Investigating the Moderating Effect of Age, Gender, and an Experience in the Relationship between Behavioural Intention to Use and Usage of Online Food Delivery Applications (OFDA) in Sarawak

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Abstract

The current study investigated the moderating effect of age, gender and an experience in the relationship between behavioural intention to use and usage of online food delivery applications (OFDA) in Sarawak. The framework of this research was drawn from the perspective of the Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2) model. The study was based on a sample gathered from users of online food delivery applications in Sarawak. Data were collected using a self-administered online questionnaire. Of the 411 returned questionnaires, 400 questionnaires were valid for analysis. IBM-SPSS Amos 24.0 procedures were utilised to analyse the data and test the hypotheses. This study focused on the significance of all constructs of the proposed conceptual model, and new findings pertaining to these constructs have been highlighted. The findings of the study lead to the conclusion that age, gender, and experience acted as partial moderator in the relationship between behavioural intention to use and usage. The significance of the findings enable to highlight the important factors in influencing people's behaviours on online food delivery applications among users in aforesaid context.

Keywords: Age, Gender, Experience, Behavioural Intention to Use, Usage, Online Food Delivery Applications

Introduction

Online Food Delivery Applications

Online food delivery applications (OFDA) are a type of web-based service that is mostly accessible through mobile devices. These applications offer services that allow customers to

order meals to be delivered to their homes (Ray et al., 2019). Customers now have access to a broader variety of options and enjoy a higher level of convenience as a result of the proliferation of online food delivery services. Customers can use these services to place orders with a variety of eateries using their mobile devices. Customers who are accustomed to making purchases online or through mobile apps are increasingly anticipating having a similar experience when they place orders for food and beverages (Shankar et al., 2022).

Aside from that, having food delivered to one's home or place of business through an internet service has become a significant and valued alternative for a growing number of the population (Kumar et al., 2021). Mobile applications that are location-based offer users with real-time access to information and services that are relevant to their current locations. One example of this type of mobile application is online food delivery applications (Dirsehan & Cankat, 2021). As a direct consequence to this, ordering and receiving food from restaurants is simplified by the use of online food delivery (Dirsehan & Cankat, 2021). The apps used for online food delivery manage a variety of tasks, such as order payment, tracking, and monitoring (Gupta & Duggal, 2021). According to the findings of some researchers, factors such as a high demand for workers and the prevalence of one-person households have all played a role in the growing of the OFDA market (Saad, 2021).

The percentage of the market demand by OFDA has increased intensely over the past few years. These services are becoming increasingly competitive, particularly among younger people who own smartphones and are accustomed to using various mobile applications. The conveniences offered by online food delivery services, such as the presentation of a list of restaurants and the sorting of food items based on price, distance, and projected delivery time, including the anticipated time for producing the food dish, contribute to the allure of these services. Additionally, the rising amounts of discretionary incomes available to consumers also play a role in increasing the popularity of these services (Pandey et al., 2022).

Trend of Using OFDA

As more people have access to the internet and the rapid penetration of smartphones has led to the growth of OFDA which let customers order food online and have it delivered (Cho et al., 2019; Zhao & Bacao, 2020). Cho et al. (2019) argues that OFDA is an innovative way that allows consumers to purchase a wide range of food selection via platform(s). OFDA platforms collect orders from consumer and pass on the information to restaurants and delivery personnel (Troise et al., 2021). This opens up new opportunity for restaurants to reach new market while increasing their revenues and consumers the convenience of having food delivered to their home. In addition, because of the increase in economics activity created by technology companies that fulfil consumer demand via the immediate delivery of goods and services, OFDA have become very popular and rapidly increasing market, and the size of the global market reached around US$100 billion in 2019 and the revenue is expected to increase to US$164.5 billion by the year 2024 (Muangmee et al., 2021). Further, the global online food-delivery sector is anticipated to grow to US$223.7 billion by 2027, with a 11.44% of compound annual growth rate (CAGR) (Statista, 2022).

Before the COVID-19 pandemic, majority of urban consumers are warming up to the concept of OFDA. This trend had a major shift with multiple regions reporting a surge in OFDA services, such as an increase 65% for Asia Pacific region, 21% for North America, 23% for

Europe and 150% for Latin America region (Statista, n.d.). The new behaviour imposed will most likely remain as long-term behaviours, altering consumer's behaviours permanently. In 2020 and 2021, due to strict lockdown order, OFDA had cemented itself as the most significant trend around the world representing a significant shift from frequenting restaurant to ordering food online (Durai, n.d.). During the COVID-19 lockdown, consumers bought almost everything online, and food delivery has become indispensable (Yi & Chiu, 2023). People have proceeded from ordering takeaways in person to stores to takeaways by phone and ordering food online and with mobile devices (Shroff et al., 2022). Thus, the world's food consumption behaviours are changing dramatically. Until 2021, food delivery has become a global market worth more than USD 150bn, tripling since 2017 (Ahuja Al.," n.d.). Nonetheless, starting in late 2019, because of the COVID-19 pandemic, the whole environment of online food delivery platforms has undergone significant changes. Thus, online food delivery platforms have sensed an opportunity, providing discounts and perks to entice customers to order online instead (Magramo & Lo, 2022).

Online Food Delivery Applications in Malaysia

In Malaysia, the increasing popularity of the smartphone has contributed to the expansion of OFDA. The vast majority of Malaysian customers are increasingly turning to their mobile devices to complete their online purchase transactions. According to the Malaysian Communications & Multimedia Commission, around 28.4 million Malaysians used their mobile smartphones to access the internet, with 64 percent of them using restaurants' online food delivery applications to purchase food products (MCMC, 2020). Its show that the trend is on the rise, in line with the accelerated evolution of internet applications and technology that are making a positive impact on the country's business sector (Yeo, Tan, Teo, & Tan, 2021).

The increase in the number of food and beverage industry players has also contributed to the usage of OFDA in Malaysia (Chai et al., 2019). According to Statista (2021), there were 6.9 million OFDA users in Malaysia in 2020; OFDA revenue is projected to reach USD 221 million at a growth rate of 45.9% year-over-year. Online food delivery in the country is available from a wide variety of establishments, including restaurants and food delivery companies (Pitchay, Ganesan, Zulkifli, & Khaliq, 2021; Nayan & Hassan, 2020). FoodPanda was the first application of food delivery service in Malaysia since 2012 and reported that approximately 75 per cent of Malaysians were in favour of using the FoodPanda food delivery app (Hassan, 2018), with more than 10 million times had been downloaded the FoodPanda Malaysia application from the Google Play Store, (Rosli, 2018).

The greatest concentration of food delivery services may be found in major urban areas such as Kuala Lumpur, the Klang Valley, and Johor Bahru (Nayan & Hassan, 2020). It is because delivery app users have maintained a similar demographic, most of these areas face the most traffic, just going out to the restaurant for a meal could take a fair bit of time, so food delivery services provide an efficient and practical alternative. This means that the driving force of the OFDA 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, OFDA services can be easily accessed through mobile devices or computers, which greatly encourage consumers to use OFDA services in their daily food

consumption. The consumers enjoy these applications and their delivery services because it brings greatest convenience in their daily lives.

Problem Statement

The COVID-19 pandemic has changed the way the food service sector operates and triggered new trends to meet the demand for more socially isolated food consumption. As OFDA grow in popularity in Malaysia, so does the emergence of food delivery services. Amidst the COVID-19 restrictions, it has become increasingly common for Malaysians to opt for food delivery services (Rosman et al., 2022). The pandemic also contributed to the growth of food delivery apps through increased demand for delivery, closure of dine-in restaurants, convenience, and safety concerns, and food delivery apps have only continued to become more popular since then, with the highly competitive Malaysian food delivery market projected to grow by 14.28% in the coming years (Poon & Tung, Hui En, 2022; Surya et al., 2021; Tan et al., 2021).

Some of the major players include GrabFood, FoodPanda, DeliverEat, and Bungkusit. These apps have been expanding their services in Malaysia, partnering with more local restaurants, and offering a range of promotions and discounts to attract more customers. This emerging trend has prompted many restaurants to explore using OFDA to enhance their customer service. However, when the government allowed restaurants to reopen, mobile food delivery apps declined slightly as Malaysians rushed to dine at restaurants. It was claimed that the intention to use OFDAs reduced by 17 per cent when the MCO was lifted (Statista, 2021). Thus, it should be investigated whether the growth trend continues. Although it has made it easier for customers to buy food, understanding the factors that drive the intention to use OFDAs needs further research (Rosman et al., 2022). Therefore, there is a need to conduct a study in the Sarawak context to examine the factors associated with using OFDA. Given the explosive growth of food delivery apps, it is critical to examine this phenomenon holistically, particularly with the Sarawak context in mind and with particular attention to the factors that drive customers using OFDA even after the pandemic.

Moreover, the most important moderating effects that the literature has deemed relevant to the adoption of new technology were incorporated (Liébana-Cabanillas et al., 2021). The demographic variables play an important part in influencing people's behaviours, however analyses regarding the moderating effect of demographic variables are somewhat limited (Talukder et al., 2023). Paul & Spiru (2021), argue that demographic factors do not influence the adoption and usage of new technology. Nevertheless, there is overwhelming empirical evidence in recent studies showing that demographic factors has an influence on technology adoption (AlHadid et al., 2022; Kasilingam & Krishna, 2021; Talukder et al., 2023). Therefore, originally the moderating effect of age, gender and experience in UTAUT 2 model has used between performance expectancy, effort expectancy, social influence, facilitating condition and behavioural intention to use in different context (Kasilingam & Krishna, 2021; Terblanche & Kidd, 2022). It is important to note here that, to the best of researcher's knowledge, the variable of age, gender and experience has never been used in any previous study on UTAUT 2 model as moderators between behavioural intention to use and technology usage in the context of online food delivery applications. Thus age, gender and experience has included as a moderators to test the relationships between these variables in the Sarawak context. Hence, this study was designed to accomplish the following specific objective:

- To determine the moderating effect of age, gender and experience in the relationship between behavioural intention to use and usage of online food delivery applications

Literature Review

Age, Gender, Experience

In recent years, there has been a significant increase in the number of studies investigating how age affects the technology use decisions among consumers (Belanche et al., 2020b; Hwang et al., 2019). Previous research has suggested that age is an important factor in the use of technology. For instance, for user interfaces associated with age-friendly design, such as a reduction in the complexity of menus, better resolution, and larger screen and button sizes (Petrovčič et al., 2018), previous research has suggested that age is an important factor. In addition, earlier studies have shown that age has an effect on the way in which information is processed, particularly in apps that have a high degree of variability (Belanche et al., 2019).

In marketing, gender is regarded as an important segmentation variable and plays a significant part in determining how customers evaluate various products and services. The differences between men and women have significant implications for the decision-making process (Venkatesh & Davis, 2000). Recent research has demonstrated that gender differences exist in terms of preferences for the utilisation of various software platforms (Alalwan et al., 2017), application software (Belanche et al., 2019), and technological devices (Cai, Fan, & Du, 2017).

Since the process of adopting new technology can vary depending on factors such as age and gender, businesses need to devise distinct plans for male and female customers (Lin et al., 2017). For instance, businesses that offer drone food delivery (DFD) services would be more likely to achieve high levels of customer satisfaction if they were aware of the gender differences for the adoption of new technologies. This would allow them to tailor their offerings specifically to the needs of male and female customers. For instance, Hwang et al. (2019) explored the moderating role of gender and age in helping to manage customers effectively and efficiently in the context of drone food delivery (DFD) services. Besides, the study by Belanche, Flavián, and Rueda (2020a) discovered that when marketers had an understanding of the differences that could be caused by factors such as age, gender, and occupation, they were able to design more accurate segmentation and apply different marketing strategies based on the varying requirements of different consumers.

Previous research has suggested that demographic factors may have an effect on the dependent variable (Tandon et al., 2020a, 2020b; Tandon, Jabeen, et al., 2021; Tandon, Kaur, et al., 2021). In research on how people use new technologies, age and gender are important factors to consider (Talwar et al., 2019, 2020). Control variables were used in a previous study to assess the impacts of the independent variables included age, gender, education level, and household size. The use and adoption of any internet-based technological product, including food delivery apps, was found to be influenced by these demographic factors (Kumar & Shah, 2021).

Thus, Song et al (2021a), suggested that further research be conducted to gain an understanding of the perceptions held by various age groups or generations, which influence the attitudes and behaviours of individuals in relation to app adoption. For instance, researchers found that both age and gender had a significant influence on the association between attitude and the intention to spread favourable word of mouth regarding drone-enabled food delivery (Hwang & Kim, 2019). In addition, it was discovered that the gender of consumers had a moderating influence on the food delivery applications they used (Kaur et al., 2020).

In a similar vein, it was found that age played a role in determining the association between consumers' attitudes and their behavioural responses to e-commerce (Wang et al., 2020). Hence, Song et al (2021b), concluded that as the number of people using smartphones continues to rise across the board, it will be necessary to create delivery apps that are convenient and straightforward to be used by people of all ages (Song et al., 2021b). Its similarly with the finding stated that older consumers are less inclined to adopt new technology (AlHadid et al., 2022). This may be because older people are less flexible to technological change whereas younger people are more flexible to changing technology (Singh et al., 2021).

The most important moderating effects that the literature has deemed relevant to the adoption of new technology were incorporated (Liébana-Cabanillas et al., 2021). The demographic variables play an important part in influencing people's behaviors, however analyses regarding the moderating effect of demographic variables are somewhat limited (Talukder et al., 2023). Paul & Spiru (2021), argue that demographic factors do not influence the adoption and usage of new technology. Nevertheless, there is overwhelming empirical evidence in recent studies showing that demographic factors has an influence on technology adoption (AlHadid et al., 2022; Kasilingam & Krishna, 2021; Talukder et al., 2023).

Therefore in this study, the moderating effect of age, gender and experience were examined. Originally, the moderating effect of age, gender and experience in UTAUT 2 model has used between performance expectancy, effort expectancy, social influence, facilitating condition and behavioural intention to use in different context (Kasilingam & Krishna, 2021; Terblanche & Kidd, 2022). It is important to note here that, to the best of researcher's knowledge, the variable of age, gender and experience has never been used in any previous study on UTAUT 2 model as moderators between behavioural intention to use and online food delivery applications. Hence, this study hypothesised that:

H1: Age moderates the effect of behavioural intention to use on online food delivery applications usage

H2: Gender moderates the effect of behavioural intention to use on online food delivery applications usage

H3: Experience moderates the effect of behavioural intention to use on online food delivery applications usage

Methodology
The sample of this study consisted of online food delivery application users aged 18 years and above in Sarawak. Since the sampling frame was not available, this study used G*Power to perform the power analysis (Faul et al., 2007; Kang, 2021). Power analysis determines the minimum sample size by taking into account the part of the model with the

largest number of predictors (Hair et al., 2019; Uttley, 2019). For this study, the parameters' values for the minimum sample size determination were set at f2 = 0.15, power = 0.95, Alpha = 0.05, and predictors = 10. The results from G*Power 3.1.9.7 software indicated that this study required a minimum sample size of 96. The researcher planned to limit the sample to 400 respondents, as a sample larger than 400 respondents would cause Structural Equation Model (SEM) to become sensitive, causing any difference to be detected and the goodness-of-fit measures to exhibit poor fit (Awang et al., 2015). Therefore, the sample size for this study should be in the range between the minimum of 96 and the maximum of 400 responses.

Due to the non-availability of a sampling frame, the convenient sampling technique was used for this study. The technique is useful when the target population is defined in terms of a very broad category. With this sampling technique, any member of the target population who is available at the moment is approached and asked to participate in the research; if the person shows consent, the investigation is done (Alvi, 2016). For the present study, the researcher included those participants who were easy or convenient to approach. The convenient sampling technique was selected because it requires less effort, cost, and time as the sample is quick and easy to approach.

Questionnaires are considered to be one of the most suitable data collection tools for collecting data from large samples (Saunders et al., 2019). The online questionnaire may provide a viable alternative method for carrying out a research plan (Siva et al., n.d.). Besides, it offers a higher response rate (Wu et al., 2022). In this study, the selection of respondents was based on the coverage areas of online food delivery services by Foodpanda and GrabFood. This was because Foodpanda (70.36%) and GrabFood (63.19%) were the popular online food delivery applications among Malaysian online food delivery users due to the user-friendliness of their systems (Tan et al., 2021). Besides, GrabFood was available in Kuching, Miri, Bintulu, and Sibu, while Foodpanda was available in Kuching, Petrajaya, Miri, Sibu, Bintulu, dan Samarahan. Data were collected over a period of 2 months from Sarawak's urban and sub-urban population. The urban and sub-urban population was selected since they had better internet connection and the online food delivery applications were available only in urban and sub-urban areas in Sarawak. During the data collection period, a Google Form link was sent to potential respondents after they were contacted online via messaging applications such as Email, WhatsApp, and Facebook. In total, 400 responses were gathered via this method of sampling for further analysis using IBM-SPSS-AMOS 24.0.

Results and Findings
Age Moderates the Effect Of Behavioural Intention to use on Online Food Delivery Applications Usage.
The moderation effect was significant since the difference between the constrained model and the unconstrained model was greater than 3.84 (99.755). For the 18–29 years age group, the difference in chi square value was 99.755 (1956.922 – 1857.167), and the difference in degree of freedom was 1 (944 – 943).

Table 1

Moderation Effect of Age (18–29 Years)

Age (18-29)					
Model Constraint	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	137	1956.922	944	0	2.073
Saturated model	1081	0	0		
Independence model	46	13841.35	1035	0	13.373
Model unconstraint	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	138	1857.167	943	0	1.969
Saturated model	1081	0	0		
Independence model	46	9335.821	1035	0	9.02
Difference Chi Square	99.755				
Results	Significant				

Similarly, for the 30–65 years age group, the difference in chi square value was 9.982 (1867.149 – 1857.167), and the difference in degree of freedom was 1. Therefore, age was a significant moderator between behavioural intention and usage.

Table 2

Moderation Effect of Age (30–65 Years)

Age (30-65)					
Model Constraint	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	137	1867.149	944	0	1.978
Saturated model	1081	0	0		
Independence model	46	9335.821	1035	0	9.02
Model	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	138	1857.167	943	0	1.969
Saturated model	1081	0	0		
Independence model	46	9335.821	1035	0	9.02
Difference Chi Square	9.982				
Results	Significant				

The significant results for the 18–29 years old age group (b = 0.728, *C.R.* = 12.157, $p <$ .05) and the 30–65 years old age group (b = 0.712, *C.R* = 8.042, $p <$ .05) indicated the occurrence of partial moderation.

Table 3

Summary on the Effects of Age

Age	Path			Estimate	S.E.	C.R.	P
18-29 Years old	UB	<---	BI	0.728	0.06	12.157	0.000
30-65 Years old	UB	<---	BI	0.712	0.089	8.042	0.000

Age Moderates the Effect of Behavioural Intention to Use on OFDA Usage

Age moderated the relationship between behavioural intention to use and OFDA usage. This study demonstrated that if age was high (low), the behavioural intention to use mattered less (more) as a moderator between behavioural intention to use and usage. The use and adoption of any internet-based technological product, including food delivery apps,

was found to be influenced by these demographic factors (Kumar & Shah, 2021). Thus, H1 was supported, with a partial moderation role.

Gender Moderates the Effect of Behavioural Intention to Use on Online Food Delivery Applications Usage

The moderation effect was significant since the difference between the constrained model and the unconstrained model was greater than 3.84 (17.866). For male, the difference in chi square value was 17.866 (1882.796 − 1864.93), and the difference in degree of freedom was 1 = 944 − 943.

Table 4
Moderation Effect of Gender (Male)

Male					
Model Constraint	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	137	1882.796	944	0.000	1.994
Saturated model	1081	0	0		
Independence model	46	7790.743	1035	0.000	7.527
Male					
Model Unconstraint	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	138	1864.93	943	0.000	1.978
Saturated model	1081	0	0		
Independence model	46	7790.743	1035	0.000	7.527
Difference chi square	17.866				
Result	Significant				

Similarly, for female, the difference in chi square was 16.433 (2049.141 − 2032.708), and the difference in degree of freedom was 1. Therefore, gender was a significant moderator between behavioural intention to use and usage.

Table 5
Effect of Gender (Female)

Female					
Model constraint	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	137	2049.141	944	0	2.171
Saturated model	1081	0	0		
Independence model	46	15524.87	1035	0	15
Model unconstraint	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	138	2032.708	943	0	2.156
Saturated model	1081	0	0		
Independence model	46	15524.87	1035	0	15
Difference chi square	16.433				
Result	Significant				

The significant results for male (b = 0.64, *C.R.* = 8.069, $p < .05$) and female (b = 0.742, *C.R.* = 12.059, $p < .05$) indicated the occurrence of partial moderation.

Table 6
Summary of the Effects of Gender

Gender	Path			Estimate	S.E.	C.R.	P
Male	UB	<--	BI	0.64	0.079	8.069	0.000
Female	UB	<--	BI	0.742	0.062	12.059	0.000

Gender Moderates the Effect of Behavioural Intention to Use on OFDA Usage

Gender moderated the relationship between behavioural intention to use and OFDA usage. This study demonstrated that male and female users has a significant relationship to moderate between behavioural intention to use and usage. The use and adoption of any internet-based technological product, including food delivery apps, was found to be influenced by these demographic factors (Kumar & Shah, 2021). Thus, H2 was supported, with a partial moderation role.

Experience Moderates the Effect of Behavioural Intention to Use on Online Food Delivery Applications Usage

The moderation effect was significant since the difference between the constrained model and unconstrained model was greater than 3.84 (12.147). For the 1–2 years of experience group, the difference in the chi square value was 12.147 (1959.373 – 1947.226), and the difference in degree of freedom was 1 (944 – 943).

Table 7
Moderation Effect of Experience (1–2 Years)

Experience (1-2 Year)					
Model Constraint	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	137	1959.373	944	0.00	2.076
Saturated model	1081	0	0		
Independence model	46	12132.37	1035	0.00	11.722
Model Unconstraint	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	138	1947.226	943	0.000	2.065
Saturated model	1081	0	0		
Independence model	46	12132.37	1035	0.000	11.722
Difference chi square	12.147				
Result	Significant				

Similarly, for the more than 2 years of experience group, the difference in chi square was 25.134 (2200.015 – 2174.881), and the difference in degree of freedom was 1 (944 – 943). Therefore, experience was a significant moderator between behavioural intention and usage.

Table 8
Moderation Effect of Experience (>2 Years)

Experience (>2 Year)					
Model Constraint	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	137	2200.015	944	0.0000	2.331
Saturated model	1081	0	0		
Independence model	46	11283.14	1035	0.0000	10.902
Model	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	138	2174.881	943	0.0000	2.306
Saturated model	1081	0	0		
Independence model	46	11283.14	1035	0.0000	10.902
Difference chi square	25.134				
Result	Significant				

The significant results for the 1–2 years of experience group (b = 0.756, *C.R.* = 11.219, $p < .05$) and the more than 2 years of experience group (b = 0.625, *C.R.* = 8.867, $p < .05$) indicated the occurrence of partial moderation.

Table 9
Summary of the Moderation Effects of Experience

Exp.	Path			Estimate	S.E.	C.R.	P
1 to 2	UB	<---	BI	0.756	0.067	11.219	0.000
>2	UB	<---	BI	0.625	0.07	8.867	0.000

Experience Moderates the Effect of Behavioural Intention to Use on OFDA Usage

Experience moderated the relationship between behavioural intention to use and OFDA usage. This study demonstrated that if experience in online food delivery applications was high (low), behavioural intention to use mattered less (more) as a mediator between behavioural intention to use and usage. The use and adoption of any internet-based technological product, including food delivery apps, was found to be influenced by these demographic factors (Kumar & Shah, 2021). Thus, H3 was supported, with a partial moderation role.

Conclusion

The objective of present study was to examine if age, gender and experience can buffer the positive relationship between behavioural intention to use and OFDA usage. It is important to note here that, to the best of researcher's knowledge, the variable of age, gender and experience has never been used in any previous study on UTAUT 2 model has used age, gender and experience as moderators between behavioural intention to use and technology usage. Originally, the moderating effect of age, gender and experience in UTAUT 2 model has used between performance expectancy, effort expectancy, social influence, facilitating condition and behavioural intention to use in different context (Kasilingam & Krishna, 2021; Terblanche & Kidd, 2022). In order to achieve this objective, three hypotheses were formulated to test the interactions of age, gender and experience in a strong and positive relationship between behavioural intention to use and technology usage. Findings of

the study revealed support for three hypotheses, more specifically, age, gender and experience successfully moderated the positive relationship between behavioural intention to use and technology usage. This finding is a step forward in the realm of UTAUT 2 model in research because many prior studies failed to find any moderating effects for age, gender and experience between behavioural intention to use and technology usage so this finding is consistent with the findings of many prior studies, stated that demographic variables play an important part in influencing people's behaviours' (Talukder et al., 2023). However, its contradict with study done by Paul & Spiru, (2021) argue that demographic factors do not influence the adoption and usage of new technology. Nevertheless, there is overwhelming empirical evidence in recent studies showing that demographic factors has an influence on technology adoption (AlHadid et al., 2022; Kasilingam & Krishna, 2021; Talukder et al., 2023).

More over based on theoretical significance, in order to get a comprehensive picture of the factors contributing to the acceptance of OFDA among users in Sarawak, the Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2) formulated by Venkatesh et al., (2012) has been used as a theoretical framework to develop a research framework for this study. The UTAUT 2 integrates several main constructs in order to predict individual's intention and use of certain new technology. Originally the moderating effect of age, gender and experience in UTAUT 2 model has used between performance expectancy, effort expectancy, social influence, facilitating condition and behavioural intention to use in different context (Kasilingam & Krishna, 2021; Terblanche & Kidd, 2022). It is important to note here that, to the best of researcher's knowledge, the variable of age, gender and experience has never been used in any previous study on UTAUT 2 model as moderators between behavioural intention to use and technology usage in the context of online food delivery applications. Thus age, gender and experience has included as a moderators to test the relationships between these variables.

In addition based on practical significance, the Sarawak government has mentioned that the government itself has serious about improving the e-commerce delivery system in the state (Utusan Borneo Online, 2021). Thus, the development of the digital economy through Sarawak Digital Economy Corporation (SDEC) has taken a further step ahead to ensure that the state keeps up with the technological advancements. The Sarawak Digital Economy Strategy is formulated to help the state achieve a high-income status through digital transformation. Therefore, policymakers and stakeholders in Sarawak need a better knowledge of the factors driving the use of OFDA and contributing to the digital economy of the state. This development is in line with the state's digital policy of ensuring Sarawak keeps up with technological advancements. It is also parallel with the Sarawak Digital Economy Strategy, which aims to attain a high-income status for the state through digital transformation.

Hence, the usage of OFDA encourages the adoption of digital technology among both businesses and consumers, contributing to the overall technological development of Sarawak. As well as, the adoption of OFDA allows restaurants in Sarawak to adapt to changing consumers behaviours, including the increasing demand for digital and contactless services. These guidelines will make it easier for application developers to comprehend the elements that influence the utilisation of OFDA. It is essential to acknowledge that OFDA are a part of the distribution channels utilised by restaurants to satisfy the requirements of their

customers and to encourage and increase the level of restaurant customer engagement. Thus, food delivery applications providers can improve their systems. While OFDA offer various benefits, it's essential to balance their growth with considerations for fair nosiness practices, sustainability and the impact on traditional dining establishment. A better understanding of the factors influencing the usage of OFDA among users is important to the policymakers and stakeholders in Sarawak.

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