risk includes numerous types of risk, such as functional, physical, financial, social, psychological, and time risk. Table 1.0 summarises these conceptualised definitions of different types of perceived risk. Generally, perceived risk was coined as the degree to which a user feels the adverse consequences and uncertainty of adopting food delivery apps.

Table I : *Defination of Risks*

Types	Definition
Functional risk	It is the risk that the product will not perform as expected.
Physical risk	It is the risk to an individual's safety, physical health, and well-being that the product may pose.
Financial risk	It is the risk that the product will not be worth the financial price and would have been available cheaper elsewhere.
Social risk	It is the risk that a poor product choice may result in social embarrassment.
Psychological risk	It is the risk that a poor product choice may bruise the consumer's ego.
Time risk	It is the risk that a purchase will take too long or waste too much time.

Source: Schiffman and Wisenblit (2019); Lu *et al*. (2005)

By referring to Gupta and Duggal (2021), adoption resistance by the consumers involves perceived risks. The overall perceived risk may include perceived functional risks such as misleading information, wrong food delivery and order accuracy; social risks such as ethical reasons, generic services, fake reviews and ratings; personal risks such as lack of personal touch and unaffordability of smartphones; financial risks such as fear of online frauds and convenience charges; psychological risks such as improper food delivery and reliability issues (Gupta and Duggal, 2021; Gupta *et al*., 2018).

Mazzini *et al.* (2016) found that perceived risk can adversely influence Malaysian Generation Y in performing e-purchase. Previous studies reported that perceived risk significantly impacts consumers' adoption of food delivery apps (Gupta and Duggal, 2021; Kaur *et al.*, 2020; Gupta *et al.*, 2018). The resistance of any innovation becomes higher if it involves high uncertainty (Kaur *et al.*, 2020). Consumers' risk perception is developed considering food not prepared following the food safety and hygienic practices, which may result in health issues (Gupta *et al.*, 2018). In addition, the delivery service is exposed to risks such as traffic congestions, road construction, and bad weather, leading to delayed delivery and freshness of food issues (Kedah *et al.*, 2015). Additionally, Kimes (2011) revealed that technology anxiety and desire for interaction are perceived risks that preventing consumers from ordering food online. Thus, they are reluctant to adopt food delivery apps. They are worried that they might be getting tangled up in the technology.

Pires *et al.* (2004) reported that risks perceived by consumers towards internet purchasing might alter with experience. Differences in perceived risk between inexperienced and experienced consumers are due to the familiarity or repetition with the purchasing process. Perceived risk is related to the customers' delivery experiences, such as hassle in explaining the intended address to the delivery person and the delivery person's unprofessional and inappropriate conduct (Kaur *et al.*, 2020). Previous studies reported that customers' perceived risks would weaken the product usage, whereas prior online experience would increase the product usage (Gupta and Duggal, 2021). Customers will visit the same website for food ordering when they have positive prior experience (Kedah *et al.*, 2015). Kimes (2011) reported that inexperienced online ordering customers have a higher need for interaction than experienced online ordering users and resist adopting such technologies. Based on the above discussion, the following hypotheses are elicited.

H3a: Perceived risk positively affects the adoption reluctance towards food delivery apps among Generation Y in Malaysia.

H3b: Experience moderates the relationship between perceived risk and adoption reluctance towards food delivery apps among Generation Y in Malaysia.

III. METHODS AND RESULTS

This study pursues a quantitative research approach with a descriptive research design. Quantitative research approach enables the researchers to generalize the results to a broader context by gathering responses from a large enough sample. VanVoorhis & Morgan (2007) recommend fifty data sets for each causal construct in testing the statistical relationship. As illustrated in the study's research conceptual framework, there are four causal constructs in this study. Hence, the study's sample size is determined as 200 elements. Upon pre-testing the questionnaire's content, a pilot study involving 20 respondents was carried. All constructs shown good Cronbach Alpha values from the pilot test and hence all items were used in data collection. Data were collected by using Google Form posted on various social media networks. Judgmental sampling technique was adopted in this study. Only respondents within the specified age range (i.e., 22 to 44 years old) and who had experience using the OFD services in recent years were considered. From 240 responses gathered, 35 were screened out as the respondents did not meet the study's screening criteria. The retained data were analysed using the path analysis technique through IBM AMOS software.

Respondents Demographic Characteristics and General Information

From the 240 responses obtained, 205 respondents have experience in using food delivery services. The other 35 responses are either incomplete or do not use food delivery service; therefore, they are excluded from data analysis. Responses from females and males are pretty equalled; out of the 205 respondents, 57.6 per cent are female, and 42.4 per cent are

male. Most of the respondents are 22 to 27 years old (69.3 per cent). The remaining respondents are 28 to 33 years old (5.9 per cent), 34 to 39 years old (4.9 per cent), 40 to 44 years old (20 per cent). This study comprises 65.4 per cent of the respondents with undergraduate qualifications, followed by 15.6 per cent of them with a postgraduate qualification, 10.2 per cent of them with a school education and 8.8 per cent of them with a pre-tertiary qualification.

Occupation of the respondents is wide-ranged – nine types of occupations. 57.6 per cent of respondents are with a monthly income lower than RM2500, followed by respondents with a monthly income of RM2501 to RM4849 (18.0 per cent), RM4,850 to RM7,099 (7.8 per cent), RM7,100 to RM10,959 (7.3 per cent) and above RM 10,960 (9.3 per cent). It is also worth noting that 53.2 per cent of respondents have used the OFD services before the imposition of movement control order (MCO). Meanwhile, 62 per cent of the respondents indicated that they had used both types (platform-to-consumer and restaurant-to-consumer) of food delivery services. The remaining respondents had used either one of the OFD services only. Only a meagre group of respondents (i.e. 4.9 per cent) had used only the restaurant-to-consumer food delivery service.

Scale Measurement – Reliability and Validity Test

Cronbach's Alpha was used to measure the reliability of data. A minimum value of .70 was employed to assess the internal consistency of the construct (Hair *et al.*, 2010). The Cronbach's Alpha coefficients for all constructs are greater than .70. The coefficient alpha estimates for each of the five constructs are: acceptance reluctance (α = .930), social influence (α = .862), perceived risk (α = .786), features of mobile apps (α = .806) and experience (α = .857). Based on the suggested cut off points, all measures appeared to be good indicators of each construct with multiple items. The mean score and standard deviation did not show any spurious data. The reliability tests, including Cronbach's Alpha, mean and standard deviation (S.D.), are presented in Table 2.0.

Table II: *Mean, standard deviation and Cronbach's Alpha Value of Constructs*

Research construct	Mean	S.D.	Cronbach's Alpha
Adoption Reluctance	2.235	0.821	0.930
Social Influence	3.380	0.866	0.862
Perceived Risk	2.737	0.598	0.786
Features of Mobile Apps	3.748	0.554	0.806
Experience	3.689	0.663	0.857

Inferential analysis

A Path Model as shown in Figure 2.0 depicted the result of this study. Five latent constructs (Adoption Reluctance, Social Influence, Features of Mobile Apps, Perceived Risk and Experience) were included in the testing of the path model.

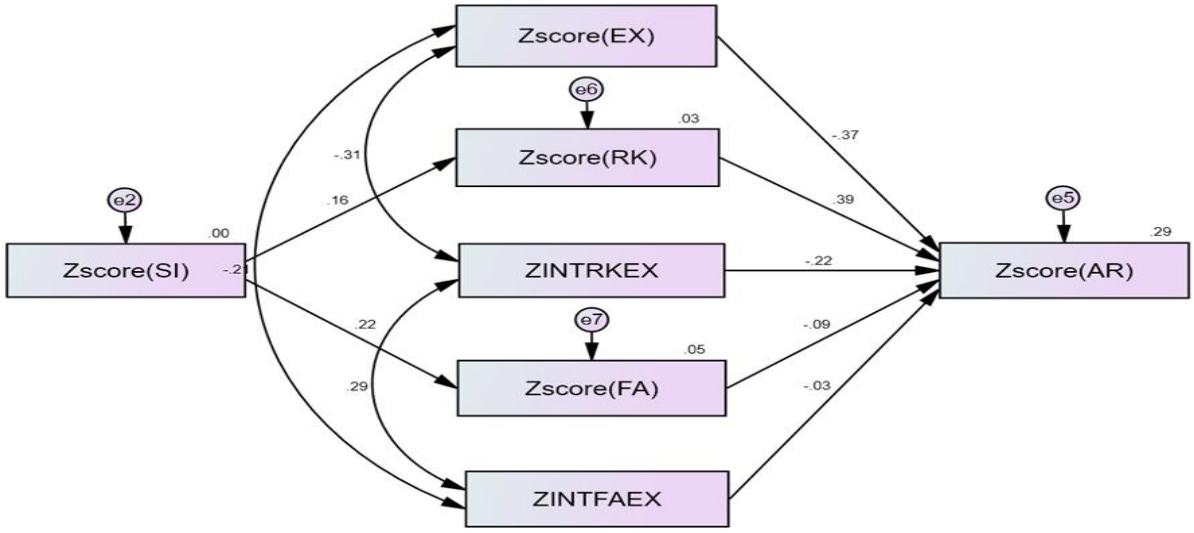

Figure 2.0 *Adoption Reluctance of Food Delivery Apps Model*

Table 3.0 shows the result of the model. The multiple square correlations (R square) of the model is 0.287; it implies that the study's model can explain 28.7 per cent effect of exogenous constructs and moderators on the endogenous construct.

Table III: *Squared Multiple Correlations*

Construct	Estimate
ZAR	.287

Hypothesis Testing

The path relationships between the five latent constructs (Adoption Reluctance, Social Influence, Features of Mobile Apps, Perceived Risk and Experience) were assessed. As shown in Table (4.0), five hypothesised paths were supported, and two were not.

Table IV: *Path analysis of Adoption Reluctance of Food Delivery Apps Model*

			Estimate	S.E.	C.R.	P
FA	<---	SI	.220	.068	3.217	.001
PR	<---	SI	.158	.069	2.290	.022
AR	<---	FA	-.082	.056	-1.456	.145
AR	<---	INTFAEX	-.014	.033	-.435	.664
AR	<---	PR	.369	.056	6.557	***
AR	<---	INTPREX	-.135	.040	-3.376	***
AR	<---	EX	-.349	.060	-5.837	***

***. Significantly different from zero at the .000 level (two-tailed).

Note: AR - adoption reluctance, EX - experience, FA - features of apps, PR - perceived risk, SI - social influence, INTRKEX – interaction between perceived risk and experience, INTFAEX - interaction between features of apps and experience.

Following are the discussions of results based on table 4.0.

Hypothesis 1a posited that social influence has a positive effect on features of mobile apps; this hypothesis is supported with $\alpha = 0.001$ and $\beta=0.220$. This result is supported by Venkatesh and Davis (2000). They coined that social

influence is the most influential determinant of PU, which determined the usage of Mobile Apps features among generation Y. Castiblanco Jimenez *et al.* (2021) proposed the same view where the perception of social groups on the usage convenient affects the user's emotion and belief, thus influencing the adoption of technology. It was found that the opinion of other users posted as reviews and ratings have made apps more discoverable, influencing downloading, purchasing, and using those apps (Khalid *et al.*, 2015).

Hypotheses 1b posited that social influence has a negative effect on perceived risk; this hypothesis is supported with α = 0.022 and β=0.158. As found by Liu and Park (2015), one of the downfalls of online purchase is that consumers would not be able to inspect the physical product before purchase, therefore increase the risk of the purchase. They can only depend on online and offline word of mouth when deciding to purchase to reduce their perceived risk. Consumer confidence in the purchase is greatly influenced by the reviews and ratings of earlier purchasers, reducing the perceived uncertainty on the purchase (Hu *et al.*, 2008). Furthermore, online reviews, social network reviews, websites or app reviews are found to influence consumer purchases (Yeo *et al.*, 2021). This research has clearly shown that the views and recommendations of social groups influenced the perception of the usefulness of technology positively and reduced the perception of risk by generation Y.

Hypothesis 2a proposed that mobile app features have a negative effect on adoption reluctance, and Hypothesis 2b proposed that experience moderates the relationship between features of mobile apps and adoption reluctance. The result shown that both hypotheses were not supported with α=0.145 and .664, respectively. Although mobile app quality found influenced the installation and adoption of food delivery apps (Cho *et al.*, 2019) which include food choice variety, fair price, timely delivery, user-friendly design, and trustworthy delivery; for Generation Y, price may be the most important factor considered when choosing a food delivery mobile app. Other factors like outdated and deceptive information in mobile apps, such as price, minimum order charge, complicated interface, and a deceptive menu, have led to consumer confusion and reluctance to use (Kaur *et al.*, 2020).

Prior experience on usage of apps may reduce the anxiety faced by the user due to the complexity of mobile apps (Sun and Zhang, 2006). On the other hand, consumers without prior experience, knowledge, and cognitive capacity may face difficulty dealing with unfamiliar mobile apps and cause resistance to use new mobile apps. Non-users of food delivery services were found to refrain from using the service due to the lack of skill in performing online purchases (Schnellbächer *et al.*, 2015). However, due to MCO adherence, food delivery apps may have become a more convenient ordering method. The risk involved may have been avoided by using familiar apps. These findings can be seen from the rejection of hypotheses that mobile apps features have a negative effect on the adoption reluctance towards food delivery apps while experience is moderating the relationship between features of mobile apps and adoption reluctance towards food delivery apps.

Hypothesis 3a proposed that perceived risk has a positive effect on adoption reluctance. The result revealed that perceived risk does positively affects adoption reluctance (α = .000, β = .369). Perceived risk is found to influence the actions of consumers (Baucer, 1960) and is supported by Stone and Gronhaug (1993). Perceived risk is found to increase the adoption resistance of consumers in purchases (Gupta and Duggal, 2021; Gupta *et al.*, 2018). It is also found negatively influence Malaysian Generation Y purchases online (Mazzini *et al.*, 2016). Consumers' perceived risks involved in food delivery, such as unhygienic food, food freshness due to road congestion, technology anxiety, have led to resistance to using food delivery service and food delivery service apps (Gupta *et al.*, 2018; Kimes,2011).

Hypothesis 3b posited that experience moderates the relationship between perceived risk and adoption reluctance. The result revealed that experience negatively moderates the relationship between perceived risk and adoption reluctance (α = .000, β = -.135). Thus, H3b is supported. Results in table 4.0 shown significant relationships between perceived risk and acceptance reluctance, experience and acceptance reluctance and the interaction of perceived risk and experience toward acceptance reluctance. These results substantiated the moderation effect of experience toward the relationship of perceived risk and acceptance reluctance (Hayes, 2017). This finding is supported by Pires *et al.* (2004), who finds that the repetition or familiarity of the consumer with specific processes will reduce their perceived risk towards those processes or acts. Through experience by using food delivery apps, users may find the perceived risk reduced over time, and familiarity with the apps may reduce their anxiety toward using the apps. With the app's familiarity, consumers and the delivery service personnel and provider will become familiar with the process, and the need for more information and inappropriate conduct will be significantly reduced. Therefore, it will reduce the reluctance of adoption (Kaur *et al.,* 2020). The consumer with prior positive experience would see a reduction in needs for more information and communication and perceived risk, resulting in a reduction in adoption reluctance (Gupta and Duggal, 2021; Kedah *et al.,* 2015 and Kimes, 2011).

IV. CONCLUSION AND IMPLICATIONS

To conclude, this study investigates Generation Y in Malaysia who had experiences in using the OFD services. TAM model has been utilised to support the theoretical stance of this study. The findings of this study were based on the 205 sets of responses gathered from Google Form, where the data were analysed using IBM AMOS software. Notably, this study highlights that almost 50 per cent of the respondents are new users of OFD services. They have begun to use the services only during the MCO period. The statistics of new users adopting OFD services align with the worldwide claim that attributes the sudden growth in the OFD segment following the Covid-19 outbreak. The descriptive statistics indicate that, on average, all the respondents agreed with the Feature of Mobile Apps and Experience construct.

On the other hand, the respondents had neutral responses towards the construct of Adoption Reluctance, Social Influence and Perceived Risks. Meanwhile, the results of path analysis reveal a significant impact of Social Influence towards the key determinants of Adoption Reluctance. These key determinants, Feature of Mobile Apps and Perceived Risks, had insignificant and significant relationships with the Adoption Reluctance, respectively. Additionally, Experience has a weak moderation effect between key determinants and Adoption Reluctance. Nevertheless, the moderation effect was insignificant on the relationship between the Feature of Mobile Apps and Adoption Reluctance.

Based on the findings of this study, almost 50 per cent of Gen Y have started to use the food delivery service during the MCO. This situation might be due to the situational circumstances of the COVID-19 pandemic, and the enactment of the Movement Control Order impeded Malaysians from carrying out numerous physical activities (Wong, 2020). If this is the case, the usage of OFD services will return to pre-COVID-19 figures after the pandemic subsides. As widely perceived, retaining customers is cost-effective than attracting new customers. Pandemic has been somehow instrumental in bringing in new customers for the OFD services. Now, it is the responsibility of the practitioners to find ways to retain these new customers. Improvement in the Mobile Feature Apps is among others to retain these new users of OFD services. Past studies have empirically demonstrated that the Features of Mobile Apps can be a double-edged sword. The superior features would facilitate the adoption rate (e.g. Cho *et al*. 2019) and vice versa to the weak features (e.g. Kaur *et al*. 2020). Thus, this

study insists that the practitioners, especially the Restaurant Operators, keep enriching their OFD services mainly by enhancing mobile apps features. Restaurant operators who are a novice to the OFD services can engage the Mobile Apps consultants or developers to develop or improve the interface of their apps. With the improved Mobile Apps Features, the users are expected to have positive experiences with the OFD services. A positive experience is essential to retain the users, especially the new users, for continuously subscribing to the OFD services even during the post-pandemic.

Restaurant and Platform Operators should devote adequate efforts and attention to content marketing in line with other key findings of this study, i.e. the significant role of Social Influence. Given the nature of the business operation that inherently utilises the online tools, the practitioners should use digital content marketing to feed the customers' curiosity through various channels. Digital content creation is relatively more straightforward and cost-efficient. A designated staff shares the company details through the storytelling approach could be used (Kee & Yazdanifard, 2015). A recent study on 707 Chinese gastronomy tourists discovered that informative and entertaining content has a positive social impact, leading the respondents to easily engage in electronic word-of-mouth (Bu *et al*. 2021). Accordingly, the current study proposes that practitioners ensure the content shared to be informative and entertaining and avoid exaggerated content.

Of the two key determinants, only Perceived Risks are found to influence the Adoption Reluctance significantly. It is interesting to note that the significant effect of Perceived Risks is valid even during the pandemic, contrary to the insignificant role of Features of Mobile Apps. Therefore, the practitioners should formulate strategies to reduce the perceived risks as much as possible to reduce the users' adoption reluctance and hence the continuous adoption intention of OFD services. For example, the inclusion of experience sharing by the famous local figures as part of the content marketing and provision of assurance in terms of on-time delivery, food quality, and reasonable pricing are among others to reduce the perceived risk of users towards the OFD services.

This study takes pride in contributing to the literature on the negative agenda of the OFD services. It is despite the OFD's existing popularity and its sudden growth due to the MCO imposition. Researchers believe both sides of OFD services should be explored to furnish the accurate details of OFD services to the stakeholders for their decision-making process. Additionally, this study contributes additional empirical evidence on the crucial role of non-technological aspects, especially Social Influence, in affecting electronic consumer behaviour.

V. LIMITATIONS AND RECOMMENDATIONS

This section summarises the limitations of the current study and proposes relevant recommendations for future research. First, the results of this study revealed that social influence, features of mobile apps, and perceived risks explain 28.7 per cent of the variance explained for

adoption reluctance among Generation Y in Malaysia. Consequently, there could be other constructs to adoption reluctance. Future research could be directed to include other constructs that are also crucial in studying the adoption reluctance. Second, this study has conducted a short-term reflection of generation Y users' perception towards adoption reluctance OFD services, especially in a particular situation (COVID-19 pandemic context). It is recommended the future research to apply longitudinal and experimental methods to explore users' perceptions in different situations, investigate causality over time, and make comparisons to explain users' continuance usage intentions of technology more comprehensively.

REFERENCES

1. Abd Rashid, I. M., Abdullah, M. F. S., Yusuf, B. N. M., & Shaari, M. S., 2016. Impact of service and food quality on customer satisfaction among generation y for the fast food restaurant in Malaysia. *International Journal of Information, Business and Management, 8*(1), pp.51 – 66.
2. Anic, I, D., Škare, V., & Milaković, I. K., 2019. The determinants and effects of online privacy concerns in the context of e-commerce. *Electronic Commerce Research and Applications*, [online] Available at < https://doi.org/10.1016/j.elerap.2019.100868> [Accessed 15 October 2021].
3. Bauer, R.A, (1960) "Consumer Behavior as Risk taking", in Hancock, R.S. (Ed.), *Dynamic Marketing for a Changing World, Proceedings of the 43rd Conference of the American Marketing Association*, pp.389-398.
4. BBC News, 2021. Food-delivery apps up to 44% more expensive, survey finds. [online] Available at: <https://www.bbc.com/news/technology-57497997> [Accessed 19 October 2021].
5. Bu, Y., Parkinson, J., & Thaichon, P., (2021). "Digital content marketing as a catalyst for e-WOM in food tourism", *Australasian Marketing Journal*, Vol. 29 No. 2, pp.142-154.
6. Castiblanco Jimenez, I.A., Cepeda García, L.C., Violante, M.G., Marcolin, F., and Vezzetti, E. (2021). "Commonly Used External TAM Variables in e-Learning, Agriculture and Virtual Reality Applications", *Future Internet*, Vol. 13 No. 1, pp.1-21.
7. Cho, M., Bonn, M.A., and Li, J., 2019. Differences in perceptions about food delivery apps between single-person and multi-person households. *International Journal of Hospitality Management*, [online] Available at: <https://doi.org/10.1016/j.ijhm.2018.06.019> [Accessed 21 October 2021].
8. Cornescu, V. and Adam, C.R., 2013. The consumer resistance behavior towards innovation. *Procedia Economics and Finance*, *6*, pp.457-465.
9. Davis, F. D. (1989). "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13 No. 3, pp. 319-339.
10. Davis, F.D., and Venkatesh, V. (1996). "A critical assessment of potential measurement biases in the technology acceptance model: three experiments", *International Journal of Human-Computer Studies*, Vol. 45 No. 1, pp.19-45.
11. dos Santos, A.A. and Ponchio, M.C., 2021. Functional, psychological and emotional barriers and the resistance to the use of digital banking services. *Innovation & Management Review*, [online] Available at: <https://doi.org/10.1108/INMR-07-2020-0093>[Accessed 24 October 2021].
12. Flandersinvestmentandtrade.com. 2021. Food and Beverages Industry Report. [online] Available at: <https://www.flandersinvestmentandtrade.com/export/sites/trade/files/market_studies/FB%20 Industry%20Report.pdf> [Accessed 19 October 2021].
13. Gupta, V. and Duggal, S. (2021), "How the consumer's attitude and behavioural intentions are influenced: A case of online food delivery applications in India", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 15 No. 1, pp.77-93.
14. Gupta, V., Khanna, K. and Gupta, R. (2018), "A study on the street food dimensions and its effects on consumer attitude and behavioural intentions", *Tourism Review*, Vol. 73 No. 3, pp.374-388.

15. Ghosh, D., 2020. Customer satisfaction towards fast food through online food delivery (ofd) services: an exploratory study. *International Journal of Management (IJM)*, 11(10), pp.645-658.
16. Hair, J. F. Black, W. C. Babin, B. J. & Anderson, R. E. (2010). *Multivariate data analysis: a global perspective* (7th ed.), Pearson Prentice Hall.
17. Hayes, A. F. (2017). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach.* (2nd ed.), New York, NY: The Guilford Press.
18. Hu, N., Liu, L., and Zhang, J. (2008). "Do online reviews affect product sales? The role of reviewer characteristics and temporal effects", *Information Technology and Management*, Vol. 9 No. 3, pp.201-214.
19. IndexMundi Home. (n.d.). *Malaysia demographics profile*. [online] Available at <https:// www.indexmundi.com/ 67anchest/demographics_profile.html> [Accessed 8 October 2021].
20. Kaur, P., Dhir, A., Talwar, S., & Ghuman, K., 2021. The value proposition of food delivery apps from the perspective of theory of consumption value. *International Journal of Contemporary Hospitality Management*, [online] Available at: < https://www.emerald.com/insight/0959-6119. htm> [Accessed 15 October 2021]
21. Kaur, P., Dhir, A., Ray, A., Bala, P. and Khalil, A., 2020. Innovation resistance theory perspective on the use of food delivery applications. *Journal of Enterprise Information Management*, [online] Available at: <https://www.emerald.com/insight/publication/issn/1741-0398> [Accessed 15 October 2021].
22. Kedah, Z., Ismail, Y., Haque, A.A. and Ahmed, S. (2015),"Key success factors of online food orderingservices: an empirical study", *Malaysian Management Review*, Vol. 50 No. 2, pp.19-36.
23. Kee, A. W. A., & Yazdanifard, R., 2015. The review of content marketing as a new trend in marketing practices. *International Journal of Management, Accounting and Economics*, *2*(9), pp. 1055-1064.
24. Khalid, H., Shihab, E., Nagappan, M., and Hassan, A.E. (2015). "What do mobile app users complain about?", *IEEE Software*, Vol. 32 No. 3, pp.70–77.
25. Kimes, S.E. (2011), "The current state of online food ordering in the US restaurant industry", *Cornell Hospitality Report*, Vol. 11 No. 17, pp.6-18.
26. Liu, Z. and Park, S. (2015), "What makes a useful online review? Implication for travel product websites", *Tourism Management*, Vol. 47, pp.140-151.
27. Lu, H., Hsu, C. and Hsu, H. (2005), "An empirical study of the effect of perceived risk upon intention to use online applications", *Information Management & Computer Security*, Vol. 13 No. 2, pp.106-120.
28. Mazzini, M., Rohani, M., and Salwana, H., (2016). "Online purchase behavior of generation Y in Malaysia", *Procedia Economics and Finance*, Vol. 37, pp.292–298.
29. Muller, J., 2021. Reasons for not using food delivery apps during COVID-19 Malaysia 2020 by gender. [Online] Available at < https://www.statista.com/ statistics/1143470/malaysia-reasons-using-food-delivery-apps-less-during-covid-19-by-gender/> [Accessed 20 October 2021].
30. Pires, G., Stanton, J., and Eckford, A. (2004), "Influences on the perceived risk of purchasing online", *Journal of Consumer Behaviour: An International Research Review*, Vol. 4 No. 2, pp.118-131.
31. San, L.Y., Omar, A. and Ramayah, T., 2015. Online purchase: a study of generation Y in Malaysia. *International Journal of Business and Management, 10*(6), pp.1-7.

32. Schiffman, L.G., and Wisenblit, J. (2019), "Consumer Behaviour", (12th ed.), Boston: Pearson.
33. Schnellbächer, C., Behr, J., Leonhäuser, I.U. and Gießen (2015), "Potential of online food shopping. An opportunity to relieve mothers' everyday life food routines?", *Ernahrungs Umschau*, Vol. 62 No. 11, pp.178–187.
34. Sharma, R., Dhir, A., Talwar, S., & Kaur, P., 2021. Over-ordering and food waste: The use of food delivery apps during a pandemic. *International Journal of Hospitality Management*, [online], Available at <https://www.sciencedirect.com/science/article/pii/S0278431921001201> [Accessed 18 October 2021].
35. Shameen, A., 2021. Tech: The future of food and grocery delivery. *The Edge Markets*, [online] Available at: <https://www.theedgemarkets.com/article/tech-future-food-and-grocery-delivery> [Accessed 10 October 2021].
36. Song, Y.E., Jeon, S.H. and Jeon, M.S., 2017. The effect of mobile food delivery application usage factors on customer satisfaction and intention to reuse. *Culinary science and hospitality research*, *23*(1), pp.37-47.
37. Statista., 2019. *Online Food Delivery - Worldwide | Statista Market Forecast*. [online] Available at: <https://www.statista.com/outlook/dmo/eservices/online-food-delivery/worldwide> [Accessed 20 October 2021].
38. Stone, R.N. and Gronhaug, K. (1993), "Perceived risk: further considerations for the marketing discipline", *European Journal of Marketing*, Vol. 3, pp.372–394.
39. Stoyanov, S.R., Hides, L., Kavanagh, D.J., Zelenko, O., Tjondronegoro, D., and Mani, M., (2015), "Mobile app rating scale: a new tool for assessing the quality of health mobile apps", *JMIR mHealth uHealth*, Vol. 3 No. 1:e27.
40. Sun, H. and Zhang, P. (2006), "The role of moderating factors in user technology acceptance", *International Journal of Human-Computer Studies*, Vol. 64, pp.53–78.
41. Ting, H., Lim, T.Y., de Run, E.C., Koh, H. and Sahdan, M., 2018. Are we Baby Boomers, Gen X and Gen Y? A qualitative inquiry into generation cohorts in Malaysia. *Kasetsart Journal of Social Sciences*, *39*(1), pp.109-115.
42. VanVoorhis, C.W. and Morgan, B.L., 2007. Understanding power and rules of thumb for determining sample sizes. *Tutorials in quantitative methods for psychology*, *3*(2), pp.43-50.
43. Venkatesh, V., and Davis, F. (2000), "A theoretical extension of the technology acceptance model: four longitudinal field studies", *Management Science*, Vol. 46 No. 2, pp.186–204.
44. Venkatesh, V., Thong, J.Y. and Xu, X. (2012), "Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology", *MIS Quarterly*, Vol. 36 No. 1, pp.157-178.
45. Wong, A., 2020. Mastercard Survey: Malaysia has the highest eWallet usage in Southeast Asia. *Soya Cincau*, [online] Available at: <https://soyacincau.com/2020/06/24/mastercard-impact-study-2020-malaysia-leads-ewallet-usage-sea/> [Accessed 25 October 2021].
46. Yeo, S.F., Tan, C.L., Teo, S.L., & Tan, K.H. (2021), "The role of food apps servitization on ,repurchase intention: a study of FoodPanda", *International Journal of Production Economics*, Vol. 234, pp.1-11.
47. Zakon. R.. 2018. *Hobbes' Internet Timeline 25.* https://www.zakon.org/robert/internet/timeline/ index.html?ver=293#1990s