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# The Impact of Online Food Delivery Services to Hotel Catering Business in China

## **Abstract**

Online food-delivery platforms have been booming in recent years with the rapid development of e-commerce, especially in China. These platforms provide customers with considerable choices on food and convenience by the use of smartphones or computers. Conversely, online food delivery (OFD) service also brings many benefits to restaurants, such as accurate orders from diners, efficient ordering system, and improved customer and kitchen management. In China, competition in the domestic catering market is fierce, especially hotel catering, which currently faces a serious challenge. Emerging restaurants attract several customers by providing them with unique products at low prices and convenient services.

This study aims to explore the opportunities and challenges of OFD services on hotel catering businesses in China by conducting a mixed-methods approach based on an integrated theoretical research model. A questionnaire was used to collect data and examine the factors that influence the actual usage of OFD services in China through descriptive statistical, correlation, and regression analyses (SPSS 23). Thereafter, focus group interviews were conducted to investigate the perceptions of hoteliers and experts in the hospitality and tourism industry. The topics covered the opportunities and challenges of hotel catering businesses in China on the basis of the findings of the questionnaire. Implications on how hotel management can face the current challenges and grab opportunities to develop OFD services were provided.

**Keywords:** Online Food Delivery, Hotel Catering Business, Opportunities and Challenges, China

#### 1. Introduction

To date, e-commerce is largely popular worldwide, and a variety of online platforms are available for consumers to purchase goods anytime and anywhere (Jiang, Yang, & Jun, 2013). The food related industry developed as a mature market, where online food-delivery platforms offer more choices to and convenience for consumers. This versatility enables users to order from a variety of restaurants with a few clicks on their smartphones or computers. In this manner, restaurants maintain their competitiveness (Hirschberg, Schumacher, & Wrulich, 2016). The online food delivery (OFD) market will continue to grow at a rapid pace. The share of restaurant sales from online orders is estimated to increase from 2.5% in 2017 to 4.9% in 2022 (Consultant, 2018).

Statista (2018) showed that most of the revenue in the OFD segment is generated in China (US\$32,908 million in 2018). OFD is a fast growing segment compared with other mobile applications in China (Daxueconsulting, 2016). The total amount of the OFD market in China is RMB\$ 67.73 million with a growth rate of 16.2% in the last quarter of 2017 (Watch, 2018). In addition, the number of users that registered online has increased to 295 million by the end of June, 2017 (Economist, 2017), which covered 1,300 cities in China. This number was predicted to be worth more than RMB\$ 240 billion (US\$37 billion) by 2018 (Tao, 2017). Liangyu (2018) stated that almost 300 million users have purchased food using online services. Thus, OFD has opened the market of various stakeholders (i.e., restaurant operators, platforms, users, and delivery service) to new opportunities. Conversely, hotel catering has faced serious challenges since the end of 2012. The Chinese government introduced "An eight-point code to cut bureaucracy and maintain close ties with the people". Therefore, the government dining consumption should be reformed (Eight-point of regulation, 2012). This announcement highly

impacts many upscale restaurants in the hotel business. Mainly, a large proportion of five-star hotels depend on the government consumption. As a result, the hotel catering business is facing a dilemma. With the fast development of casual dining restaurants, the hotel dining business is becoming increasingly difficult and competitive. Competition in the domestic catering market is fierce. For instance, many large-scale restaurants have emerged and attracted customers by offering them favorable price, trendy design, and a unique variety of choices of cuisine to satisfy their needs and wants on different consumption levels.

However, the hotel catering has its own advantages compared with socialized catering, such as good hygiene conditions and quality service and food. In recent years, an increasing number of upscale hotels initiated food delivery services. For instance, in June 2016, the Westin Hotel became the first five-star hotel in Shanghai with a qualified meal delivery team. In September 2016, the Beijing capital tourism group reached an agreement with Baidu Waimai (OFD platform) and jointly built a catering delivery ecosystem for starred hotels. Nevertheless, based on the overall development of the food deliver of hotels, this industry is still in its infancy because only few hotels offer food delivery services. Furthermore, several hotels remain unsuitable for delivery service because of the high requirements in terms of quality and service of the dishes (Hui, 2018). Therefore, this study aims to explore the opportunities and challenges of OFD services on hotel catering business in China through the mixed-methods approach. By collecting both users and hoteliers' views of food delivery, this study identify how users' attitude of using OFD services, as well as how hoteliers' view of OFD impact on hotel catering service.

### 2. Literature Review

## 2.1 Development of OFD service

Various industries worldwide have adopted e-commerce, which enabled customers to shop online anytime and anywhere (Jiang et al., 2013). In this context, the food related industry has developed into maturity as a market with the development of OFD platforms and services that provide more choices and convenience to customers. Conversely, OFD also assists restaurants in promoting their business and increasing their competitiveness (Hirschberg et al., 2016). Furthermore, the food delivery service technology enables restaurant operators to provide efficient production, accurate orders, and user management (Suhartanto, Helmi Ali, Tan, Sjahroeddin, & Kusdibyo, 2019).

OFD is characterized by two types, which enable consumers to compare the restaurant menus, prices, and reviews from previous customers. The first one emerged approximately 15 years ago and is called "aggregators". It is a type of traditional delivery service, where a customer orders food online and restaurants handle the delivery and pay for the order. Examples of this type of service are Delivery Hero, Foodpanda, and Just Eat. The second one pertains to the "new delivery" players that emerged in 2013. They provided platforms for customers and restaurants that lack drivers. That is, customers order food from restaurants through online platforms. The restaurants can then deliver food to customers assisted by the drivers registered under online platforms, such as Deliveroo and Foodora. This type of service differs because the revenues of new delivery players are gained from restaurants and customers alike ( Hirschberg et al., 2016). According to Statista (2017), approximately 44% of consumers use food delivery services at least once a month in the United States. Out of these consumers, 43% of them order food online, whereas 13% of them use mobile apps to order food. Additionally, 82% of the total food orders in the United States for 2018 are home consumption, whereas 16% are derived from

workplaces consumption (John, 2018) which demonstrate a growing marketing for catering industry.

## 2.2 Development of OFD service in China

In the previous years, OFD has developed rapidly in China. In fact, it is the fastest growing segment compared with other mobile applications in China. As such, competition in this market has increased (Daxueconsulting, 2016). Maimaiti, Zhao, Jia, Ru, and Zhu (2018) discussed the online-to-offline (O2O) food delivery service market scale, which increased by a total of \$29.1 billion from 2011 to 2017. The number of its users also experienced a growth of 64.6% from 114 million in 2015 to 343 million in 2017. The total amount of Chinese OFD market is US\$67.73 million with a growth rate of 16.2% in the last quarter of 2017 (Watch, 2018). The number of users registered online has increased to 295 million by the end of June, 2017 (Economist, 2017). Tao (2017) pointed out that the online delivery service has covered 1,300 cities in China and is predicted to be worth more than RMB\$ 240 billion (US\$35 billion) in 2018.

According to the Economist (2017), the OFD market in China is composed of three market segments, namely, a white-collar business market with 82.7% market share, family community market (9.7%), and campus market (7.6%). Yu (2018) also indicated that more than 50% of orders originated from residential areas, followed by schools, office buildings, and hotels. As indicated by director Jiang Junxian of the China Cuisine Association, nearly 300 million users have purchased food using online services (Liangyu, 2018). That is, one-fifth of Chinese users are dependent on online delivery services (Yu, 2018). Thus, what is the impact of OFD services on restaurants in China? According to a Chinadaily report (Yu, 2018), online delivery cannot replace the dine-in experience. However, dining at home without cooking is also becoming a trend. Furthermore, the government of China has shown increased concern about

food safety regarding online food retailers with the frequent occurrence of foodborne illness. The government has amended the regulations of the Food Safety Law to ensure that the entire process of OFD is legal and safe (Kim et al., 2018).

# 2.3 Development of hotel catering business in China

"The hotel industry in China is growing rapidly owing to high demand of inbound and outbound tourists" (Pimtong, Zhang, Law and Lin, 2016, p. 313). Hotel dining in China is well-known to be expensive due to the high costs of labor and quality food (Lin, Tung, Zhang and Gu, 2018). When the Chinese government announced the cut down in government dining consumption in 2012, a severe impact was felt in hotel catering operations in upscale hotel operations (four to five stars hotels). However, the social dining business is doing well in China mainly due to the price, food variety, and trendy themes, which constitute a unique experience. Consequently, the reduction of government consumption and development in social dining has negatively influenced the hotel catering industry. In fact, the cost of operation in hotels is much higher than that of regular restaurants mainly in terms of the cost for quality food, and regulated benefit package of labor cost. Furthermore, online travel agents are key distributors of marketing in hotel sales, which share a high proportion of hotel revenue (CNINFO, 2017). However, hotel catering has certain advantages over social restaurants in aspects, such as food hygiene and safety and food and service quality.

In recent years, an increasing number of starred hotels have begun to lower down their prices to attract customer consumption and launched delivery services. For instance, in June 2016, the Westin Hotel became the first five-star hotel in Shanghai that was qualified to operate an OFD. It obtained the "Catering Service License", which is especially given for quantity OFD service (Hui, 2018; Jiandanbaike, 2017). However, the OFD service in hotel catering is still in its

infancy and many hotel restaurants cannot provide OFD services (Hui, 2018). With the fast development of social dining and food delivery service, various factors threaten the operation of hotel catering. The hotel catering service has to find a way to stand out in the catering business.

# 2.4 Influential factors of online purchasing and hypothesis development

# 2.4.1 Influential factors of OFD service

Online shopping has become a popular way of purchasing method. Many factors motivate consumers to use online services, such as convenience, usefulness, time savings (Jing, 2016), and prior online experience (Kimes, 2011; Rezaei, Shahijan, Valaei, Rahimi, & Ismail, 2018; Saarijärvi, Mitronen, & Yrjölä, 2014). Nejati and Parakhodi Moghaddam (2013) found that online food consumption is motivated by utilitarian and hedonic motivations. Furthermore, Yeo, Goh, and Rezaei (2017) examined the factors of hedonic motivations, convenience motivation, prior online purchase experience, time-saving orientation, price-saving orientation, and post-usage benefits. The authors found that all factors are closely related to the attitude toward OFD services as well as behavioral intention toward OFD services.

# 2.4.2 Perceived risk of online shopping

Belanche, Casaló, and Guinalíu (2012) purported that the factor of risk perception negatively influence consumers' attitude toward online shopping. Mainly, consumers and merchants lack face-to-face interaction, which may increase uncertainty and risk (Wu & Chen, 2005). These risks come from intangibility and time lag that consumers experience in exposing their personal information to an unknown online merchant (De Ruyter, Wetzels, & Kleijnen, 2001). With frauds and piracy crimes frequently happening in online shopping, an increasing number of consumers are aware of online security, privacy, financial, and personal information

(Belanche et al., 2012). The purchasing process of online shopping is under control of the emarket platform, not the consumers (Lee and Turban (2001). Consequently, referring to perceived risk in the decision to purchase online is very important for consumers (De Ruyter et al., 2001; Hsu & Chiu, 2004).

H1: Perceived risk is negatively related to behavioral attitude toward using OFD service.

## 2.4.3 Trust

The previous literature has considered trust a factor that drives an individual's attitude and intention of purchasing behavior (Ashraf, Thongpapanl, & Auh, 2014; Hassanein & Head, 2007; Hsu, Chuang, & Hsu, 2014; Lin, 2011; Wang & Emurian, 2005). Hassanein and Head (2007) and Lin (2011) also proposed that trust is a direct determining factor of consumers' attitude. Akroush and Al-Debei (2015) stated that trust was significant in online environments because of the various types of perceived risks that exist in online environments. Similarly, Alagoz and Hekimoglu (2012) defined trust as a important factor that affect customers' intention of online purchasing. Based on these definitions, we propose the following hypothesis.

H2: Trust is positively related to behavioral attitude toward OFD service

# 2.5 Theoretical background and hypothesis development

## 2.5.1 Theory of planned behavior (TPB)

As described in the articles of Fishbein and Ajzen (1975) and Ajzen (1985), TPB is a simple and cognitive model that covers many behavioral factors. Moreover, TPB has been widely adopted in many research areas and industries, such as consumption and social psychology-related studies (Ajzen, 1991; Taylor & Todd, 1997), studies on consumer food choices, food-related areas and behavior (Conner & Sparks, 2005; Cook, Fairweather, & Campbell, 2000; Honkanen, Olsen, &

Verplanken, 2005; Sparks, Hedderley, & Shepherd, 1992; Verbeke & Vermeir, 2004), and other research on online purchasing behavior (Bhattacherjee, 2002; Joey, 2002; Suh & Han, 2003). The TPB consists of three main factors, namely, attitude, perceived behavioral control, and subjective norm. Figure 1 illustrates the TPB.

# \*\*Insert Figure 1. Theory of Planned Behavior

In terms of purchase attention, numerous studies have indicated that self-confidence positively influences consumers' purchase intention (Conner & Abraham, 2001; Liang & Lim, 2011). Hansen, Jensen, and Solgaard (2004) proved that online buying intention of individuals is positively related to perceived behavioral control, subjective norm, and online buying attitude. Lam, Cho, and Qu (2007) also argued that attitudes and subjective norms are positively related to behavioral intention. Hwang (2019) pointed out that attitude positively and significantly increase behavioral intentions. According to Yeo et al. (2017), the attitude of OFD service is positively related to the behavioral intention of OFD service. Therefore, we propose the following hypothesis.

H3: Behavioral intention toward using OFD service is positively related to actual OFD service usage.

Subjective norm refers to an individual's perception of whether other important people think the behavior should be engaged in, which plays a key role on consumers' behavioral intention (Lu, Zhou, & Wang, 2009; Liang & Lim, 2011). Hansen et al. (2004) and Lam et al. (2007) found that the relationship between subjective norm and behavioral intention was positively related. Hence, consumers may opt to use OFD services only because their friends, families, or relatives are users and are recommending these services. Therefore,

H4: Subjective norm is positively related to the behavioral intention toward using OFD services. Ajzen (1991, p. 184) identified perceived behavioral control as the extent of an individual's feeling about engaging in the behavior. It may directly impact the actual usage behavior; and "the person who is confident that he can master this activity is more likely to persevere than the person who doubts his ability". Lu et al. (2009) argued that perceived behavioral control mainly pertains to the consideration of consumers as to whether they possess resources and capability to successfully control a behavior. Therefore, even if a consumer has a strong intention to use OFD services, they may defer from using this technology because of the shortage of skills or capabilities. Thus, we derive the following hypotheses.

H5: Perceived behavioral control is positively related to behavioral intention toward using OFD service.

H6: Perceived behavioral control is positively related to the actual utilization of OFD services.

# 2.5.2 Technology acceptance model (TAM)

The majority of OFD services rely on third-party platforms, which are a type of technology-driven application. Thus, the technology acceptance of OFD is a key factor in understanding how consumer feel about this application. In the information system research, the TAM is frequently applied to examine individual's acceptance of information technology (IT). In addition, TAM plays an important role in predicting consumers' attitude and loyalty on using the information system. It investigates consumer perception on the usefulness and ease of use of a system (Davis, Bagozzi, & Warshaw, 1989). Figure 2 illustrates the TAM.

\*\*Insert Figure 2. Technology Acceptance Model

In addition, TAM is widely applied to the research on user acceptance of different technologies, such as e-mail, word processors, the World Wide Web, enterprise resource planning (ERP) systems, and e-commerce (Amoako-Gyampah & Salam, 2004; Davis et al., 1989; Gefen, 2004; Pavlou, 2003). Kim (2012) argued that TAM recently had been further studied under the web environment to understand and predict consumers' acceptance of Internet-related technologies as well as purchase intentions. The study was conducted according to their browsing TAM, which consists of two important concepts, namely, perceived usefulness (PU) and perceived ease of use (PEOU). Both concepts play an important role in shaping the attitude toward the use of any type of IT (Davis et al., 1989). Additionally, various researchers pointed out that PU and PEOU prominently impact user attitudes, which are also related to user adoption and satisfaction (Hess, McNab, & Basoglu, 2014; Martins, Oliveira, & Popovič, 2014; Morosan, 2012). Hence: H7: PU is positively related to behavioral attitude toward using OFD services.

## 2.5.3 Integrative theoretical model

On the basis of the TPB and TAM as well as factors that affect online shopping (perceived risk of online shopping and trust), this study proposes an integrative theoretical model to examine the factors that influence the actual usage of OFD services.

H8: PEOU is positively related to behavioral attitude toward using OFD services.

Figure 3 summarizes the research model as well as the hypotheses.

## Insert Figure 3. Research Model and Hypotheses

# 3. Methodology

This study adopted the mixed-methods approach to explore the opportunities and challenges of OFD services on hotel resturant outlets in China. Wisdom and Creswell (2013) indicated that "mixed methods" is an emergent methodology of research that facilitates the systematic integration of quantitative and qualitative data. This method entails a complete and synergistic utilization of data compared to separating the collection and analyzing the quantitative and qualitative data. Wisdom and Creswell (2013) also listed many advantages of adopting the mixed-methods approach. First, it can help researchers investigate the conflicts between quantitative results and qualitative findings. Second, it is an effective means of reflecting participants' point of view. Third, it provides researchers with increased flexibility and information compared with only conducting quantitative or qualitative research. Lastly, through data collection, the mixed-methods approach can provide richer and more comprehensive findings. In phase one, the quantitative approach is applied to the data collected from consumers. Phase two follows, which uses the focus group interview approach to collect views from hoteliers in China.

#### 3.1 Phase one

#### 3.1.1 Scale measurement

Quantitative data were collected by conducting a structured questionnaire to explore the habits of OFD service users. Furthermore, the questionnaire was used to measure and examine the factors that influence the actual usage of OFD services. Although many studies are related to online food purchasing, only very few of the studies are set in the context of OFD services, especially in China. Therefore, the measurement items and questions were developed with reference to previous studies as well as the proposed integrative theoretical model as previously mentioned. The questionnaire consists of 19 closed-ended questions with 25 measurement items.

The questionnaire consists of four sections, namely, two screen questions, behavioral pattern of using OFD apps (Jie, 2018), online food purchase behavior (Cho, Bonn, & Li, 2019; Correa et al., 2019; Kim et al., 2018; Maimaiti et al., 2018; Suhartanto et al., 2019), and respondents' demographic information. The final section of the questionnaire was developed to test the hypothesized relationships based on the comprehensive literature and theoretical models. This study used a Likert-type scale from 1 "Strongly Agree" to 5 "Strongly Disagree" to rate their experience. The influential factors (perceived risk and trust) and measurement items of the TAM (PU and PEOU) were adopted from Belanche et al. (2012) and Amin, Rezaei, and Abolghasemi (2014). In addition, other items of the TPB, such as attitude, subjective norm, perceived behavioral control, behavioral intention toward using OFD services, and actual usage of OFD services were adopted from Ingham, Cadieux, and Berrada (2015), Liang and Lim (2011), and Yeo et al. (2017).

# 3.1.2 Data collection

To ensure the reliability and acceptability of the questionnaire, a pilot survey was distributed to 50 individuals with various demographics. Few changes in wording were applied to the final version of the questionnaire as a result. The questionnaire was translated into Chinese because the target population of this study is Chinese. Thereafter, an online questionnaire was generated using a qualified online questionnaire company. A link was generated when the questionnaire was published on the platform of the company and distributed to the individuals through social media (i.e., WeChat and QQ) to collect data. A total of 407 completed questionnaires were collected. A total of 379 (93.12%) valid questionnaires remained after eliminating questionnaires with unusual answers. Moreover, respondents who do not use OFD

services were considered ineligible to answer the questionnaire, which was regarded terminated and invalid.

## 3.1.3 Findings and discussions

The questionnaire aims to explore the habits of OFD service users and determine the factors that influence the actual usage of OFD services in China. Table 1 shows the demographics of OFD users. The majority (95%) of the participants have used OFD services and most of them are female between the age of 25 and 34 with a Bachelor's degree and earn 3,000 to 8,999 RMB monthly. According to occupation, the top three groups are sales, students, and managers. Only 19 participants did not use OFD services because they dislike the service. Nearly 80% of the participants used OFD services at least 5–10 times per month with a few of them using it up to 20 times. The frequent orders are lunch and dinner at homes, offices, schools, or hotels. Evening snacks are popular during weekends and public holidays. Users frequently order fast food (76%) and staple food (71%, e.g., noodles, rice, and other dishes) within the price range of 21 RMB to 49 RMB.

# Insert Table 1. Demographics of OFD Users

According to the results, the participants selected "a variety of choices" as the most important reason for using OFD services, followed by "time saving" and "convenient", which are in line with previous studies (Jeng, 2016; Kimes, 2011; Rezaei et al., 2018; Saarijärvi et al., 2014). Moreover, most of the participants regarded "food quality" and "price" as important factors when using OFD services. This finding is consistent with those Yeo et al. (2017) and Suhartanto et al. (2019), that is, food quality and price significantly affected the loyalty of customers toward OFD services. A number of participants opt to use OFD services based on "food delivery time," "food taste," as well as "restaurants' online review", due to requirements that emerged, namely,

quick delivery time and tasty food (Cho et al., 2019). Customers who purchase food products online mainly rely on online reviews from other consumers. Otherwise, verify online information is difficult due to its virtual nature (Kim et al., 2018). Maimaiti et al. (2018) argued that restaurant license in China is not required by OFD service platforms for online restaurants. Therefore, they are not supervised by the government. Furthermore, Kim et al. (2018) pointed out that the concerns about the accuracy of online food information were reinforced as online restaurants were not asked to conduct an accuracy verification of their advertisements. In this study, participants also mentioned that they were concerned about factors, such as "food safety and hygiene", "whether the food is same as described," "whether the food is healthy," and "whether the online restaurants are licensed," especially the factor of food safety and hygiene, which was ranked first.

According to Jie (2018), the number of hotel guests that use OFD services has increased in the recent year due to the affordable price and variety of choices. This study thus found similar results. That is, more than 60% of participants choose OFD services when staying at a hotel. The top three factors that participants considered are reasonable price, various choice, and convenience. However, a small number of participants indicated that they preferred to dine in hotels because of the good ambiance, quality food, and good hygiene. Jie (2018) also mentioned this aspect. In term of hypothesis testing, an integrative theoretical model, which constitutes of the TPB and TAM as well as other factors (perceived risk of online shopping and trust), was used to examine the relationships among PU, PEOU, subjective norm, perceived behavioral control, other external factors, and actual usage of OFD services. Whether or not these relationships were mediated by attitude toward using OFD services and intention toward using OFD service was also examined. Table 2 shows the results of hypothesis testing.

# Insert Table 2. Results of Hypothesis Testing

Based on previous studies, behavioral intention is positively related to actual behavior. The results of the present study further examined the positive relationship between intention toward using OFD service and actual OFD service. In addition, Lam et al. (2007) indicated that a positive relationship was observed between attitude and behavioral intention. Yeo et al. (2017) pointed out that attitude toward OFD services is positively related to the behavioral intention of OFD service. Thereby, attitude toward using OFD service is also positively related to actual OFD service usage. In other words, the more positive the attitude of the users toward using OFD service, the more likely the users are going to use OFD services.

Several scholars have indicated that subjective norm was positively related to behavioral intention (Hansen et al., 2004; Lam et al., 2007). The results of the present study also confirmed this relationship. Therefore, subjective norm is also positively related to actual OFD service usage. This notion indicates that people are more willing to use OFD services if recommended by families or friends. Hansen et al. (2004) argued that perceived behavioral control positively affects individuals' online buying behavior, whereas Ajzen (1991) posited that perceived behavioral control may directly impact the actual usage behavior. In the present study, perceived behavioral control was found to be a significant variable, which has a positive relationship with intention toward using OFD service and actual OFD service usage. This finding indicates that if individuals have higher confidence regarding the control of their behavior performance with regard the use of OFD services, then their intention toward using OFD services will be higher. They are also more likely to use the OFD service.

In the TAM model, PU and PEOU are the two main factors related to user adoption and satisfaction. They positively influence users' attitudes (Hess, McNab, & Basoglu, 2014; Martins,

Oliveira, & Popovič, 2014; Morosan, 2012). Moreover, Hassanein and Head (2007) and Lin (2011) also found that trust can directly affect customers' attitude. In terms of OFD services, the results clearly show that these factors are positively related to the attitude toward using OFD services. That is, if customers experience more satisfaction with the usage and function of OFD apps or trust toward it, then they are more willing to use OFD services. However, perceived risk was found to be a significant factor that is negatively related to the attitude of using OFD service. The results in this research confirmed that the higher the perceived risk, the worse the customer attitude toward the use of OFD services. In this regard, if customers consider OFD service a risky operation, then their attitude toward using the service will be diminish.

#### 3.2 Phase two

#### 3.2.1 Data collection

The focus group interview approach was adopted in phase two to explore the perception of OFD service offered by hoteliers in China. The purpose of using this approach is to capture the interactions and reactions of interviewees and conjecture their understanding about the topic under study. In addition, we aim to solicit their feelings about the impact of OFD service on hotel catering business (Brotherton, 2015). The focus group interview questions were designed on the basis of the findings of the questionnaire in phase one. A total of 10 focus groups were conducted in Feburary 2019. Each group consisted of 7–8 participants (Kitzinger & Barbour, 1999; Morgan & Krueger, 1998), who were mainland Chinese and experienced managers, top executives, and academic researchers mainly from the hotel, tourism, and educational industries. A total of 76 participants were interviewed, 35 of whom were female. All the participants are

currently working in the service industry, such as hotels, tourism industry, and other service industries.

To build rapport and make the interviewees feel comfortable during the interviews, 10 volunteer moderators were invited to manage and conduct the interviews. They were trained by the researchers on various aspects, such as greeting interviewees, briefing rules, asking questions, and managing discussions to ensure that the participants hold a consistent understanding of the interview topic. At the beginning of the interview, the moderator briefed the participants with the basic rules followed by semi-structured interview questions. The groups were encouraged to express their views on the following questions:

- Please share what are the factors for hotel guests choose to/ not to use the OFD service?
- What are the strength and weakness of hotel outlets verse OFD service?
- What are the opportunities and challenges for hotel catering service?

We took the linguistic environment of China into consideration. Thus, the interviews were conducted in Mandarin. Importantly, the interviewees were assured of anonymity to encouraged them to discuss freely and confidently. Furthermore, the discussion of each focus group lasted approximately 30–45 min and recorded using a digital recorder. In the meantime, all conversations were transcribed by professionals.

After obtaining the transcripts, content analysis was carried out to obtain a brief overview of the hotel and tourism industry experts' perception of OFD services and the current challenges and opportunities for the hotel catering business. Content analysis is a scientific method that provides inferences from basically verbal or communicative data. As indicated in the study of de Carlos, Alén, Pérez-González, and Figueroa (2019), the purpose of using content analysis is to understand data and analyze them directly through an objective, systematic, and quantitative

procedure. In addition, a qualitative research software QSR NVivo 11 was used to code the key factors from the transcribed data and classify the categories according to the research questions.

# 3.2.3 Findings and discussions

Why do hotel guests use OFD services? Approximately 89% of the participants cited reasonable price as the main reason why hotel guests use OFD services. However, more than 80% indicated that hotel guests use OFD service because they are "too lazy to go out" to dine. These two factors were rated as the top two factors followed by variety of choices (67%) and convenience (46%). The results are quite similar with those from users' perception. With regard to users' concern about using OFD services, the majority of interviewees (87%) cited food quality and hygiene as important factors when using OFD service. In addition, interviewees also suggested that users' concerns, such as unhealthy cooking standard (32%) and long delivery time (36%) when using OFD services. In addition, a total of 738 text units were coded and analyzed from the transcripts. The presentation of the findings is divided into six parts, namely, strengths of hotel catering business (53 text units), strengths of OFD service (90 text units), weaknesses of hotel catering businesses (54 text units), weaknesses of OFD service (opportunities for hotel catering business, 36 text units), challenges for hotel catering business (90 text units), and strategies (411 text units). The participants identified these components during the focus group discussions. F1 represents group one followed by a participant's seat number. For instance, group 1, participant 1 is coded as F1:1.

Table 3 presents the findings.

Insert Table 3. Presentation of Findings

Among all analyzed text units of strengths for hotel catering business, the interviewees frequently mentioned "good atmosphere and nice place for gathering" (24 text units, 45%) and "completed catering facilities and professional service" (23 text units, 43%) as strengths of the hotel catering business. From the consumers' perspective, dining experience and environment are very important, especially when organizing gathering s with families and friends. Sufficient space is also an essential condition that homes or other places may not satisfy. In addition, the hotel catering outlets also provide customers with comprehensive catering facilities and professional service to make them feel comfortable. This aspect is also attractive for the customers. For instance, one of the interviewees stated that

"I would like to celebrate my birthday in a five-star hotel, as the staff are very nice, friendly, and professional. They always provide a small surprise for my birthday and sing happy birthday with my families and friends to me. I really enjoy the atmosphere there" (F1:3).

The finding of the first strength supports the result why hotel guests choose to dine in hotels and the factor "good dining environment" accounts for the highest proportion among other factors. Moreover, a small part of the participants indicated that the strengths of dining in hotel include food quality, hygiene assurance, and availability of catering receipt for business travelers. These findings are similar to the results for why hotel guests choose to dine in hotels. "Quality and hygiene assurance" and meal reimbursement were pointed out by 75% and 19% of the hotel guests, respectively.

The second part is the strengths of OFD services. The top two strengths are "a variety of choices with local taste" (39 text units, 43%) and "convenient with flexible opening time" (30 text units, 33%). These two findings are in parallel to the results of why consumers choose to use OFD service instead of dining in hotel restaurants. "It is very convenient to order food by using the OFD apps and there are a variety of choices for food and restaurants. Moreover, the various

operating schedule of each online restaurant can cater for different diners' preferences (F1:1 and F6:5). Followed by "reasonable price with many payment methods are available" (19 text units, 21%) and "time-saving and can be traced in real time" (2 text units, 2%) are also the strengths of OFD service's that mentioned by the participants. These findings further expand consumers' opinions regarding the use of OFD services.

In terms of weaknesses of hotel catering business, "limited choice for food and no innovation" received the highest rating (28 text units, 52%). "Low cost performance" (16 text units, 30%) is also a big concern for consumers when dining in hotel restaurants, followed by "expensive (high price)" and "no catering service in low-end hotel". For instance, "I do not prefer having dinner in hotel restaurant as it is very expensive, but the dishes are always the same without innovation, I think that this is low cost performance" (F8:3). This finding is also similar to consumers' perception that they refrain from eating in hotel restaurants due to the lack of innovation for hotel catering. Furthermore, the price is high, whereas the quality does match the price. In terms of the weakness of OFD services, the factor "no assurance for food safety and hygiene" accounts for 50% (18 text units) among others that are in line with the result of customers' concern about using OFD service that they regard "food safety and hygiene" as the most important concerns when using OFD service. Furthermore, the participants mentioned other weaknesses, such as "I will feel humiliated if I use OFD service in five-star hotel" (F10:6), "I found that the service of each delivery is different, some of them provide very good service, even better than the service in hotel, but some of them just want to complete their work" (F5:6), and "the OFD app is easy to use for youngsters, but the elderlies are normally unable to use and it is not environmental-friendly as this service creates many packages" (F6:7). Although these aspects constitute the weakness of OFD service, they also can be regarded as opportunities for the

management of the hotel business to turn these weaknesses into strengths by implementing unique strategies.

The participants also discussed certain challenges during the focus group interviews. As the majority of the interviewee are hoteliers, they found several problems regarding hotel operations and impact on hotel guests from the usage of OFD services. These aspects can be challenges for the hotel catering business. Many participants mentioned that if the hotel allows the food delivery to hotel guests, then it may cause a safety problem for other hotel guests. A similar case actually occurred in China. Meanwhile, other participants explained that food delivery may disturb other hotel guests (privacy) and lower the service quality and image of the hotel. If hotels allow guest to use OFD services, then doing so may influence the profitability of the hotel catering business. A few participants indicated that "the OFD service mainly impacts the catering service of middle- and high-end hotels, as almost all low-end hotels do not offer catering service. The target market of high-ends hotels is not youngsters, while the young generation are the main customers for OFD services. Therefore, middle-class hotels may be the main groups that are heavily impacted by OFD services" (F3:6, F5:7, and F7:1).

The strategic implications were finally proposed by the participants based on the strengths and weaknesses of the OFD service and hotel catering business. Furthermore, challenges and opportunities of hotel catering business as well as the results of hypotheses from the quantitative questionnaire are presented. First, the subjective norm positively affects consumers' intention toward using OFD service. In other words, suggestions from consumers' families and friends as well as word of mouth (WOM) are essential for decision making. Therefore, the participants suggested that hotels should strengthen online and offline marketing for hotel catering business.

"Hotels can organize more activities with different and unique themes to attract more customers, such as gourmet week or open day for wedding" (F7:2).

"Offer special package to the hotel loyalty customers if they can come with their friends or families during weekend and holidays so that can increase the number of new customers, like 4 people come together can enjoy one free or a bottle of wine" (F2:3).

Furthermore, one of the participants recommended that "hotels can cooperate with some famous apps like Dazhongdianping to improve its restaurants' awareness if the reviews of the restaurant generated by other guests are good" (F5:7). Meanwhile, "hotels can generate a QR code especially for guests ordering food in the hotel restaurants and train the hotel staffs to offer this service to all the hotel guests, let the hotel guests know that they can enjoy quality food by scanning the QR code and simply clicking on their smartphones, which is very convenient" (F5:3). This statement is also in line with the findings that PEOU and usefulness are positively related to behavioral attitude toward using OFD services.

Secondly, "permit but limit the OFD service in hotel by making related rules" received the second highest frequency. A hotel team may create a set of protocol in handling food delivery services. Moreover, "the disclaimers of online food safety problems should be provided to hotel guests by hotel to avoid any unnecessary troubles" (F9:1). At the same time, several participants also suggested that hotels should cooperate with the OFD platforms, such that they can promote special packages on the platform that is produced by hotel. Thus, guest needs are not only satisfied, but also the risk of food quality and safety assurance is avoided.

Lastly, customers and interviewees cited the factors "limited choices," "no innovation," and "low-cost performance" as the weaknesses of the hotel catering business. Therefore, recommendations, such as "improve the type and taste of the food" and "improve hotel catering

cost performance by adjusting the price" were forwarded to the hotel management to improve the profitability of their hotel catering business.

### 6. Conclusions

The quantitative method was used to successfully integrated the TAM and TPB models. This study aimed to investigate the influential factors regarding the usage of OFD service in China. These findings improve the understanding of hoteliers and industry experts about OFD services, which will lay a solid foundation for the focus group interview. According to results, "a variety of choices," "time saving," and "convenient" are the users' top three important reasons for using OFD service, which is in line with previous studies (Kimes, 2011; Rezaei et al., 2018; Saarijärvi et al., 2014, Jeng, 2016). This study also analyzed the rationale of hotel guests in regard the use of OFD services. These factors are reasonable price, various choice, and convenience. This findings also support Jie (2018). Many factors and concern influence the decision of users on OFD services, such as food quality and price, food delivery time, food taste, restaurants' online review, and food safety and hygiene. All hypotheses are supported according to the results of the regression analysis. That is, if the OFD service is easy to use, then its function is very useful, easy to control, low risk, and recommended by most of the families and friends. Then, the actual usage of OFD services will be increased.

In terms of managerial contribution, (a) this study identified the strengths and weaknesses of hotel catering service verse to OFD service. For instance, several interviewees regarded dining experience and environment as key factors, especially when organizing gatherings for families and friends. Facility is also an essential consideration that home or other places may be unable to satisfy. However, this study also found that hotel catering service tends to have limited

innovation and menu selection, which can be constraints for hotel guests. Moreover, the interviewees also examined opportunities and challenges. The OFD service has many weaknesses, such no assurance of food safety and hygiene, no service standard for deliveries, not environmental-friendly (use takeout container), people do not know how to use OFD apps. Other people feel humiliated when they the app in a five-star hotel. In this manner, hotels can grab the opportunities to increase their catering sales by implementing effective strategies. The participants also found certain challenges for the hotel catering business. For instance, safety issues may arise for hotel guests, which can lower the service quality, image, and profit of hotel catering (i.e., safety, privacy, and hygiene of room). Meanwhile, middle- and high-class hotels are largely influenced by OFD service. Finally, the hoteliers and industry experts posed strategic implications on the basis of the strengths and weaknesses of OFD service and hotel catering business, challenges and opportunities of hotel catering business as well as the results of the hypotheses based on the quantitative questionnaire. For instance, the hotel should "strengthen the online and offline marketing for hotel catering business," "permit but limit the OFD service in hotel by making related rules," "improve the type and taste of the food," "cooperate with OFD platforms," "improve hotel service quality," "improve hotel catering cost performance by adjusting the price," and "provide guest (hotel chef) door-to-door service".

#### 7. Limitations

This study proposes meaningful suggestions and implications with certain limitations that should be considered for further study. First, this study used an online questionnaire to collect data, which is widely used in consumer research due to low cost, convenience, and flexibility. However, this method can lead to selection bias as well as problems, such as limited sampling

and respondent availability (Wright, 2005). Hence, different types of data collection methods are recommended for further research to reduce bias and eliminate other disadvantages. Second, focus group interview was used to collect the qualitative data because it is a time-saving method that can solicit more opinions and feedback compared with other methods of interviews. However, it is less efficient in covering the maximum depth on certain specific topics. For instance, interviewees may not be willing to express their opinions when the ideas of the topic are opposite their views. Therefore, a face to face in-depth interview is recommended for further study because it can generate more insightful responses, especially for sensitive topics. Lastly, except for the constructs of the TAM and TPB models, only two additional factors were used because other factors may influence the usage of OFD service. However, the market for OFD services is getting larger. Therefore, several factors that may potentially affect the usage of OFD services should be considered in future studies.

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