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CULTIVATING USAGE AND WORD-OF-MOUTH IN FOOD DELIVERY APPLICATIONS: A CONCEPTUAL STUDY

Nurul Syahirah Idris[1*], Muhammad Safuan Abdul Latip[2] & Noradzhar Baba[3]

[1,3] *Faculty of Hotel and Tourism,*
Universiti Teknologi MARA Cawangan Selangor, Kampus Puncak Alam

[2]*Faculty of Hotel and Tourism,*
Universiti Teknologi MARA Cawangan Terengganu, Kampus Dungun

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ABSTRACT

Food delivery applications (FDAs) have surged in popularity in recent years, gaining widespread acceptance among consumers in both developed and developing countries. The appeal of these applications stems from their user-friendly interfaces and efficient food delivery services to people's homes. FDAs have also offered restaurants a unique opportunity to boost revenue without expanding seating capacity. The food sector transformed as busy consumers increasingly use FDAs due to hectic schedules, impacting dining and cooking habits. Despite the escalating popularity of FDAs, a need remains to comprehend the drivers of their usage and electronic word-of-mouth across various age groups and generations. Hence, this study seeks to conduct an in-depth literature review to explore the potential factors influencing FDA usage and eWOM. The Technology Acceptance Model (TAM) is utilised as a guiding framework to underpin the rationale behind potential predictors, providing insights to practitioners and academics in the food delivery industry, thereby enhancing urban landscape planning and management efficiency. Additionally, the study aims to conceptually investigate potential connections between FDA users and demographic characteristics, uncovering potential differences. The study's findings are intended to offer valuable insights to practitioners and researchers within the food delivery sector, fostering a

deeper understanding of the drivers behind food delivery app adoption and eWOM, with a clear focus on demographic distinctions.

1. Introduction

Food delivery applications have emerged as a transformative innovation that not only bridged the gap between customers and nearby restaurants, but also revolutionised the landscape of the sharing economy. By doing so, they ushered in fresh avenues for business growth and employment opportunities. Leveraging the platform of the sharing economy, these applications capitalised on a powerful paradigm shift. Notably, the proliferation of food delivery applications in Malaysia has played a pivotal role in shaping the evolution of food delivery services within the nation. Projections by Acumen Research and Consulting (2019) point to a staggering trajectory, estimating that the meal delivery market in Malaysia is poised to burgeon to approximately 319.1 million US dollars by 2026.

In the contemporary urban lifestyle, the convenience underpinning food delivery services has assumed a central role as underscored by (Belanche et al., 2020). Over the past decade, the global ascent of food delivery applications has been a notable phenomenon, spanning diverse corners of the world. This meteoric rise owes its momentum to the seamless ease these services offer, complemented by the ubiquity of smartphones and mobile applications among consumers as highlighted by Wen et al. (2022). In the midst of this smartphone prevalence, Roh and Park (2019) underscore how food delivery apps such as Foodpanda, DeliverEat, and GrabFood have adeptly bridged the gap between consumers and a diverse array of local dining options.

In Malaysia's vibrant food delivery landscape, companies such as Foodpanda, Dahmakan, DeliverEat, and GrabFood stand out among the multitude of players as indicated by Similarweb (2019). Pitchay et al. (2022) posit that these dynamics are substantially influenced by factors like escalating per capita income and a heightened public consciousness. Although Malaysia's smartphone penetration may not match that of China, the nation remains ardently committed to embracing mobile commerce.

Lee et al. (2019) underscore consumers' growing penchant for time-saving solutions as a pivotal impetus driving the escalating popularity of online food delivery services. Moreover, Cho et al. (2019) unearth that the contemporary quest for optimising time and streamlining daily routines is steering individuals towards innovative solutions, with food delivery apps emerging as a convenient remedy that alleviates the complexities of cooking or dining out. In a world perpetually immersed in bustling schedules, the ability to effortlessly order food online and have it promptly delivered to one's doorstep confers substantial convenience.

The advent of the COVID-19 pandemic, heralding unprecedented disruptions across the foodservice sector and instigating novel trends aimed at promoting social distancing in food consumption (Kim et al., 2021a), has further bolstered the surging popularity of online food delivery services. The pandemic compelled numerous restaurants to recalibrate their operations, pivoting towards contactless and online food delivery systems to sustain competitiveness and viability in the market landscape. Consequently, the pandemic-induced shift has led to a meteoric rise in the adoption of online food delivery systems by both foodservice providers and

consumers alike as illuminated by Statista (2022). According to Ray et al. (2019), food delivery applications can be divided into two categories based on their operational model. The first category consists of applications operated by the restaurants themselves, including KFC, Domino's, and Pizza Hut. The second category consists of a variety of third-party intermediary platforms, such as Foodpanda and GrabFood, that connect consumers with a variety of nearby restaurants. Roh and Park (2019) note that the second type of app has become more prevalent and extensively adopted because of its capacity to provide users with a greater variety of restaurant options and greater convenience.

In conjunction with the COVID-19 pandemic, the demand for food delivery applications has been fuelled by consumers' desire for convenience and safety (Roh & Park, 2019; Ray et al., 2019; Kim et al., 2021a). As a result, the foodservice industry has had to adapt to accommodate these changing consumer preferences, causing many restaurants to rely on these platforms to reach their customers. Moreover, it is essential to emphasise the significant impact of digital transformation on the food industry (Brem et al., 2021; Zeng et al., 2017; Troise et al., 2022; Rondi et al., 2020). The incorporation of technology has resulted in significant alterations and innovations that impact the entire food supply chain, including production, logistics, and service delivery.

In the 21st century, the food and beverage industry's reliance on technology has reached a critical point, with the acceptance and utilisation of food delivery applications and other digital tools now crucial to the survival of many businesses. In a swiftly evolving industry, businesses run the risk of becoming irrelevant if they do not adopt and implement these technologies. As a result, it is crucial to comprehend the moderating factors that influence the adoption and use of these digital tools as they are becoming increasingly important to the organisational viability of food businesses (Cameron, 2006). This study employs the Technology Acceptance Model (TAM), a theoretical framework that evaluates the value of technology from the customers' perspective to identify the primary characteristics of utility and usability (Davis, 1989; Teo, 2010; Kang & Namkung, 2019). In doing so, the study aims to shed light on the significance of technology in the food industry and how it can be better integrated to satisfy customers' evolving needs and expectations.

According to Statista (2022), the adoption of food delivery applications (FDAs) has grown significantly, with 24% of Malaysians using them at least once a week and 8 percent using them at least once a month. In 2019, 90.1% of Malaysian individuals and households had internet connectivity, while 97.1% used social media (Department of Statistics Malaysia, 2020). This transition towards a digital lifestyle has fuelled the creation of FDAs which are answering the restaurant industry's increasing need for off-premises orders (Rivera, 2019). The increase in FDA demand can be linked to a variety of factors, including hectic work schedules and a preference for quick and convenient food delivery, especially among the tech-savvy younger population (Ray et al., 2019; Kaur et al., 2021; Statista, 2020, as cited in Tandon et al., 2021). Furthermore, the ability to provide delivery without the need for additional seating allows restaurants and bars to expand their customer base (Xu & Huang, 2019, as cited in Tandon et al., 2021). Consumers are looking for more meal delivery options as takeaway and delivery orders increase. Restaurants can attract clients who may not have visited their physical sites by offering delivery services. This is especially useful for restaurants with limited or no seating. Restaurants can minimise costs and focus on improving their delivery offerings by eliminating the cost of additional seating.

As the competition among food delivery apps in Malaysia increases, electronic word-of-mouth (eWOM) has emerged as a crucial marketing instrument for these services. In recent years, the market share of food delivery applications (FDAs) has increased significantly, particularly among tech-savvy millennials who are proficient in smartphone usage and mobile app navigation (Saad,

2020). Puccinelli et al. (2009), as cited in Song et al. (2021), note that when selecting a food delivery app, consumers tend to place more weight on the recommendations and opinions of their peers. Reviews and feedback left by previous customers on the app or on social media platforms have a substantial impact on potential consumers' purchasing decisions. Therefore, marketers must comprehend the consumption patterns of their target audience and effectively communicate messages via eWOM to differentiate their services from those of competitors and attract new customers. By leveraging the power of eWOM, food delivery app developers can increase brand awareness, attract new consumers, and ultimately increase sales.

Moreover, according to a survey conducted by Statista (2023), 34% of Malaysian respondents indicated that they ordered food via third-party food delivery applications in the fourth quarter of 2022. This is an increase from 30% in the preceding quarter. This upward trend in the use of third-party food delivery apps in Malaysia highlights the importance of eWOM for differentiating and attracting new consumers in a market that is becoming increasingly competitive. In addition, Lock's 2020 report on Statista has found that approximately 87.61% of Malaysia's population owns a smartphone, with this percentage expected to increase in the future years.

The increase in the prevalence of food delivery applications (FDAs) can be attributed to changes in consumer behaviour brought about by the COVID-19 pandemic, especially among younger individuals and food culture enthusiasts (Itani & Hollebeek, 2021; Marinković & Lazarević, 2021). This shift in behaviour is the result of a heightened emphasis on contactless services as a means of personal security (Zhao & Bachao, 2020; Bae & Chang, 2021; Shim et al., 2021). In addition, the food and beverage industry has encountered significant difficulties due to economic downturns, with many restaurants experiencing lengthy closures due to lockdown regulations (Kumar & Shah, 2021). The convenience of having meals delivered directly to one's front door has also contributed substantially to the increase in the popularity of FDAs (Naeem, 2021; Roggeveen & Sethuraman, 2020).

Considering the preceding discussions, despite the substantial surge in the prominence of FDAs as a noteworthy economic contributor to the nation, the landscape remains somewhat uncharted when it comes to exploring fresh dimensions of consumer decision behaviour. This unexplored area serves as the impetus for this study. The core of this study resides in delving deep into the existing literature concerning FDA usage and eWOM. This endeavour seeks to uncover potential predictors that could exert an influence on the adoption of FDAs and the proliferation of eWOM. Furthermore, the study elucidates the foundation established by previous research endeavours concerning FDA usage and eWOM, using them as the underpinning reasoning upon which to construct a new avenue of research related to FDAs. In addition to its foundational objectives, the study also aspires to highlight potential differences in demographic characteristics among consumers, which could potentially yield an impact on FDA usage and eWOM. This multifaceted exploration delves into the nuanced interplay between consumers' backgrounds and their engagement with FDAs and eWOM. By addressing these objectives, this study seeks to paint a comprehensive picture of the dynamics underlying FDA usage and eWOM, contributing to both the theoretical understanding of consumer behaviour and the practical insights beneficial to stakeholders within the food delivery landscape. On the academic front, this research aspires to expand the existing body of knowledge by delving into an underexplored aspect of consumer behaviour—specifically, the dynamics surrounding the use of food delivery applications (FDAs) and the subsequent electronic word-of-mouth (eWOM) dissemination, particularly among different age groups.

By investigating the factors that influence the adoption of FDAs and the subsequent sharing of experiences online, this study contributes to a deeper understanding of consumer decision-

making processes in the digital era. The focus on demographic variables brings an additional layer of insight, shedding light on how different age groups perceive, utilise, and discuss FDAs. This exploration aligns with the evolving landscape of the food industry, where digital platforms are increasingly integral to consumers' interactions with foodservices. Furthermore, this study extends the application of the Technology Acceptance Model (TAM) to the realm of food delivery apps and consumer behaviour. This extension not only enriches the theoretical foundation, but also provides a practical lens through which researchers, practitioners, and industry stakeholders can comprehend the nuances of consumer behaviour in the context of FDAs. In essence, this study contributes academically by augmenting our understanding of consumer behaviour within the evolving digital landscape while offering practical implications that can shape the strategies of food industry businesses striving to meet the multifaceted needs and preferences of their customers across different age groups.

From a practical standpoint, the findings of this study hold considerable relevance for businesses operating within the food industry, particularly those engaged in food delivery services. The insights into the factors driving FDA usage and eWOM behaviour across generational cohorts can guide companies in tailoring their marketing strategies, service offerings, and user experiences to effectively engage with diverse consumer groups. Businesses can leverage these insights to optimise their online delivery services, enhance customer satisfaction, and foster stronger brand loyalty.

2. Literature Review

Food Delivery Applications

Li et al. (2020) defines food delivery applications as platforms that allow consumers to order meals online and have them delivered to their doorsteps. Ray et al. (2019) classifies food delivery apps into two distinct categories, each with a specific operating structure. The first category consists of restaurant chains with their own mobile apps, such as KFC, Domino's, and Pizza Hut. The second group, represented by Foodpanda and GrabFood, comprises of intermediary food delivery aggregators that connect customers with a variety of local dining options. The increasing prevalence of these apps, according to Roh and Park (2019), is a result of their user-friendly interface, which provides users with more restaurant options. This research focuses on the second category of food delivery applications (FDAs), which are organisations that facilitate strategic alliances between franchisees and act as intermediaries for food delivery services.

Food delivery apps influence both customer and restaurant behaviour. Muangmee et al. (2021) propose assessing this using demographics and customer behaviour. Apps solve the problem of many younger customers who are hesitant to wait in queue for restaurant food. These apps make it easier to prepare meals at home. FDAs make restaurant ordering easier (Dirsehan & Cankat, 2021). According to recent studies, meal delivery apps grew in popularity after COVID-19 because consumers valued health and non-contact eating (Chotigo & Kadono, 2021; Kumar & Shah, 2021). Many customers used meal delivery apps during the COVID-19 pandemic. Lock (2020) forecasts 53.9 million users by 2023. As a result, meal delivery applications have become critical to the food delivery sector (Inthong et al., 2022).

Food delivery apps are more significant than ever in today's fast-paced world because they meet consumers' requirements for ease of use (Ray et al., 2019; Lee et al., 2019; Chan, 2021). FDAs may feature information like as price, menu, and consumer ratings (Belanche et al., 2020). The most recent technology enables apps to deliver consistently and precisely. According to

Dirsehan and Cankat (2021), FDAs are location-based smartphone apps that give real-time information and services. In addition, Lau and Ng (2019) discover in a Malaysian study that FDAs with usability, efficiency, and privacy were more likely to be accepted. According to Ray et al. (2019), process pleasure (user experience, ease of use) and content satisfaction (restaurant search) predict FDA acceptance. This is supported by Lee et al. (2019) who conclude that the quality of a system and the information it gathered from a range of users or firms influenced its usefulness and usability. In addition, Kaur et al. (2021) highlight variability, cost, dependability, attractiveness, and accessibility. Meanwhile, Alalwan (2020) discovers that eWOM has an impact on FDA consumer satisfaction and future planned use. Customer trust in the FDA is the most important determinant in the agency's adoption and utilisation (Cho et al., 2019).

Food Delivery Applications in Malaysia

The adoption of contactless food delivery technologies during the COVID-19 pandemic has had a significant impact on the context of online food ordering in Malaysia, which has witnessed a significant transformation. This strategy was instrumental in preventing the spreading of the virus. Aligned with the increasing number of food delivery applications, the Malaysian food delivery market is expanding concurrently. Acumen Research and Consulting (2019) projects that the Malaysian food delivery market will surpass $319.1 million by 2026. Notably, nearly 10 million copies of the Foodpanda Malaysia app were downloaded from the Google Play Store (Rosli, 2018). Most individuals use food delivery apps due to the fast-paced modern lifestyle and the desire for culinary exploration (Pitchay et al., 2022). During the Movement Control Order (MCO) period, the demand for online platforms and delivery services increased as a result of restrictions (Antara et al., 2022).

Suhartanto et al. (2019) note that the emergence of food delivery systems has served as a lifeline for individuals confronting income loss and unemployment due to the pandemic. Consequently, it is necessary to evaluate the prevalence of food delivery applications among Malaysians in their daily lives. Notably, "perceived usefulness" and "perceived ease of use," as highlighted by Arora et al. (2021), are influential factors in app usage frequency. Users are more likely to utilise food delivery applications when they perceive their utility. Moreover, Kaur et al. (2021) highlights the significant impact of perceived values (functional, social, conditional, and epistemic) on food delivery app purchase intentions. According to Ray and Bala (2021), the influence of user-generated content on these platforms provides additional motivation for app engagement. Troise et al.'s (2020) theoretical frameworks of planned behaviour and technology adoption provide insight into the characteristics of food delivery app users. In light of these considerations, app usability plays a crucial role in shaping consumer preferences. The Technology Acceptance Model (TAM) is chosen as the guiding framework for this study, which aims to determine the acceptability of specific food delivery applications in Malaysia. TAM's compatibility with this research's objective, which aims to determine Malaysian consumers' receptivity to food delivery applications, strengthens the case for its adoption.

The Underpinning Theories and Study Models
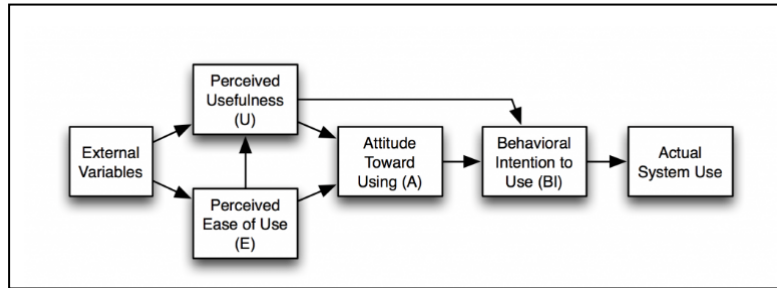
Figure 1. Technology Acceptance Model

Theory of Technology Acceptance Model

In the literature, numerous theoretical frameworks have been used to explain the adoption and use of technologies. The Technology Acceptance Model (TAM) has emerged as one of the most popular frameworks for analysing the acceptance of novel technologies. Initially developed by Davis et al. in 1989 (as cited in Silva et al., 2022), TAM has been recognised as a valid and effective model (Suh & Han, 2002; King & He, 2006). Based on the Theory of Reasoned Action (TRA), which identifies attitude and subjective norm as two determinants of intention towards behaviour within the context of social psychology (Alshammari & Rosli, 2020), TAM is a model for assessing human behaviour. Davis et al. (1989, as cited in Silva et al., 2022) adapted TRA to create the Technology Acceptance Model (TAM). TAM (Davis, 1985, 1989) has been widely utilised in the hospitality industry to investigate customers' attitudes and behaviours (Morosan, 2011; Salehi-Esfahani & Kang, 2019; Zhang et al., 2019).

In addition, TAM has been applied to the study of individual usage and behaviour in the context of applications, demonstrating that it is a suitable framework for explaining intentions to use apps (Byun et al., 2018, as cited in Silva et al., 2022). According to the Technology Acceptance Model (TAM) (Davis, 1985, 1989), perceived simplicity of use and perceived usefulness are crucial factors in predicting consumers' decisions to adopt a technology. Several studies have examined the factors that influence the utility and usability of TAM (Davis, 1989; Szajna, 1996; Legris et al., 2003; Lee et al., 2023). To better understand technology adoption, some researchers have extended TAM by integrating additional factors, such as moral obligation, trustworthiness, and multidimensional perceived values (Roh & Park, 2019; Cho et al., 2019). TAM has also been criticised for its reliance on general beliefs, such as perceived ease of use and perceived utility, rather than salient beliefs, in shaping attitudes towards a particular technology (Davis et al., 1989, as cited in Jun et al., 2021). Perceived ease of use refers to an individual's subjective evaluation of the effort required to adopt the technology, whereas perceived usefulness refers to the belief that implementing the technology would improve task performance (Davis, 1989).

TAM has found widespread application in numerous industries, including education, transportation, medical services, tourism, hotels, online travel agencies, and accommodation sharing (Teo, 2010; Chen et al., 2007; Min et al., 2019; Kamal et al., 2020; tom Dieck & Jung, 2018; Kim et al., 2008; Assaker, 2020; Jung et al., 2021). In an online-to-offline service system, Kang and Namkung (2019) demonstrate the explanatory power of TAM. Numerous studies have utilised TAM

as a theoretical basis for analysing consumer behaviour (Lee et al., 2019; Zhao & Bachao, 2020). Moreover, some studies used TAM to investigate individuals' usage and behaviour in the context of apps, and these studies demonstrated that TAM is an appropriate theoretical framework to explain individuals' intentions to use apps (Byun et al., 2018, as cited in Silva et al., 2022).

Theory of Planned Behaviour

Figure 2. Theory of planned behaviour

The Theory of Planned Behaviour (TPB) is a theoretical framework in the field of social psychology that extends and develops upon the foundational principles of the Theory of Reasoned Action (TRA). Ajzen (1985) posits that an individual's behaviour depends upon their attitudes towards said behaviour, sense of social standards, and self-efficacy beliefs. Troise et al. (2020) conducted a study to go deeper into this concept by integrating the Technology Acceptance Model with the Theory of Planned Behaviour (TPB) in order to gain insights into the user characteristics of food delivery applications. The objective of the study was to obtain a deeper understanding of the impact of several characteristics such as visibility, affordance value, trust in usage, and electronic word of mouth on the utilisation of food delivery applications across different generational cohorts.

Electronic Word of Mouth (eWOM)

eWOM has emerged as a potent and efficient tool, wielding a remarkable ability to swiftly reach and resonate with customers (Selvi & Thomson, 2016). In contrast to the traditional form of word-of-mouth communication, eWOM encompasses both the passive act of screen reading and the active engagement of messaging (Selvi & Thomson, 2016). The strategic significance of consumer perception cannot be overstated as it intricately weaves its threads into the fabric of business competitiveness and growth (Chandrasekhar et al., 2019). Within this complex interplay, customer reviews play a pivotal role, offering a discerning lens through which the efficacy of technological systems can be appraised (Min et al., 2019; Mohammed and Ferraris, 2021). The era of online commerce has ushered in a profound amplification of eWOM's impact on consumer decision-making (Guo et al., 2019). This phenomenon is predicated on the virtual realm, where eWOM manifests as a mosaic of online expressions that chronicle product and service experiences (Hajli, 2020). It exerts a substantial influence on the choices consumers make in the realm of social commerce (Guo et al., 2019), seamlessly bridging the chasm between individuals and the digital market landscape.

eWOM's sources are as diverse as they are dynamic, encompassing an eclectic ensemble of contributors ranging from anonymous strangers to influential opinion leaders and trusted friends (Guo et al., 2019). Through the nexus of moderate to strong relationships, products and services find their virtual podium, where their virtues are extolled, invariably shaping the course of future

consumer decisions (Guo et al., 2019). As eWOM burgeons, its tendrils gradually unfurl across the various stages of social commerce decision-making, exerting its influence in multifaceted ways (Hajli, 2020).

Considering this intricate interplay and the evolving landscape of consumer engagement, it becomes apparent that the potential effects of eWOM on food delivery application (FDA) usage warrant deeper exploration. The trajectory of this digital phenomenon, intertwined with the journey of electronic food delivery services, holds the promise of unearthing novel insights that can reshape business strategies and enhance consumer experiences. Thus, the spotlight is firmly cast on the imperative for future research to probe into the potential nexus between eWOM dynamics and FDA adoption, unveiling new dimensions that could galvanise both academic inquiry and practical industry pursuits.

Perceived Ease of Use

Perceived ease of use captures an individual's anticipation that interacting with a technological system will be a straightforward and user-friendly experience (Castillo & Bigne, 2021, p. 879). This concept's importance is underscored by the combined insights of researchers like Pavlou (2003) and Gefen et al. (2003) who emphasise the intertwined relationship between trust and the perceived ease of use. Building upon these foundations, Jun et al. (2021) undertook a study to better understand how trust and the perceived ease of use align within the context of food delivery applications (FDAs).

Adding to this understanding, Kang and Namkung (2019) unravel the motivations driving consumers to embrace FDAs, revealing that the perceived usefulness and ease of use significantly impact their choices. This insight aligns with Chakraborty (2022), which stresses the need for FDAs to be designed with user-friendliness and adaptability in mind, catering to the diverse scenarios consumers encounter. This holistic view gains depth through the insights of Ray et al. (2019), who intricately explore the roles of user-friendliness, consumer experience, and the functionality of restaurant listing and searching. This ensemble of factors collectively shapes the intention to make a purchase, underscoring the vital role of user experience and usability in this context (Hansen et al., 2018).

Building upon previous empirical research as mentioned earlier, the notion that the ease of using FDAs influences customers and shapes their inclination to keep using these apps becomes evident. This fundamental idea unravels the connections between perceived ease of use and subsequent FDA usage, extending into the realm of electronic word-of-mouth (eWOM). In light of these insights, a call emerges for future research—a call to explore the potential impact of perceived ease of use not only on FDA usage, but also on the intricate dynamics of eWOM. This endeavour holds promise, offering fresh perspectives on the evolving landscape of digital food delivery platforms and consumer interactions. As the digital horizon unfolds, these investigations hold the potential to unlock new opportunities, enriching both academic discussions and practical insights for the dynamic tapestry of the food industry.

Perceived Usefulness

The concept of perceived usefulness, elucidated by Igbaria et al. (2007), delves into an individual's anticipation that embracing new technology will yield enhanced performance and heightened productivity. This sentiment aligns with the findings by Venkatesh and Morris (2000) and Masrom (2007), wherein the notion of usefulness encapsulates the way technology empowers individuals to acquire the essential tools to achieve their objectives.

Conversely, the facet of simplicity of use delves into the degree to which users can seamlessly navigate technology without encountering complexities. As expounded by Legris et al. (2003) and Ha and Stoel (2009), the evaluation of a technology's usefulness hinges upon its capability to amplify individual productivity. In parallel, the level of simplicity ingrained in the technology directly influences its user-friendliness, subsequently affecting the learning curve in terms of time and effort. This perspective echoes the insights underscored by Legris et al. (2003) and Ha and Stoel (2009), postulating that a technology's utility is intricately tied to its capacity to enhance an individual's productivity.

Considering these interwoven elements, a compelling relationship emerges, underscoring the significance of further research in uncovering the intricate connections between perceived usefulness, user behaviour, and the digital landscape of food delivery platforms. As the digital frontier continues to expand, these investigations hold the promise of unveiling new dimensions that enrich both scholarly discourse and practical insights within the ever-evolving realm of the food industry.

Visibility

Visibility refers to the extent to which an application is utilised by others and the importance of advertisements, a significant e-commerce intention-influencing factor. Visibility in the context of food delivery apps (FDAs) involves distributing information to prospective users via advertisements and observed usage patterns, which has epistemic value. This study assesses the visibility of mobile applications such as FDAs to quantify their epistemic value. Johnson et al. (2018) demonstrates that observing others using an innovation increases adoption intent.

Visibility is essential for influencing consumers' propensity to use smartphone-based services and FDAs (Johnson et al., 2018; Pigatto et al., 2017, as cited in Tandon et al., 2021). In the context of FDAs, Talwar et al. (2020) and Kaur et al. (2020) support this position. Enhanced visibility, attained by means such as advertising, can influence decision-making, trust, and purchase propensity (Teng & Wang, 2015). This study seeks to quantify visibility for evaluating informational aspects: advertisements, curiosity from others' use of FDA, and perception of novelty. Increased visibility influences FDAs' actual utilisation and purchase intentions in a positive manner (Thomé et al., 2019). The correlation between visibility and customers' propensity to use FDAs suggests that advertisements and observing others' utilisation have a positive effect on food orders made via FDAs. This study investigates visibility by observing service provider advertisements and FDA use.

Affordance Value

The term "affordability," stemming from the realm of social media literature, pertains to the advantages extended by diverse platforms (Dhir et al., 2017, as cited in Kaur et al., 2020). In our exploration, we categorise external factors as "affordability value" within the context of food delivery apps (FDAs), aiming to underscore their sway over usage patterns and their potential to amplify electronic word-of-mouth (eWOM) dynamics. It's not uncommon that consumer grievances regarding FDAs stem from constrained menu options and delayed deliveries (Food on Demand, 2019). Ensuring comprehensive delivery information and a diverse array of menu choices is paramount.

Further amplifying this narrative, Wells et al. (2011) unearth that platform quality substantially shapes the perception of products, especially when information disparities exist. The work of

Wang et al. (2021) delves into how platform quality acts as a linchpin in steering customer loyalty and utilisation, while Kim (2021b) magnifies the pivotal role of user interface.

Informed by prior research (McCloskey, 2006; Gafni & Nissim, 2014; Bezovski, 2016), it becomes evident that perceived costs often tip the scale over perceived benefits, dampening the enthusiasm to embrace new technology. This underscores the necessity for a streamlined system. The allure of food delivery apps resides in their features, encompassing restaurant listings and efficient food categorisation (Pandey et al., 2022). These applications furnish preparatory time details and cater to individuals with a burgeoning disposable income.

Considering this intricate interplay, the potential influence of affordability on both FDA usage and the ensuing eWOM dynamics emerges as a compelling hypothesis. This potential link accentuates the importance of future research endeavours in dissecting the nuances of affordability's role in shaping consumer behaviour and interactions within the dynamic realm of food delivery platforms. As the digital landscape continually unfolds, these investigations hold the promise of unveiling fresh insights that contribute to both scholarly dialogue and actionable insights within the vibrant canvas of the food industry.

Trust in Application Platform

Customers' evaluations of shops' internet technology as safe and reliable are related to trust (Jun et al., 2021; Pavlou, 2003). Due to a lack of information on food delivery app platforms, analysing flavour and consistency is difficult (Ashfaq et al., 2020; Kim et al., 2021b). This lack of knowledge leads to ambiguity, making correct assessments prior to purchase difficult (Dong et al., 2021). A comprehensive, user-friendly interface is essential for increasing customer satisfaction (Wang et al., 2021). Customer attractiveness to high-quality food delivery apps (FDAs) is influenced by quality (Yoo & Donthu, 2015, as cited in Wang et al., 2021), creating consumer confidence and practical use. In the food delivery industry, safety and trust are critical factors that influence purchasing decisions (Gefen et al., 2003; Lai et al., 2013; Nguyen et al., 2019; Vatanasombut et al., 2008, as cited in Hong et al., 2023). Trust has a positive relationship with online food purchase (Nguyen et al., 2019). Inconsistent service because of safety concerns changes the relationship between trust and convenience over efficacy (Hong et al., 2023).

Many studies find that trust plays an important impact in promoting FDA usage, highlighting that customers' preferences are influenced by perceived reliability (Cho et al., 2019; Hong et al., 2021; Jun et al., 2021; Muangmee et al., 2021; Zhao & Bacao, 2020). Customer satisfaction and following transactions are also related to trust (Chen & Chou, 2012; Javed & Wu, 2020). Privacy, satisfaction, and loyalty are all influenced by user interface (Kim et al., 2021b). While technology improvements provide ease, establishing trust and meeting consumer demands is still critical (Chao, 2019; Malaquias & Hwang, 2016; Sharma & Sharma, 2019). Despite the services provided, internet meal delivery platforms may not fully meet various consumer expectations as information technology advances.

Actual Usage

Information processing technique can explain the customer purchasing decision-making process (Bettman & Zins, 1979; Howard & Sheth, 1969). Consumers gather information, assess it, and make a decision. Several models have been created to characterise this tendency. The purchasing decision-making process is constructive and is influenced by the consumer and decision-making setting (Bettman et al., 1998).

When it comes to mobile services, a gamut of variables come into play, including network information, app features, perceptions of service quality, and the intention to use (Ghose & Han, 2014; Tong et al., 2020; Vlachos & Vrechopoulos, 2008). Among these variables, the pivotal role of consumer trust emerges. The research by Javed and Wu (2020) uncovers a positive correlation between consumer trust and both app satisfaction and usage. Building upon this link, studies have illuminated the continuous utilisation factor, showing its strong connection to consumer trust (Shao et al., 2019).

Adding depth to this understanding, Wang et al. (2021) emphasises the pivotal role of customer trust and satisfaction in amplifying customer retention and fostering a willingness to engage with food delivery applications. These insights collectively weave a narrative of interwoven elements, underscoring the multifaceted dance between consumer behaviour, trust, and the evolving landscape of mobile services, particularly within the food delivery domain.

Proposed Research Framework

The proposed conceptual framework for this study is grounded in the growing significance of food delivery applications in the modern digital economy. In recent years, the food delivery industry has experienced a remarkable transformation due to technological advancements, changing consumer behaviours, and a heightened reliance on digital platforms for everyday needs. This study seeks to provide a comprehensive understanding of the factors that contribute to the increased usage of food delivery applications and the subsequent generation of positive eWOM recommendations among users. It is justified by the need to comprehend the intricate interplay of factors that influence user behaviour and eWOM in the dynamic landscape of food delivery services. By systematically examining these factors, the study aims to provide valuable insights and strategic recommendations for application providers to enhance their user engagement, drive usage, and foster positive eWOM, ultimately contributing to the success and sustainability of food delivery platforms in the digital age.
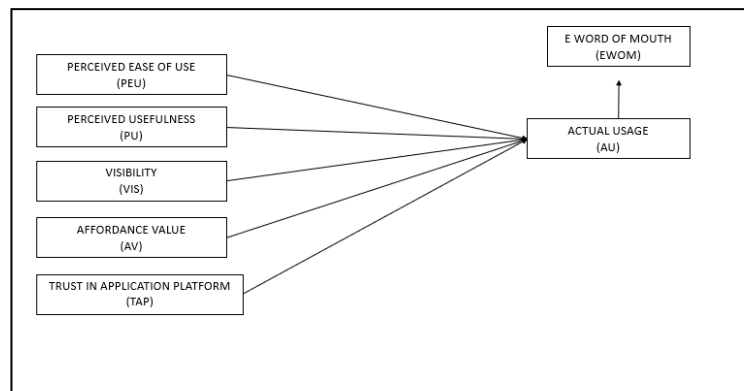

Figure 3. Proposed research framework

3.   Methodology

The research method for this conceptual paper will employ PLS-based structural equation modelling as a robust tool to measure the data. SmartPLS will be utilised for estimating the parameters, following the approach endorsed by Ghozali and Latan (2015), known for its

flexibility across different data scales and lack of stringent assumptions. To this end, a modified version of assessment items from prior research will be adapted, utilising a five-point Likert scale (ranging from 1 = completely disagree to 5 = entirely agree) to assess the variables.

Addressing the research gap, a quantitative approach will be employed to gather data from a diverse cohort of Malaysian consumers representing various age groups, facilitated through an online survey. The meticulously designed questionnaire will ensure methodical and comprehensive data collection, leveraging the online platform for broader participation across all regions of Malaysia. By delving into crucial aspects such as usability, utility, visibility, affordability, platform credibility, actual usage patterns, and generational classifications, the questionnaire will serve as a tool to unearth vital insights.

The resulting dataset will undergo an exhaustive causal analysis, seeking to unveil potential relationships between the identified variables. Framed within a causal research design, the study remains open to incorporating alternative designs if deemed necessary. The methodology is inherently geared towards uncovering significant cause-and-effect connections between independent and dependent variables. With a predominant focus on numerical representation, the dataset will encompass quantitative data, forming the foundation of this quantitative study.

At the heart of this methodology lies the meticulous accumulation of primary data from participants through a structured questionnaire. This approach seamlessly aligns with the objective of identifying trends, establishing causal linkages, and extrapolating findings to broader population segments. Given the pivotal relevance of the research topic, this study will masterfully integrate both causal research analysis and quantitative research methods, resulting in a comprehensive exploration of the intricate web of relationships within the realm of food delivery apps and consumer behaviour.

4.   Conclusion

The growing desire for convenient services has resulted in major developments in a variety of industries, with the food industry serving as a prime example. Technological integration has been critical in streamlining processes in this area. Notably, the emergence of food delivery apps is a crucial driver influencing consumers' participation in electronic word-of-mouth (eWOM), which includes the online sharing of experiences and suggestions. This powerful dynamic is influenced by a variety of causes and circumstances. These include the application's perceived ease of use, perceived utility, visibility, affordance value, and trust. As consumer behaviours and usage patterns evolve, there remains a need to investigate alternatives, such as food delivery apps, that meet necessities. Nonetheless, despite advancements in the foodservice industry and the evolution of meal delivery applications, there is significant unrealised potential in influencing the industry's future trend.

Authors Contributions

Nurul Syahirah Idris led this study and wrote the paper; Muhammad Safuan Abdul Latip and Noradzhar Baba supervised, reviewed, and improved the article.

Conflict of Interest

No conflict of interest is associated with this publication.

References

Acumen Research and Consulting (2019, April 17). *Malaysia online food delivery market size worth around USD 319.1 million by 2026.* GlobeNewswire. https://www.globenewswire.com/news-release/2019/04/18/1806184/0/en/Malaysia-Online-Food-Delivery-Market-Size-Worth%20-Around-USD-319-1-Million-by-2026-Acumen-Research-and-Consulting.html

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Action control: From cognition to behavior* (11-39). Springer-Verlag New York Inc.

Alalwan, A. A. (2020). Mobile food ordering apps: An empirical study of the factors affecting customer e-satisfaction and continued intention to reuse. *International Journal of Information Management*, *50*, 28–44. https://doi.org/10.1016/j.ijinfomgt.2019.04.008

Alshammari, S. H., & Rosli, M. S. (2020). A review of technology acceptance models and theories. *Innovative and Learning Journal*, *4*(2), 12-22.

Antara, P. M., Mohamad, A., Othman, K., Wahab, M. Z., Ibrahim, N. A., Musa, R., & Ningrum, N. K. (2022). Turning crisis into opportunity in the gig economy-acceptance of e-hailing food delivery applications in Malaysia. *Academia Journal e-Academia Journal of UiTM Cawangan Terengganu*, *11*(2). http://journale-academiauitmt.uitm.edu.mye

Arora, M., Singh, H., & Gupta, S. (2021). What drives e-hailing apps adoption? An analysis of behavioral factors through fuzzy AHP. *Journal of Science and Technology Policy Management*, *13*(2), 382- 404.

Ashfaq, M., Yun, J., Yu, S., & Loureiro, S. M. C. (2020). I, Chatbot: Modeling the determinants of users' satisfaction and continuance intention of AI-powered service agents. *Telematics and Informatics, 54*, Article e101473. doi: 10.1016/j.tele.2020.101473

Assaker, G. (2020). Age and gender differences in online travel reviews and user-generated-content (UGC) adoption: Extending the technology acceptance model (TAM) with credibility theory. *Journal of Hospitality Marketing and Management*, *29*(4), 428-449.

Bae, S. Y., & Chang, P.-J. (2021). The effect of coronavirus disease-19 (COVID-19) risk perception on behavioural intention towards 'untact' tourism in South Korea during the first wave of the pandemic (March 2020). *Current Issues in Tourism*, *24*(7), 1017-1035.

Belanche, D., Flavián, M., & Pérez-Rueda, A. (2020). Mobile apps use and WOM in the food delivery sector: the role of planned behavior, perceived security and customer lifestyle compatibility. *Sustainability*, *12*(10), Article e4275.

Bettman, J. R., & Zins, M. A. (1979). Information format and choice task effects in decision making. *Journal of Consumer Research*, *6*(2), 141-153.

Bettman, J. R., Luce, M. F., & Payne, J. W. (1998). Constructive consumer choice processes. *Journal of Consumer Research*, 25(3), 187-217.

Bezovski, Z. (2016). The future of the mobile payment as electronic payment system. European *Journal of Business and Management*, 8(8), 127-132.

Brem, A., Viardot, E. & Nylund, P. A. (2021). Implications of the coronavirus (COVID-19) outbreak for innovation: Which technologies will improve our lives? *Technological Forecasting and Social Change*, 163, Article e120451. https://doi.org/10.1016/j.techfore.2020.120451

Cameron, C. A. (2006). *Examining the relationship that age, gender, experience and communication technology has on acceptance and use of information technology: Using the Unified Theory of Acceptance and Use of Technology (UTAUT) model*. [Doctoral Dissertation, Touro University International]. ProQuest Information and Learning Company.

Castillo S, M. J., & Bigne, E. (2021). A model of adoption of AR-based self-service technologies: a two country comparison. *International Journal of Retail and Distribution Management*, 49(7), 875–898. https://doi.org/10.1108/IJRDM-09-2020-0380

Chakraborty, D. (2022). Exploring the meteoric rise of online food ordering apps (OFOAs): The moderating role of visibility. *British Food Journal*, 124(11), 3871–3887. https://doi.org/10.1108/BFJ-08-2021-0906

Chan, J. (2021). Hunger for profit: How food delivery platforms manage couriers in China. *Sociologias*, 23(57), 58-82.

Chandrasekhar, N., Gupta, S., & Nanda, N. (2019). Food delivery services and customer preference: A comparative analysis. *Journal of Foodservice Business Research*, 22(4), 375-386.

Chao, C.-M. (2019). Factors determining the behavioral intention to use mobile learning: An application and extension of the UTAUT Model [Original Research]. *Frontiers in Psychology*, 10, Article e01652. https://doi.org/10.3389/fpsyg.2019.01652

Chen, C., Fan, Y., & Farn, C. (2007). Predicting electronic toll collection service adoption: An integration of the technology acceptance model and the theory of planned behavior. *Transportation Research Part C: Emerging Technologies*, 15(5), 300-311.

Chen, Y.-T., & Chou, T.-Y. (2012). Exploring the continuance intentions of consumers for B2C online shopping: Perspectives of fairness and trust. *Online Information Review*, 36(1), 104–125. doi: 10.1108/14684521211209572

Cho, M., Bonn, M. A., & Li, J. (2019). Differences in perceptions about food delivery apps between single-person and multi-person households. *International Journal of Hospitality Management*, 77, 108–116. https://doi.org/10.1016/j.ijhm.2018.06.019

Chotigo, J., & Kadono, Y. (2021). Comparative analysis of key factors encouraging food delivery app adoption before and during the COVID-19 pandemic in Thailand. *Sustainability*, *13*(8), Article e4088.

Davis, F. D. (1985). *A technology acceptance model for empirically testing new end user information systems: Theory and results* [Doctoral Dissertation, Massachusetts Institute of Technology]. DSpace@MIT.

Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319-340.

Department of Statistics Malaysia. (2020, April). *ICT use and access by individuals and households survey report, Malaysia, 2019*. https://www.dosm.gov.my/portal-main/release-content/ict-use-and-access-by-individuals-and-households-survey-report-malaysia-2019

Dirsehan, T., & Cankat, E. (2021). Role of mobile food-ordering applications in developing restaurants' brand satisfaction and loyalty in the pandemic period. Journal of Retailing and Consumer Services, 62, Article e102608.

Dong, D., Malik, H. A., Liu, Y., Elashkar, E. E., Shoukry, A. M., & Khader, J. A. (2021). Battling for consumer's positive purchase intention: A comparative study between two psychological techniques to achieve success and sustainability for digital entrepreneurships. *Frontiers in Psychology*, *12*, Article e665194. doi: 10.3389/fpsyg.2021.665194

Food on Demand. (2019). *Survey identifies big delivery gripes, driver's dirty secrets.* https://foodondemandnews.com/07252019/survey-identifies-big-delivery-gripes-drivers-dirtysecrets/

Gafni, R., & Nissim, D. (2014). To social login or not login? Exploring factors affecting the decision. *Issues in Informing Science and Information Technology, 11*(1), 57-72.

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, *27*(1), 51–90.

Ghose, A., & Han, S. P. (2014). Estimating demand for mobile applications in the new economy. *Management Science*, 60(6), 1470–1488. https://doi.org/10.1287/mnsc.2014.1945

Ghozali, I., & Latan, H. (2015). *Partial least squares: Konsep, teknik dan aplikasi menggunakan Program SmartPLS 3.0 untuk penelitian empiris*. Badan Penerbit UNDIP.

Guo, C., Kulviwat, S., Zhu, J., & Wang, Y. J. (2019). Competing in an emerging market: Antecedents and consequences of market orientation and the role of environmental factors. *Journal of Strategic Marketing*, *27*(3), 248–267. https://doi.org/10.1080/0965254X.2017.1411386

Ha, S., & Stoel, L. (2009). Consumer e-shopping acceptance: Antecedents in a technology acceptance model. *Journal of Business Research*, *62*(5), 565-571.

Hajli, M. N. (2020). The impact of positive valence and negative valence on social commerce purchase intention. *Information Technology and People*, *33*(2), 774-791, doi: 10.1108/ITP-02-2018-0099

Hansen, J. M., Saridakis, G., & Benson, V. (2018). Risk, trust, and the interaction of perceived ease of use and behavioral control in predicting consumers use of social media for transactions. *Computers in Human Behavior*, *80*(1), 197-206.

Hong, C., Choi, E.-K., & Joung, H.-W. (2023). Determinants of customer purchase intention toward online food delivery services: The moderating role of usage frequency. *Journal of Hospitality and Tourism Management*, *54*, 76–87. https://doi.org/10.1016/j.jhtm.2022.12.005

Hong, C., Choi, H., Choi, E.-K., & Joung, H.-W. (2021). Factors affecting customer intention to use online food delivery services before and during the COVID-19 pandemic. *Journal of Hospitality and Tourism Management*, *48*, 509–518. https://doi.org/10.1016/j.jhtm.2021.08.012

Howard, J. A., & Sheth, J. N. (1969). *The theory of buyer behavior.* John Wiley and Sons.

Igbaria, M., Schiffman, S. J., & Wieckowski, T. J. (2007). The respective roles of perceived usefulness and perceived fun in the acceptance of microcomputer technology. *Taylor and Francis Group*, *13*(6), 349-361, doi: 10.1080/01449299408914616

Inthong, C., Champahom, T., Jomnonkwao, S., Chatpattananan, V., & Ratanavaraha, V. (2022). Exploring factors affecting consumer behavioral intentions toward online food ordering in Thailand. *Sustainability*, *14*(14), Article e8493. https://doi.org/10.3390/su14148493

Itani, O. S., & Hollebeek, L. D., 2021. Consumers' health-locus-of-control and social distancing in pandemic-based e-tailing services. *Journal of Services Marketing*, *35*(8), 1073–1091. https://doi.org/10.1108/JSM-10-2020-0410

Javed, M. K., & Wu, M. (2020). Effects of online retailer after delivery services on repurchase intention: An empirical analysis of customers' past experience and future confidence with the retailer. *Journal of Retailing and Consumer Services*, *54*, Article e101942. https://doi.org/10.1016/j.jretconser.2019.101942

Johnson, V. L., Kiser, A., Washington, R., & Torres, R. (2018). Limitations to the rapid adoption of m-payment services: Understanding the impact of privacy risk on m-payment services. *Computers in Human Behavior*, *79*(3), 111-122.

Jun, K., Yoon, B., Lee, S., & Lee, D.-S. (2021). Factors influencing customer decisions to use online food delivery service during the COVID-19 pandemic. *Foods*, *11*(1), Article e64.

Jung, J., Park, E., Moon, J., & Lee, W. S. (2021). Exploration of sharing accommodation platform Airbnb using an extended technology acceptance model. *Sustainability*, *13*(3), Article e1185.

Kamal, S. A., Shafiq, M., & Kakria, P. (2020). Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). *Technology in Society, 60,* Article e101212.

Kang, J.-W., & Namkung, Y. (2019). The information quality and source credibility matter in customers' evaluation toward food O2O commerce. *International Journal of Hospitality Management, 78,* 189-198.

Kaur, P., Dhir, A., Ray, A., Bala, P. K., & Khalil, A. (2021). Innovation resistance theory perspective on the use of food delivery applications. *Journal of Enterprise Information Management, 34*(6), 1746–1768. https://doi.org/10.1108/JEIM-03-2020-0091

Kaur, P., Dhir, A., Talwar, S., & Ghuman, K. (2020). The value proposition of food delivery apps from the perspective of theory of consumption value. *International Journal of Contemporary Hospitality Management, 33*(4), 1129–1159. https://doi.org/10.1108/IJCHM-05-2020-0477

Kim, J.J., Kim, I., & Hwang, J. (2021). A change of perceived innovativeness for contactless food delivery services using drones after the outbreak of COVID-19. *International Journal of Hospitality Management, 93,* Article e102758.

Kim, T., Lee, J., & Law, R. (2008). An empirical examination of the acceptance behaviour of hotel front office systems: An extended technology acceptance model. *Tourism Management, 29*(3), 500-513.

Kim, Y., Wang, Q., & Roh, T. (2021). Do information and service quality affect perceived privacy protection, satisfaction, and loyalty? Evidence from a Chinese O2O-based mobile shopping application. *Telematics and Informatics, 56,* Article e101483. doi: 10.1016/j.tele.2020.101483

King, W. R., & He, J. (2006). A meta-analysis of the technology acceptance model. *Information & Management, 43*(6), 740-755.

Kumar, S. & Shah, A. (2021). Revisiting food delivery apps during COVID-19 pandemic? Investigating the role of emotions. *Journal of Retailing and Consumer Services, 62,* Article e102595.

Lai, Y.-H., Huang, H.-C., Lu, R.-S., & Chang, C.-M. (2013). The effects of website trust, perceived ease of use, and perceived usefulness on consumers' online booking intention: Evidence from Taiwan B&B sector. *Life Science Journal, 10*(2), 1516–1523.

Lau, T. C., & Ng, D. C. Y. (2019). Online food delivery services: Making food delivery the new normal. *Journal of Marketing advances and Practices, 1*(1), 62-77.

Lee, S. W., Sung, H. J., & Jeon, H. M. (2019). Determinants of continuous intention on food delivery apps: Extending UTAUT2 with information quality. *Sustainability, 11*(11), Article e3141.

Lee, W. S., Song, M., Moon, J., & Tang, R. (2023). Application of the technology acceptance model to food delivery apps. *British Food Journal*, *125*(1), 49–64. https://doi.org/10.1108/BFJ-05-2021-0574

Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information & Management*, *40*(3), 191-204.

Li, C., Mirosa, M., & Bremer, P. (2020). Review of online food delivery platforms and their impacts on sustainability. *Sustainability*, *12*(14), Article e5528.

Lock, S. (2020). *Amount of smartphone food delivery app users in the U.S. 2019-2023*. Statista. Retrieved June 14, 2021, from https://www.statista.com/statistics/1189404/food-delivery-app-users-us/

Malaquias, R. F., & Hwang, Y. (2016). An empirical study on trust in mobile banking: A developing country perspective. *Computers in Human Behavior*, *54*, 453-461. https://doi.org/10.1016/j.chb.2015.08.039

Marinković, V., & Lazarević, J. (2021). Eating habits and consumer food shopping behaviour during COVID-19 virus pandemic: Insights from Serbia. *British Food Journal*, *123*, 3970–3987. https://doi.org/10.1108/BFJ-11-2020-1072

Masrom, M. (2007). Technology acceptance model and e-learning. *Technology*, *21*(24), Article e81.

McCloskey, D. (2006). The importance of ease of use, usefulness, and trust to online consumers: An examination of the technology acceptance model with older customers. *Journal of Organizational and End User Computing*, *18*(3), 47-65.

Min, S., So, K., & Jeong, M. (2019). Consumer adoption of the Uber mobile application: Insights from diffusion of innovation theory and technology acceptance model. *Journal of Travel and Tourism Marketing*, 36(7), 770-783.

Mohammed, A., & Ferraris, A. (2021). Factors influencing user participation in social media: Evidence from twitter usage during COVID-19 pandemic in Saudi Arabia. *Technology in Society*, 66(2), Article e101651.

Morosan, C. (2011). Customers, adoption of biometric systems in restaurants: An extension of the technology acceptance model. *Journal of Hospitality Marketing and Management*, *20*(6), 661-690.

Muangmee, C., Kot, S., Meekaewkunchorn, N., Kassakorn, N., & Khalid, B. (2021). Factors determining the behavioral intention of using food delivery apps during COVID-19 pandemics. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*(5), 1297–1310. https://doi.org/10.3390/jtaer16050073

Naeem, M. (2021). Understanding the customer psychology of impulse buying during COVID-19 pandemic: Implications for retailers. *International Journal of Retail and Distribution Management*, *49*(3), 377-393.

Nguyen, T. T. H., Nguyen, N., Nguyen, T. B. L., Phan, T. T. H., Bui, L. P., & Moon, H. C. (2019). Investigating consumer attitude and intention towards online food purchasing in an emerging economy: An extended TAM approach. *Foods*, *8*(11), Article e576.

Pandey, S., Chawla, D., & Puri, S. (2022). Food delivery apps (FDAs) in Asia: An exploratory study across India and the Philippines. *British Food Journal*, *124*(3), 657–678. https://doi.org/10.1108/BFJ-01-2020-0074

Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, *7*(3), 101–134. https://doi.org/10.1080/10864415.2003.11044275

Pitchay, A. A., Ganesan, Y., Nurul Syifa Zulkifli, & Ahmad Khaliq. (2022). Determinants of customers' intention to use online food delivery application through smartphone in Malaysia. *British Food Journal*, *124*(3), 732–753. https://doi.org/10.1108/BFJ-01-2021-0075

Ray, A., & Bala, P. (2021). User generated content for exploring factors affecting intention to use travel and food delivery services. *International Journal of Hospitality Management*, *92*(4), Article e102730.

Ray, A., Dhir, A., Bala, P., & Kaur, P. (2019). Why do people use food delivery apps (FDA)? A uses and gratification theory perspective. *Journal of Retailing and Consumer Services*, *51*, 221-230.

Rivera, M. (2019). Online delivery provider (ODP) services: Who is getting what from food deliveries? *International Journal of Hospitality Management*, *80*(3), A1–A2.

Roggeveen, A. L., & Sethuraman, R. (2020). Customer-interfacing retail technologies in 2020 and beyond: an integrative framework and research directions. *Journal of Retailing*, *96*(3), 299-309.

Roh, M., & Park, K. (2019). Adoption of O2O food delivery services in South Korea: The moderating role of moral obligation in meal preparation. *International Journal of Information Management*, *47*, 262–273. https://doi.org/10.1016/j.ijinfomgt.2018.09.017

Rondi, E., Sciascia, S. and De Massis, A. (2020). Innovation in small family firms. *Piccola Impresa/ Small Business*, *1*(1), 10-19.

Saad, A. T. (2020). Factors affecting online food delivery service in Bangladesh: An empirical study. *British Food Journal*, *123*(2), 535-550.

Salehi-Esfahani, S., & Kang, J. (2019). Why do you use Yelp? Analysis of factors influencing customers' website adoption and dining behavior. *International Journal of Hospitality Management*, *78*, 179-188.

Selvi, B. N. M., & Thomson, J. E. (2016). An exploratory study on the electronic word of mouth communication in promoting brands in the online platforms. *Intelligent Information Management*, *8*(5), 115–141. https://doi.org/10.4236/iim.2016.85010

Shao, Z., Zhang, L., Li, X., & Guo, Y. (2019). Antecedents of trust and continuance intention in mobile payment platforms: The moderating effect of gender. *Electronic Commerce Research and Applications*, *33*, Article e100823. https://doi.org/10.1016/j.elerap.2018.100823

Sharma, S. K., & Sharma, M. (2019). Examining the role of trust and quality dimensions in the actual usage of mobile banking services: An empirical investigation. *International Journal of Information Management*, *44*(5), 65-75. https://doi.org/10.1016/j.ijinfomgt.2018.09.013

Shim, J., Moon, J., Song, M., & Lee, W. (2021). Antecedents of purchase intention at Starbucks in the context of Covid-19 pandemic. *Sustainability*, *13*(4), Article e1758.

Silva, G. M., Dias, Á., & Rodrigues, M. S. (2022). Continuity of use of food delivery apps: An integrated approach to the health belief model and the technology readiness and acceptance model. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(3), Article e114. https://doi.org/10.3390/joitmc8030114

Similarweb. (2019). *The most popular food and drink Android apps in MY according to Google play*. https://www.similarweb.com/apps/top/google/store-rank/my/food-and-drink/top-free

Song, H. J., Ruan, W. J., & Jeon, Y. J. J. (2021). An integrated approach to the purchase decision making process of food-delivery apps: Focusing on the TAM and AIDA models. *International Journal of Hospitality Management*, *95*(4), Article e102943. https://doi.org/10.1016/j.ijhm.2021.102943

Statista. (2022, October 5). *Frequency of using food delivery apps in Malaysia 2021*. https://www.statista.com/statistics/1143154/malaysia-ordering-food-from-food-delivery-apps-frequency/

Statista. (2023, August 29). *Smartphone penetration in Malaysia 2010-2025*. https://www.statista.com/statistics/625418/smartphone-user-penetration-in-malaysia/

Suh, B., & Han, I. (2002). Effect of trust on customer acceptance of Internet banking. *Electronic Commerce Research and Applications*, *1*(3), 247-263.

Suhartanto, D., Dean, D., Leo, G., & Triyuni, N. N. (2019). Millennial experience with online food home delivery: A lesson from Indonesia. *Interdisciplinary Journal of Information, Knowledge, and Management*, *14*, 277–294. https://doi.org/10.28945/4386

Szajna, B. (1996). Empirical evaluation of the revised technology acceptance model. *Management Science*, *42*(1), 85-92.

Talwar, S., Dhir, A., Kaur, P., & Mäntymäki, M. (2020). Why do people purchase from online travel agencies (OTAs)? A consumption values perspective. *International Journal of Hospitality Management*, *88*, Article e102534. https://doi.org/10.1016/j.ijhm.2020.102534

Tandon, A., Kaur, P., Bhatt, Y., Mäntymäki, M., & Dhir, A. (2021). Why do people purchase from food delivery apps? A consumer value perspective. *Journal of Retailing and Consumer Services*, *63*, Article e102667. https://doi.org/10.1016/j.jretconser.2021.102667

Teng, C.-C., & Wang, Y.-M. (2015). Decisional factors driving organic food consumption: Generation of consumer purchase intentions. *British Food Journal*, *117*(3), 1066–1081. https://doi.org/10.1108/BFJ-12-2013-0361

Teo, T. (2010). A path analysis of pre-service teachers' attitudes to computer use: Applying and extending the technology acceptance model in an educational context. *Interactive Learning Environments*, *18*(1), 65-79.

Thomé, K.M., Pinho, G.M., & Hoppe, A. (2019). Consumption values and physical activities: Consumers' healthy eating choices. *British Food Journal*, *121*(2), 590-602. https://doi.org/10.1108/BFJ-12-2017-0683

tom Dieck, M.C., & Jung, T. (2018). A theoretical model of mobile augmented reality acceptance in urban heritage tourism. *Current Issues in Tourism*, *21*(2), 154-174.

Tong, S., Luo, X., & Xu, B. (2020). Personalized mobile marketing strategies. *Journal of the Academy of Marketing Science*, *48*(1), 64-78. https://doi.org/10.1007/s11747-019-00693-3

Troise, C., Corvello, V., Ghobadian, A., & O'Regan, N. (2022). How can SMEs successfully navigate VUCA environment: The role of agility in the digital transformation era. *Technological Forecasting and Social Change*, *174*, Article e121227.

Troise, C., O'Driscoll, A., Tani, M., & Prisco, A. (2020). Online food delivery services and behavioural intention - A test of an integrated TAM and TPB framework. *British Food Journal*, *123*(2), 664-683. https://doi.org/10.1108/BFJ-05-2020-0418

Venkatesh, V., & Morris, M.G. (2000). Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior. *MIS Quarterly*, *24*(1), 115–139.

Vlachos, P. A., & Vrechopoulos, A. P. (2008). Determinants of behavioral intentions in the mobile internet services market. *Journal of Services Marketing*, *22*(4), 280–291. https://doi.org/10.1108/08876040810881687

Wang, J., Shen, X., Huang, X., & Liu, Y. (2021). Influencing factors of the continuous usage intention of consumers of online food delivery platform based on an information system

success model. *Frontiers in Psychology*, *12*, Article e716796. https://doi.org/10.3389/fpsyg.2021.716796

Wells, J., Valacich, J., & Hess, T. (2011). What signal are you sending? How website quality influences perceptions of product quality and purchase intentions. *MIS Quarterly*, *35*(2), 373–396. doi: 10.2307/23044048

Wen, H., Pookulangara, S., & Josiam, B. M. (2022). A comprehensive examination of consumers' intentions to use food delivery apps. *British Food Journal*, *124*(5), 1737–1754. https://doi.org/10.1108/BFJ-06-2021-0655

Zeng, Y., Jia, F., Wan, L., & Guo, H. (2017). E-Commerce in agri-food sector: A systematic literature review. *The International Food and Agribusiness Management Review*, *20*(4), 439-459.

Zhang, H., Wang, Z., Chen, S., & Guo, C. (2019). Product recommendation in online social networking communities: An empirical study of antecedents and a mediator. *Information and Management*, *56*(2), 185–195. https://doi.org/10.1016/j.im.2018.05.001

Zhao, Y., & Bacao, F. (2020). What factors determining customer continuingly using food delivery apps during 2019 novel coronavirus pandemic period? *International Journal of Hospitality Management*, *91*, Article e102683.