

# DETERMINANTS OF EXAMINING BEHAVIORAL ASPECTS OF USING EMERGING TECHNOLOGY IN ONLINE FOOD DELIVERY APPS. AN EXTENDED TECHNOLOGY ACCEPTANCE MODEL APPROACH

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## ABSTRACT

**Purpose** – The study aims to examine factors that influence customers' intention to use emerging technology (such as chatbots, AI-based recommendations, robotics delivery, Augmented Reality/Virtual Reality) in online food delivery applications. The factors examined in this study are based on the existing theory of Technology Acceptance Model (TAM), namely perceived usefulness, perceived ease of use, attitude towards intention to use the applications, and this research expanded with an additional dimension: perceived enjoyment, which leads to the intention to use online food delivery services.

**Design/methodology/approach** – The study employed a quantitative method, and 201 respondents participated in this study. The questionnaires were distributed using a convenience sampling technique, and the data was analyzed using the partial least square

approach. The study focused on measurement properties via Confirmatory Factor Analysis (CFA) and SEM using Smart PLS 4.0. Descriptive analysis and hypothesis testing provided insights into factors influencing OFD app adoption among consumers, ensuring methodological rigor and credibility.

**Findings** – The results show that four (4) constructs, i.e. Perceived usefulness, Perceived ease of use, Perceived Enjoyment, and Attitude towards Behavioral intention. The study indicates that user experience factors, such as enjoyment and ease of use, play a crucial role in determining the behavioral intention to use technology-based online food delivery applications in Delhi.

**Practical implications** – The output of this study has several practical contributions, such as enhancing the existing knowledge and skillset of the shared-economy industry. OFD industry practitioners can use these results to better understand how to improve the behavioral

intentions of their customers. Additionally, this study advances the ongoing investigation into the use of TAM in OFD platforms.

**Originality/value** – The current work examined consumers' intentions regarding emerging technology in online food delivery services.

**Keywords:** Technology Acceptance Model, perceived enjoyment, emerging technologies, online food delivery, and structural equation modeling.

## INTRODUCTION

The widespread adoption of smartphones and the proliferation of mobile applications (apps) has led to a significant transformation in the lifestyles of Indian consumers (Gupta, 2019; Singh, 2018). Consumers enthusiastically embrace the internet and Online Food Delivery Applications (OFDAs) due to the convenience, information availability, and interaction they offer (Chen et al., 2009; Gupta et al., 2019). This rapid integration of innovative technological solutions propels the growth of previously untapped market segments within the food industry. The surge in mobile-based ordering, evidenced by a remarkable 380 percent rise in delivery app installations, signifies a notable shift in consumer preferences towards convenient and effective solutions. This trend aligns with the broader digital transformation across various industries, particularly in services. Businesses adapting to this shift by offering user-friendly mobile applications for ordering and delivery stand to gain increased revenues (Wang et al., 2010). Online food

delivery (OFD), facilitated by platforms enabling customers to purchase a wide range of products or services, is a burgeoning trend (Cho et al., 2019). Platforms like Zomato, Swiggy, and Food Panda empower users to order food from multiple restaurants via apps or websites. Alalwan (2020) suggests that restaurants can boost their revenue potential through these platforms, while Cho et al. (2019) highlight their assistance in selecting from a diverse range of food providers. Projections indicate that by 2028, the market will reach a value of US\$81.91 billion. A Rakuten Insight survey in April 2023 found that approximately 20 percent of female respondents in India ordered food via delivery apps once or twice weekly, while about 19 percent of male respondents placed one or more weekly orders through such apps.

Indian consumers are attracted to the ease of online shopping through digital apps and portals and seek a similar convenience when ordering food online. Digital ordering is a straightforward process, indicating to customers that restaurants are capable of embracing technological advancements (Ramesh et al.). In 2023, the online food delivery market in India is projected to generate US\$33.36 billion in revenue, with a compound annual growth rate (CAGR) of 19.68% for 2023–2028. Although numerous studies have examined the online food delivery market, limited research has investigated the effectiveness of emerging technology-based OFD apps in influencing consumer behavioral intentions. This study aims to evaluate the effectiveness of integrating cutting-edge technologies such as chatbots, AI-based recommendations, and robotics delivery into India's online meal delivery service,

aiming to provide pragmatic functionality and a pleasurable ordering experience. Investigating the influence of technologically-driven Online Food Delivery Apps (OFDA) on customer orders, particularly among women, was a central research objective. The Technology Acceptance Model (TAM), developed by Davis et al. (1989), guides this research, emphasizing the importance of perceived usefulness, ease of use, and perceived enjoyment in shaping technology acceptance.

Moving beyond the introduction, Section 2 outlines the research constructs and hypothesis construction, followed by the research methodology in Section 3, data analysis results in Section 4, study conclusions in Section 5, implications in Section 6, and limitations in Section 7.

### **Theoretical Background:**

Davis' Technology Acceptance Model (TAM), introduced in 1989 and substantiated by subsequent studies (Gao & Bai, 2014), is pivotal in comprehending technology adoption aligned with user expectations. TAM amalgamates perceived ease of use and usefulness to gauge user intentions (Davis, 1989). Subsequently, Davis et al. (1992) enhanced TAM by integrating perceived enjoyment, acknowledging the significance of intrinsic satisfaction alongside utility. Perceived enjoyment denotes the inherent pleasure in technology interaction (Davis et al., 1992). Researchers such as Agarwal, Heijden, Shang, Teo, and Venkatesh have investigated the influence of both intrinsic and extrinsic motivators on technology acceptance.

By incorporating perceived enjoyment, TAM provides a comprehensive perspective on technology adoption dynamics.

Perceived ease of use evaluates the simplicity of comprehending a system, influenced by user interaction and frequency of usage (Zuniarti et al., 2021). Bassiouni et al. (2019) suggest that ease of use reflects the effort exerted by users, akin to video game usage. Zhang et al. (2014) define perceived ease of use concerning IT systems in restaurants. Rauniar et al. (2014) discuss Facebook's ease of use in terms of comprehension and navigation. Higher perceived ease of use of cloud computing correlates with increased adoption (Ratten, 2014). Hubert et al. (2019) relate ease of use to users' confidence in understanding smart home systems and effortless interaction. In hospitality technology, ease of use hinges on interaction desirability and simplicity (Zhang et al., 2014). Rauniar et al. (2014) elaborate on Facebook's ease of use criteria, encompassing flexibility, accessibility, skill acquisition, user-friendliness, and interaction clarity.

Perceived usefulness, defined by Kowalczyk (2018), pertains to users' belief in the smart speaker system's ability to enhance work output. Moghavvemi et al. (2016) highlight Malaysian entrepreneurs employing innovative systems to improve tasks and skills. Rauner et al. (2014) discuss.

Perceived usefulness in social media concerns goal-oriented users. The usefulness of cloud computing is influenced by information accessibility, as noted by Ratten (2014). Zhang et al. (2014) emphasize the usefulness of hospitality technology in improving performance and simplifying tasks. The utility of Facebook, as

per Rauniar et al. (2014), is measured through reconnecting with influential connections, improving life, maintaining relationships, staying in touch, and staying informed. Wu et al. (2017) propose measurement items for usefulness, emphasizing faster payments and streamlined transactions. Perceived enjoyment, described as hedonic, enhances individuals' comfort with technology, particularly in video games (Bassiouni et al., 2019). Comfort with information technology fosters positive attitudes and effective task performance (Zhang et al., 2014). Technological application boosts comfort and usage, particularly in entrepreneurial pursuits (Moghavvemi et al., 2016; Kunz et al., 2020). Kowalczyk (2018) links perceived enjoyment with the pleasantness of smart speaker usage. In restaurant settings, information technology systems are designed for user-friendly enjoyment (Zhang et al., 2014). Wu et al. (2017) use factors like pleasure and excitement to measure enjoyment in mobile payment tools like WeChat. Behavioral intention to use technology represents the propensity to persist in its usage. Moghavvemi et al. (2016) define it as the decision to adopt or reject technology for enhancing business performance, particularly among entrepreneurs. Hospitality classes in the USA emphasize the acceptance and application of behavioral intentions towards information technology systems by restaurant staff (Zhang et al., 2014). Smart home technology usage can be predicted based on users' attention to it (Hubert et al., 2019). Zhang et al. (2014) identify indicators of behavioral intentions in restaurants, including continuous and prolonged use of IT systems. Similarly, Hubert et al. (2019) outline criteria

such as home usage frequency for measuring behavioral intention in smart homes.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### **Perceived Usefulness and perceived ease of use of Technology based Online food delivery service**

Service simplicity not only saves users' time and effort but also significantly enhances their overall experience. Perceived ease of use consistently shapes users' perceptions of usefulness across various contexts. For example, Rauniar et al. (2014) found that Facebook's straightforward interaction positively influenced its perceived usefulness. Gathering insights through electronic surveys, as suggested by Tarigan et al. (2019), facilitates comfortable sharing of thoughts. In the realm of smart homes, Hubert et al. (2018) stress that simplicity directly impacts perceived usefulness, contributing to a more convenient lifestyle. Similarly, Setiawan and Widanta (2021) report that Traveloka's user-friendly interface enhances its perceived benefits in Bali. In education, cloud computing's utility is closely tied to ease of use (Ratten, 2014), emphasizing intuitive interfaces for a better user experience in large universities. Lastly, in the context of Korean consumer sports and fitness wearable devices, perceived ease of use positively influences perceived usefulness, as demonstrated by Kim and Ciu (2019). Thus, we hypothesize that.

**H1:** Perceived ease of use has significantly influence perceived usefulness of Technology based online food delivery apps.

## **Perceived ease of use affects perceived enjoyment of Technology based online food**

“Technology systems play a pivotal Role in enhancing user convenience, leading to a sense of ease when interacting with these systems (Tarigan et al., 2020). For instance, the perception of smart homes as user-friendly and enjoyable stems from their ability to provide comfort and a feeling of being at home (Hubert et al., 2018). Intrinsic motivation, often associated with perceived enjoyment, significantly influences user acceptance of systems. Consider video games, which are both easy to play and understand. Their simplicity facilitates game selection and optimal family playtime. Notably, perceived ease of use directly impacts perceived enjoyment in the context of video games (Bassiouni et al., 2019). A study by Kim and Ciu (2019) highlights the interplay between technology readiness dimensions and perceived ease of use. While optimism and innovativeness positively influence ease of use, discomfort and insecurity related to negative technology readiness can hinder the adoption of sports and fitness wearable devices. Thus, we hypothesize that

**H2:** Perceived ease of use has significantly influences perceived enjoyment of Technology based online food delivery service.

## **Perceived Enjoyment affects Perceived Usefulness of Technology based online food delivery service**

This study focused on several elements that contribute to an enjoyable ordering experience, including a fascinating ordering process,

appealing technology, and a funny and engaging ordering process. The intrinsic motivator, perceived enjoyment, is proposed to influence the use of technology-based meal delivery apps. It is anticipated that an increase in perceptions of extrinsic motivation, specifically perceived utility, will result from intrinsic motivation, such as perceived enjoyment. Individuals finding a system enjoyable are more inclined to perceive it as useful (Sun & Zhang, 2008). Additional studies on various systems, including instant messaging, search engines, and e-learning platforms, demonstrated a positive impact of user enjoyment on perceived usefulness (Li et al., 2005; Liaw & Huang, 2003; Yi & Hwang, 2003). Hence, the hypothesis posits a relationship between intrinsic enjoyment and extrinsic utility in technology acceptance.

**H3:** Perceived enjoyment has a positive effect on perceived usefulness of technology based online food delivery service.

## **Perceived usefulness affect Behavioral intention to use Technology based Online Food Delivery service**

Numerous previous studies have consistently confirmed the significant role of perceived usefulness in shaping behavioral intentions. For instance, research by Venkatesh (2000) and Sun & Zhang (2006) has highlighted this robust relationship. Most of these studies have focused on assessing the impact of perceived usefulness on users' intentions to adopt and utilize technology. Specifically, in the context of online food delivery services, perceived usefulness plays a crucial role in explaining the technology-based ordering process.

Tam's model, which emphasizes the purpose behind adopting information system technology, aligns with the findings of Davis (1989) and Palumian et al. (2021). Furthermore, the acceptance of information system applications by users is likely to increase in the future, as demonstrated by research conducted by Tarigan et al. (2020). In a different context, Krishnanand Koshy (2021) explored the relationship between perceived usefulness and consumer behavioral intentions related to electric cars in Taiwan and Vietnam. Their findings suggest that perceived usefulness significantly influences consumers' intentions to acquire electric vehicles. Similarly, a survey conducted by Taufik and Hanafiah (2019) at the Kulala Lumpus International Airport revealed that perceived usefulness has a direct impact on consumer behavioral intentions in the context of self-service technologies. Thus, we hypothesize that

**H4:** Perceived usefulness has significantly influences Behavioral intention of Technology based online food delivery service

#### **Perceived enjoyment affect Behavioral intention to use Technology based Online Food Delivery service:**

The proposition posits that the extent of perceived enjoyment significantly shapes the intention to use a system. This stems from the notion that individuals deriving pleasure or satisfaction from system usage are more inclined to develop an intention to utilize it, as indicated by Davis et al. (1992). Substantial empirical backing for this relationship exists across various domains, including Internet learning

(Lee et al., 2005), interface agents (Serenko, 2008), the Second Life virtual platform (Shen et al., 2009), and web portals (Van der Heijden, 2004). In the context of ARTP use by students, a perception of enjoyment is likely to foster favorable perceptions and a heightened intention to use it. Thus:

**H5:** Perceived enjoyment significantly influences behavioral intention to use technology-based online food delivery service.

#### **Perceived Ease of use affect Behavioral Intention to use Technology based Online Food Delivery service:**

Perceived ease of use in cloud computing adoption impacts adoption intentions in 135 respondents (Ratten, 2014). The intention to use cloud computing by students at large universities depends on the ease of use, ease of learning cloud computing, and how to use cloud computing quickly, and it has a direct influence on the desire to buy these services and the desire to access and store data in cloud computing. Perceived ease of use affects the intention to use sports and fitness wearable devices among Korean consumers. The ease of use and interaction in sports and fitness wearable devices is clear and easy to understand, which has an impact on the desire to use these tools regularly and often in the future (Kim and Ciu, 2019). Alawan et al. applied the TAM to examine the intention and adoption of mobile internet service among Saudi Arabians. (Roh et al., 2019) found that ease of use positively influences both usefulness and intention to use food.

These researchers also found that usefulness positively influences the intention to use such applications. The benefits perceived by the user do not affect behavioral intention in a study of food delivery applications in India (Gupta et.al 2021). The researchers studied drone food delivery services, noting that the key variables that predict customer intention are attitude, subjective norms, and perceived usefulness (Waris et. al 2022). Based on the explanation of the relationship, our hypothesis can be established:

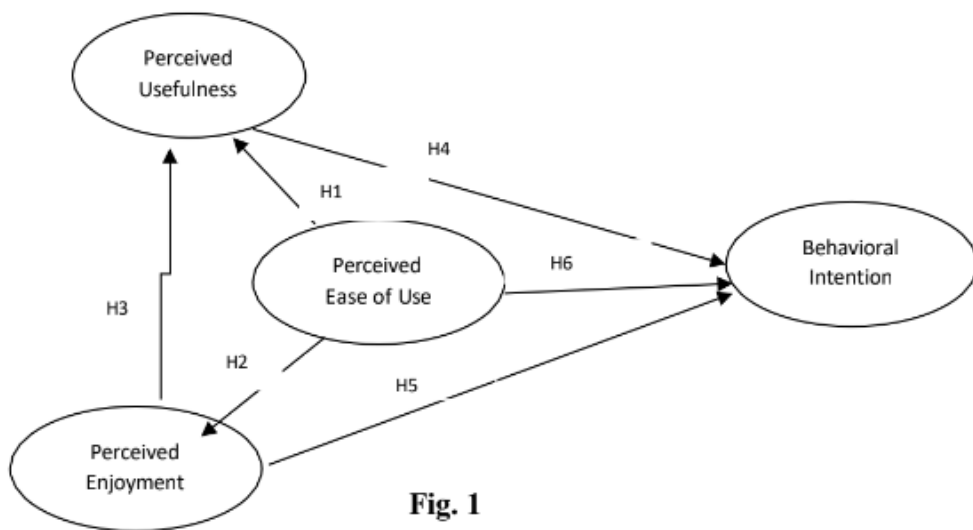
**H6:** Perceived ease of use has significantly influence Behavioral Intention to use Technology based online food delivery service.

The research model, as depicted in Figure 1, is derived from the arguments presented in the introduction and literature review, outlining the interconnections among various constructs. The relationships between factors are identified by corresponding hypothesis numbers. This

model serves as a visual representation of the theoretical framework, providing a structured depiction of the proposed associations. The illustration in Figure 1 encapsulates the comprehensive conceptualization of the research model, offering a guide for understanding the intricate connections between different constructs in the study.

### RESEARCH METHODS

Quantitative research examined causal relationships among constructs and hypotheses regarding the usage of Online Food Delivery (OFD) services like Zomato, Swiggy, and Food Panda in Delhi. PLS-SEM established correlations between perceived ease of use, usefulness, enjoyment, and behavioral intention, with 201 respondents surpassing the recommended sample size. Google Forms distributed the questionnaire, incorporating adapted items from previous research. The



**Fig. 1**  
**Research Framework and Hypotheses**  
**Intention**

study focused on measurement properties via Confirmatory Factor Analysis (CFA) and SEM using Smart PLS 4.0. Descriptive analysis and hypothesis testing provided insights into factors influencing OFD app adoption among Indians, ensuring methodological rigor and credibility.

## RESULTS

### Profile of Respondents

Table 1 presents the demographic profile of respondents. All participants were female, with a significant majority (77%) falling within the

18-23 age group. Regarding the frequency of using food delivery applications, the most common response, chosen by 30%-40% of respondents, indicated a weekly or monthly usage pattern.

### Reliability and Validity

“In assessing the appropriateness of our measurement model, we conducted confirmatory factor analysis (CFA) as outlined in Table 2. The results of the CFA indicate that our model exhibits favorable fit statistics, including a chi-square to degrees of freedom ratio ( $\chi^2/df$ ) of

**Table 1: Participant Demographics.**

Measure	Item	In Percentage
<b>Respondents</b>	Women	
<b>Age</b>	18-23	77%
	24-29	6.3%
	30-35	9.8%
	36-40	4.2%
	41-45	2.1%
	46 and above	0.6%
<b>Educational Qualification</b>	Under Graduate	68.6%
	Graduate	7.2%
	Post Graduate	21.1%
	Doctorate	3.1%
<b>Frequency of using OFD</b>	Weekly	30.4%
	Bi-Weekly	13.2%
	Monthly	29.4%
	Quarterly	15.7%
	Twice a year	2.5%
	Yearly	8.8%



1.71, a root mean square error of approximation (RMSEA) of 0.060, a relative fit index (RMR) of 0.031, and a comparative fit index (CFI) of 0.974. These values align with the recommended thresholds established by Hu and Bentler (1999) and Browne and Cudeck (1992) (RMSEA < 0.08, RMR < 0.05, CFI > 0.90).

Furthermore, all standardized factor loadings for our items exceed 0.60, and the average variance extracted (AVE) is above 0.50, indicating strong convergent validity (Hair, Sarstedt, Ringle & Gudergan, 2017). Additionally, the maximum shared variance is less than the respective AVE for all variables, further supporting convergent validity. Lastly, our variables demonstrate good reliability, with Cronbach's alpha and composite reliability exceeding 0.70."

To assess discriminant validity, the study compared the square root of the average variance extracted (AVE) with interfactor correlations for each construct, as presented in Table 5. Notably, all correlations were below the square root of the respective AVEs, indicating acceptable discriminant validity. The diagonal elements, representing AVEs (in bold), consistently exceeded the recommended threshold of 0.50 according to Fornell & Larcker (1981). Furthermore, squared correlations between constructs (off-diagonal elements) were consistently smaller than the AVE measures, demonstrating that each construct shared more variance with its items than with other constructs. This robustly met the criteria for discriminant validity, ensuring the distinctiveness of each construct in the model.

**Table 2: Validity and reliability of the measurement result**

Variable/Constructs Items		Standardized factor loading	Cronbach Alpha	Composite Reliability	Average Variance Extracted
Perceived Usefulness (PU)	PU1	.84	<b>0.89</b>	<b>0.93</b>	<b>0.67</b>
	PU2	.85			
	PU3	.87			
	PU4	.69			
Perceived Ease of Use (PEOU)	PEOU1	.87	<b>0.91</b>	<b>0.95</b>	<b>0.72</b>
	PEOU2	.92			
	PEOU3	.86			
	PEOU4	.74			
Perceived Enjoyment (PENJ)	PENJ1	.89	<b>0.92</b>	<b>0.96</b>	<b>0.75</b>
	PENJ2	.91			
	PENJ3	.89			
	PENJ4	.78			
Behavioral Intention (BI)	BI1	.82	<b>0.90</b>	<b>0.94</b>	<b>0.69</b>
	BI2	.92			
	BI3	.77			
	BI4	.81			

Note:  $p < 0.001$ .

**Table 3: Discriminant Validity**

Latent Variable	PU	PEOU	PENJ	BI
PU	<b>0.82</b>			
PEOU	<b>0.81</b>	<b>0.84</b>		
PENJ	<b>0.77</b>	<b>0.66</b>	<b>0.86</b>	
BI	<b>0.76</b>	<b>0.72</b>	<b>0.81</b>	<b>0.83</b>

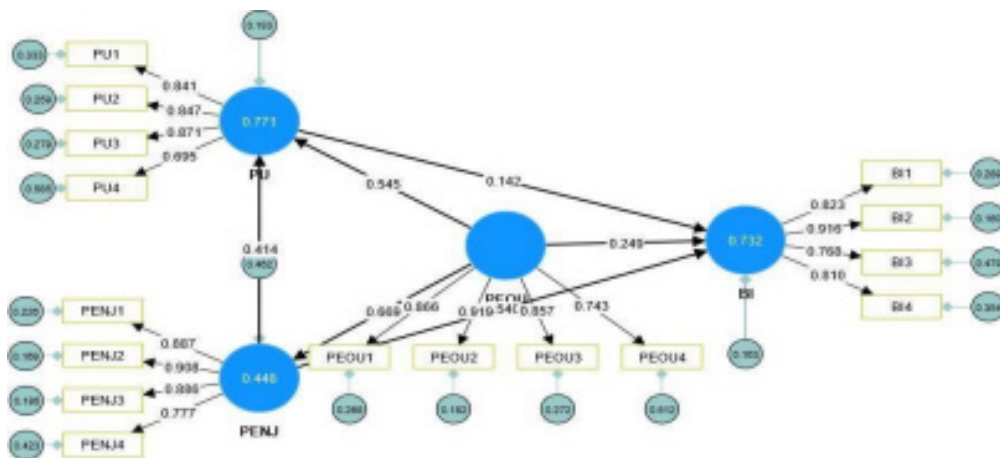
**Testing Hypotheses**

“The structural model exhibited robust fit statistics (Figure 2):  $\chi^2$  (144) = 263.67,  $p < 0.01$ , CFI = 0.97, NFI = 0.94, TLI = 0.96, RMR = 0.03, and RMSEA = 0.04. We tested six research hypotheses, and the results revealed the following: “

1. **Perceived Usefulness (PU):** There was no significant relationship between perceived usefulness and behavioral intention (H4 rejected).
2. **Perceived Ease of Use (PEOU):** PEOU positively influenced perceived usefulness ( $\beta = 0.54$ ,  $t = 7.696$ ), supporting H1. Additionally, PEOU had positive effects on perceived enjoyment and behavioral

intention ( $\beta = 0.67$ ,  $t = 9.687$ ;  $\beta = 0.24$ ,  $t = 2.612$ , respectively), confirming H2 and H6.

3. **Perceived Enjoyment (PE):** PE significantly affected both perceived usefulness and behavioral intention ( $\beta = 0.41$ ,  $t = 6.094$ ;  $\beta = 0.54$ ,  $t = 6.134$ , respectively), supporting H3 and H5.
4. **Variance Explained:** The model explained substantial variance in PU ( $R^2 = 0.77$ ), perceived enjoyment (PENJ,  $R^2 = 0.45$ ), and behavioral intention (BI,  $R^2 = 0.732$ ).
5. **PEOU and PE Relationship:** PEOU explained 54% of the variance in PE. Together, PEOU and PE accounted for 47% of the variance in perceived usefulness.
6. **PEOU and Perceived Enjoyment:** PEOU significantly influenced perceived enjoyment (explaining 45% of the variance).
7. **Overall Impact:** PEOU, PU, and PENJ jointly explained 73.2% of the variance in behavioral intention, with perceived enjoyment playing a more substantial role than perceived usefulness and ease of use.”



**Figure 2. Results of PLS-SEM**

**Table 3: Hypothesis and Path Coefficient**

Hypothesized Path	Standardized Path Coefficients	t-Value	Results
H1: PEOU → PU	0.54	7.696	Supported
H2: PEOU → PENJ	0.67	9.687	Supported
H3: PENJ → PU	0.41	6.094	Supported
H4: PU → BI	0.14	1.194	Rejected
H5: PENJ → BI	0.54	6.134	Supported
H6: PEOU → BI	0.24	2.612	Supported

Note:  $p < 0.001$ .

## V. DISCUSSION

In light of the rapid evolution of cutting-edge technologies, it is imperative to grasp how the food service industry can harness these innovations to enhance efficacy in diverse business domains such as marketing, hiring, customer service, and overall operations (Di Pietro et al., 2012).

Numerous studies underscore the significance of e-service, particularly in restaurants offering Online Food Delivery (OFD) services (Suhartanto et al., 2019). Technological progress has enabled Artificial Intelligence (AI) to furnish e-service agents, aiding businesses in improving offerings and cultivating a favorable clientele (Chung et al., 2018). However, the technology employed by AI in the food service sector requires more attention in academic literature (Ruiz- Molina et al., 2014). This study aims to investigate consumers' intentions to use technology-based online meal delivery services within an Emerging Technology Acceptance Model

(ETAM) framework, offering practical solutions for policymakers. Research on emerging technologies like chatbots, robotic delivery, augmented or virtual reality, and AI-based recommendations for food delivery services is in its nascent stages, necessitating further examination to ensure alignment with customer needs. The current study contributes to the understanding of Online Food Delivery (OFD) and emerging technologies by elucidating how these technologies influence consumer perceptions of OFD services, the study's findings did not reveal a significant correlation between behavioral intention and perceived usefulness, contrary to expectations. This differs from other studies (Ngubelanga et al., 2021; Tarigan et al., 2021; Palumia et al., 2021; Krishanan & Koshy et al., 2021) establishing a positive relationship between these variables in contexts like online food delivery, information systems, and mobile commerce applications for millennials. However, alignment with a study on food delivery apps in India (Gupta et al., 2021) suggests no relationship between user

benefits and behavioral intention, consistent with our results. Despite this, the study uncovered a robust and favorable correlation between Perceived Ease of Use (PEOU) and Perceived Usefulness (PU).

In summary, the study addresses the evolving landscape of technology in the food service industry, emphasizing the need for further research to align technological advancements with consumer needs. The unexpected findings regarding the relationship between perceived usefulness and behavioral intention underscore the complexity of factors influencing consumers' acceptance of emerging technologies in the context of online meal delivery services. The results validated the findings of previous studies (Rauniar et al., 2014; Tarigan et al., 2019; Hubert et al., 2018; Kim & Ciu, 2019). It can be inferred that consumers who are more likely to think about how convenient it is to use food delivery services will quickly determine how useful new technologies are to them. This study also demonstrated that there is a positive correlation between perceived utility and ease of use. Furthermore, as previous research has shown, perceived usefulness was positively impacted by perceived ease of use in a significant way. This suggests that people would consider food delivery services that are simpler to use to be more beneficial.

Our findings are consistent with earlier research, which found that consumers' perceived enjoyment of technology-based online meal delivery applications is a major factor in increasing their intention to purchase (Lee et al., 2005; Serenko et al., 2008; Shen et al.,

2009; Vander herijden, 2004). Specifically, it was discovered that the intention to use was more influenced by perceived enjoyment than by PU and PEOU (Roberta et al., 2020). Finally, it was discovered that intention to use was significantly influenced by perceived enjoyment and ease of use, which is consistent with other research (Lee et al., 2017; Lee et al., 2022; Silva et al., 2022; Yoon et al., 2021). These findings suggest that...

Consumers' intentions to use food delivery applications are positively correlated with their perception of using technology and ease of use. This study's noteworthy achievement is a validated model encompassing diverse evaluation dimensions for online ordering platforms. The measurement model exhibited satisfactory convergent and discriminant validity, ensuring the robust assessment of constructs. The versatility of this model extends to the integration of emerging technology in Online Food Delivery Apps (OFDA), making it applicable to technology-based online food delivery platforms. It is important to take into account the limitations of the current study. First, future researchers should consider the challenge of generalizability, as findings from diverse cultural backgrounds may vary. To enhance generalization, forthcoming studies should aim for higher response rates. Additionally, it's essential to note that the data for this study originated from Online Food Delivery App (OFDA) users who may be particularly attuned to new technologies. The users that were looked at could be given more thought and could offer more information about market segmentation and potential acceptability. It would be interesting to investigate the degree to which

older people plan to adopt new technologies and the reasons behind their intention to use OFDA technologies. Lastly, we think more investigation is necessary to determine whether implementing Emerging Technologies in OFDA could be beneficial in other sectors of the economy.

## CONCLUSION

The findings of our research have consequences for OFD services and emerging technology. To the best of our knowledge, OFD services made possible by emerging technologies—AI-based recommendation, chatbots, AR/VR, and so on—remain unexplored, despite the fact that some studies have begun to examine the role of technologies in application in various domains (Chattaraman et al., 2019; Jung et al., 2018). In light of this, our research provides valuable insights for food delivery businesses looking to target younger clientele by utilizing contemporary interactive technologies to figure out how technology-based OFDA influences consumers' intentions. In this regard, our research emphasizes that expanding the number of touch points available in the OFD segment requires more than simply implementing technology in OFDA. This study extends the Technology Acceptance Model (TAM) by incorporating the constructs of perceived ease of use, perceived usefulness, enjoyment, and behavioral intention specific to Online Food Delivery Apps (OFDA). The outcomes demonstrated the expanded use of TAM on platforms for online meal delivery. Enjoyment and perceived usefulness are positively impacted by perceived ease of use.

Moreover, intention to use is positively and significantly impacted by perceived ease of use and enjoyment. OFD industry practitioners can use this result to better understand how to improve the behavioral intentions of their customers. Additionally, this study advances the ongoing investigation into the use of TAM in OFD platforms.

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PEOU, PU, and PENJ jointly explained 73.2% of the variance in behavioral intention, with perceived enjoyment playing a more substantial role than perceived usefulness and ease of use.

## Figure 2. Results of PLS-SEM

**Table 3: Hypothesis and Path Coefficient**

Hypothesized Path	Standardized Path Coefficients	t-Value	Results
H1: PEOU PU	0.54	7.696	<b>Supported</b>
H2: PEOU PENJ	0.67	9.687	<b>Supported</b>
H3: PENJ PU	0.41	6.094	<b>Supported</b>
H4: PU BI	0.14	1.194	<b>Rejected</b>
H5: PENJ BI	0.54	6.134	<b>Supported</b>
H6: PEOU BI	0.24	2.612	<b>Supported</b>

Note:  $p < 0.001$ .



## DISCUSSION

In light of the rapid evolution of cutting-edge technologies, it is imperative to grasp how the food service industry can harness these innovations to enhance efficacy in diverse business domains such as marketing, hiring, customer service, and overall operations (Di Pietro et al., 2012).

Numerous studies underscore the significance of e-service, particularly in restaurants offering Online Food Delivery (OFD) services (Suhartanto et al., 2019). Technological progress has enabled Artificial Intelligence (AI) to furnish e-service agents, aiding businesses in improving offerings and cultivating a favorable clientele (Chung et al., 2018). However, the technology employed by AI in the food service sector requires more attention in academic literature (Ruiz- Molina et al., 2014). This study aims to investigate consumers' intentions to use technology-based online meal delivery services within an Emerging Technology Acceptance Model (ETAM) framework, offering practical solutions for policymakers. Research on emerging technologies like chatbots, robotic delivery, augmented or virtual reality, and AI-based recommendations for food delivery services is in its nascent stages, necessitating further examination to ensure alignment with customer needs. The current study contributes to the understanding of Online Food Delivery (OFD) and emerging technologies by elucidating how these technologies influence consumer perceptions of OFD services. Contrary to expectations, the study's findings did not reveal a significant correlation between behavioral

intention and perceived usefulness. This differs from other studies (Ngubelanga et al., 2021; Tarigan et al., 2021; Palumia et al., 2021; Krishanan & Koshy et al., 2021) establishing a positive relationship between these variables in contexts like online food delivery, information systems, and mobile commerce applications for millennials. However, alignment with a study on food delivery apps in India (Gupta et al., 2021) suggests no relationship between user benefits and behavioral intention, consistent with our results. Despite this, the study uncovered a robust and favorable correlation between Perceived Ease of Use (PEOU) and Perceived Usefulness (PU). In summary, the study addresses the evolving landscape of technology in the food service industry, emphasizing the need for further research to align technological advancements with consumer needs. The unexpected findings regarding the relationship between perceived usefulness and behavioral intention underscore the complexity of factors influencing consumers' acceptance of emerging technologies in the context of online meal delivery services. The results validated the findings of previous studies (Rauniar et al., 2014, Tarigan et al., 2019, Hubert et al., 2018, Kim & Ciu, 2019). It can be inferred that consumers who are more likely to think about how convenient it is to use food delivery services will quickly determine how useful new technologies are to them. This study also demonstrated that there is a positive correlation between perceived utility and ease of use. Furthermore, as previous research has shown, perceived usefulness was positively impacted by perceived ease of use in a significant way. This suggests that people would consider food

delivery services that are simpler to use to be more beneficial. Our findings are consistent with earlier research, which found that consumers' perceived enjoyment of technology-based online meal delivery applications is a major factor in increasing their intention to purchase (Lee et al., 2005, Serenko et al., 2008, Shen et al., 2009, Vander herijden, 2004). Specifically, it was discovered that the intention to use was more influenced by perceived enjoyment than by PU and PEOU (Roberta et al., 2020). Finally, it was discovered that intention to use was significantly influenced by perceived enjoyment and ease of use, which is consistent with other research (Lee et al., 2017; Lee et al., 2022; Silva et al., 2022; Yoon et al., 2021). These findings suggest that consumers' intentions to use food delivery applications are positively correlated with their perception of using technology and ease of use. This study's noteworthy achievement is a validated model encompassing diverse evaluation dimensions for online ordering platforms. The measurement model exhibited satisfactory convergent and discriminant validity, ensuring the robust assessment of constructs. The versatility of this model extends to the integration of emerging technology in Online Food Delivery Apps (OFDA), making it applicable to technology-based online food delivery platforms. It is important to take into account the limitations of the current study. First, Future researchers should consider the challenge of generalizability, as findings from diverse cultural backgrounds may vary. To enhance generalization, forthcoming studies should aim for higher response rates. Additionally, it's essential to note that the data for this study

originated from Online Food Delivery App (OFDA) users who may be particularly attuned to new technologies. The users that were looked at could be given more thought and could offer more information about market segmentation and potential acceptability. It would be interesting to investigate the degree to which older people plan to adopt new technologies and the reasons behind their intention to use OFDA technologies. Lastly, we think more investigation is necessary to determine whether implementing Emerging Technologies in OFDA could be beneficial in other sectors of the economy.

## CONCLUSION

The findings of our research have consequences for OFD services and emerging technology. To the best of our knowledge, OFD services made possible by emerging technologies—AI-based recommendation, chatbots, AR/VR, and so on—remain unexplored, despite the fact that some studies have begun to examine the role of technologies in application in various domains (Chattaraman et al., 2019; Jung et al., 2018). In light of this, our research provides valuable insights for food delivery businesses looking to target younger clientele by utilizing contemporary interactive technologies to figure out how technology-based OFDA influences consumers' intentions. In this regard, our research emphasizes that expanding the number of touch points available in the OFD segment requires more than simply implementing technology in OFDA. This study extends the Technology Acceptance Model (TAM) by incorporating the constructs

of perceived ease of use, perceived usefulness, enjoyment, and behavioral intention specific to Online Food Delivery Apps (OFDA). The outcomes demonstrated the expanded use of TAM on platforms for online meal delivery. Enjoyment and perceived usefulness are positively impacted by perceived ease of use. Moreover, intention to use is positively and significantly impacted by perceived ease of use and enjoyment. OFD industry practitioners can use this result to better understand how to improve the behavioral intentions of their customers. Additionally, this study advances the ongoing investigation into the use of TAM in OFD platforms.

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