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Analysis of M-Commerce Adoption in Online Food Delivery Services Using the TAM3, UTAUT2, and TOE Models in MSMES in the Food and Beverage Sector in the Central Parahyangan Area, West Java

Muhammad Farrell Pradichytama Raksawaruga, Siska Noviaristanti
Universitas Telkom, Indonesia
Email: awelzoyawel@student.telkomuniversity.ac.id, siskamarhen@telkomuniversity.ac.id

ABSTRACT

Mobile commerce in online food delivery services (OFDS) is a technological innovation that simplifies digital business operations. Its growing adoption reflects significant local interest in conducting business digitally. The Central Parahyangan region of West Java has experienced a surge in this technology's uptake. This research analyzes mobile commerce adoption in OFDS using the TAM3, UTAUT2, and TOE models within MSMEs in the Central Parahyangan area. The study investigates factors influencing mobile commerce adoption, focusing on variables such as Computer Self-Efficacy (CSE), Computer Anxiety (CA), Result Demonstrability (RD), Mobile-Commerce Knowledge (MCK), Pressure from Trading Partners (PTP), Pressure from Competitors (PC), and Hedonic Motivation (HM). Results show that CSE, CA, RD, MCK, PTP, and PC significantly impact m-commerce adoption among MSMEs in the food and beverage sector. Hedonic Motivation also plays a significant moderating role on the effects of Computer Self-Efficacy, Computer Anxiety, and Result Demonstrability on mobile commerce adoption. These findings highlight the importance of self-confidence, perceived results, external pressures, and motivational factors in driving OFDS adoption. This study suggests that MSMEs should increase their engagement with OFDS technology to meet more effective adoption targets, fostering growth and competitiveness in the digital economy of the Central Parahyangan region.

Keywords: Mobile Commerce, Online Food Delivery Services, SMES, TAM3, UTAUT2, TOE

INTRODUCTION

The current trend of digitalization is a phenomenon experienced by everyone, changing various aspects of daily life, ranging from the way individuals communicate, shop, and work to how they access public services (Haris, 2024). The development of information technology and the internet has accelerated digital transformation in various sectors, including health, education, the economy, and creative industries. This trend allows for higher efficiency in various processes, both at the individual and organizational levels, by providing technology-based solutions such as Artificial Intelligence, the Internet of Things, Cloud Computing, and Big Data (Herwanto, 2025).

Digitalization is not only used as a tool to increase productivity but also serves as the main driver of innovation and economic growth in the modern era. With the continued development of technology, digitalization will remain a crucial part of human life, connecting various sectors within an increasingly integrated and data-driven ecosystem (Azzahra, 2024). The digitalization trend can be interpreted as a transformation journey from a conventional system to a more modern system with a digital basis that uses information technology to increase efficiency, effectiveness, and accessibility in various aspects of life (Tresna, 2023).

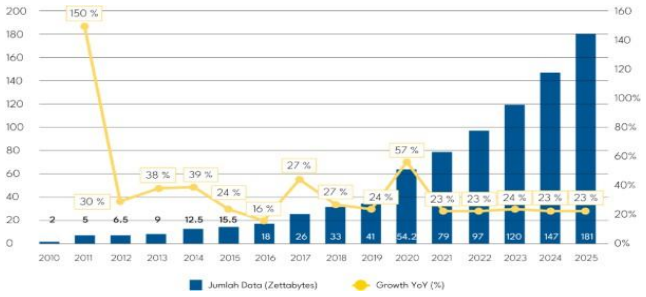

Figure 1. Digitalization Rate
Source: OECD

Since the Covid-19 pandemic, digital transformation has experienced significant acceleration in various sectors, including the food and beverage (F&B) industry. OECD data (2020) shows a surge in internet traffic of up to 60% in some countries, while Statista notes that global data volume increased to 64.2 zettabytes in 2020 and is projected to reach more than 180 zettabytes by 2025. This surge reflects the increasing familiarity of people with technology-based services, including m-commerce such as GrabFood, ShopeeFood, and GoFood. This change in consumer behavior—which relies more on online platforms to meet daily needs—opens up opportunities for F&B business actors to adopt Online Food Delivery Services as the main strategy to maintain business competitiveness (Arghajata, 2024)

Figure 2. Changes in Shopping Behavior
Source: DetikFinance.com

Figure 2 shows changes in people's shopping behavior that are increasingly digitized by utilizing interactive features; one example is *M-Commerce* such as Shopee Live and Shopee Video. This digitalization not only optimizes consumer shopping efficiency but also creates a more impulsive and hedonistic consumption trend. People are now more easily influenced by promotional content presented attractively by digital creators, which has increased 2.5 times (Kanalsatu.com, 2023). In addition, the rise in online shopping among young age groups, especially in food categories such as geprek chicken, shows a shift in consumption behavior from simply meeting needs to a more practical and pampering lifestyle.

The rise of mobile commerce (*m-commerce*) in the food delivery sector, particularly services like GrabFood, ShopeeFood, and GoFood, is reshaping consumption patterns. This shift, driven by ease of access and appealing digital promotions, is seen especially in urban and suburban areas. As digital adoption grows, consumers prefer services that offer comfort, accessibility, and personalization. *M-commerce* in the F&B sector is expanding rapidly due to consumer reliance on technology, as evidenced by rising app usage and the convenience of non-cash transactions.

In Indonesia, platforms like GoFood and GrabFood dominate the online food delivery market, with surveys revealing that 85% of people in major cities, including Bandung, have used such services. The growth potential of online food delivery (*OFD*) in the MSME sector is significant, though

challenges like platform fees, digital literacy, and operational sustainability remain. The adoption of these platforms by MSMEs is influenced by innovation compatibility, costs, and pressures from both customers and competitors. Studies also show that ease of app use and mobile commerce knowledge significantly enhance MSME sales.

However, challenges exist, such as limited technology understanding, low self-confidence in tech usage, and the time required for digital adoption. Government programs post-COVID-19 have sought to address these issues through digital education for MSMEs, though there is still a gap in effective digital marketing strategies. Despite these obstacles, *OFD* platforms continue to provide valuable business growth opportunities, especially for micro and small enterprises, by facilitating wider market access and efficient operation.

This technology facilitates the routines of urban people, especially saving time and effort, as explained by Lau and David (2019). Although Online Food Delivery services such as GrabFood, ShopeeFood, and GoFood are beneficial for culinary business actors, the adoption of this technology faces challenges such as limited digital literacy, high platform costs, uneven infrastructure, and fierce competition and technological readiness from MSMEs. This study aims to analyze the factors that affect the adoption of this service in MSMEs using the *TAM3*, *UTAUT2*, and *TOE* models.

Figure 3. Provinces with the Highest Number of Universities
Source: Jabar.bps.go.id

The Central Parahyangan area in West Java, including Bandung and Cimahi, is a hub for higher education with around 392 universities. Bandung hosts renowned institutions like Unpad, Unpar, ITB, UPI, and Telkom University. The large student population, familiar with technology, drives dynamic consumption behaviors, making them a prime target market for mobile commerce (m-commerce), particularly Online Food Delivery Services like GrabFood, ShopeeFood, and GoFood (Nur Alifah, 2022). West Java, with a high number of culinary businesses—1,414 units in 2020—ranked second in Indonesia for culinary enterprises, making it an ideal region to study m-commerce adoption in the F&B sector.

Figure **4. Areas with the Most Culinary Businesses**
Source: Jabar.Bps.co.id

In addition to the high number of culinary in the Central Parahyangan area, West Java, the student population that has been previously exposed in the Parahyangan area also shows high adaptation to digital technology. With the growing information technology infrastructure and extensive internet penetration, consumers in this region are increasingly accustomed to using m-commerce applications to order food and beverages. This change in behavior opens up great opportunities for business actors in the F&B sector to take advantage of platforms such as GrabFood, ShopeeFood, and Gofood to reach consumers more effectively (Sari, 2024). Therefore, factors such as hedonistic motivation, computer knowledge, technology utilization, and anxiety about technology are important variables influencing the adoption of m-commerce services.

Referring to the previous literature, Venkatesh et al. (2012) stated that the TAM and UTAUT models individually have shortcomings in explaining all factors that affect technology adoption. Although both models have proven to be powerful in predicting technology usage intentions and behaviors, they do not adequately account for the external and organizational factors that also have an impact. The TOE model offers a framework for examining external factors such as pressures from the environment and organizational resources that are not covered by TAM and UTAUT. Hedonistic motivation is considered important because it affects adoption intentions, especially in the context of the food and beverage sector that is oriented towards user experience and pleasure. This is supported by Khatimah et al. (2019) who suggest that hedonistic motivation can strengthen or weaken the influence of technological factors on the intention of use, so it is necessary to include it as a moderation variable to understand this dynamic more deeply. This factor is needed because it affects adoption intentions, especially in the context of the food and beverage sector that is oriented towards user experience and pleasure. The use of hedonistic motivation as moderation is also supported by studies showing that aspects of pleasure and user experience strongly influence technology adoption behavior.

This study aims to analyze in depth the factors that affect the adoption of m-commerce in Online Food Delivery Services, especially within the limits of Delivery Only/Instant by MSME actors in the Central Priangan area, West Java using the UTAUT2, TAM3, and TOE models. The researcher used the constructs of Computer Self Efficacy, Computer Anxiety, Result Demonstrability, Pressure from Trading Partners, Pressure from Competitor, Mobile Commerce Knowledge, and Hedonic Motivation by using structural equation modeling as the method.

The purpose of this study is to analyze the influence of Computer Self Efficacy, Result Demonstrability, Mobile Commerce Knowledge, Pressure from Trading Partners, Pressure from Competitors, Hedonic Motivation and Mobile Commerce Adoption among MSMEs in the Central Priangan Region, West Java. The benefits of this research are expected to be used by the local government to increase efforts in adopting m-commerce for MSME actors.

METHOD

The research method consisted of stages carried out in the study. The research was quantitative and used a deductive approach deemed appropriate for the objectives. This study employed causal research to determine relationships between independent and dependent variables. Surveys served as the unit of analysis. A cross-sectional approach was applied to capture a snapshot at a specific point in time, suitable for examining variable relationships.

The study focused on food and beverage MSME actors in the Central Parahyangan area, West Java, who had used online food delivery services and had operated for at least one year. Using purposive sampling and the Slovin formula (5% error rate), 200 respondents were obtained. Data were collected

through an online questionnaire with a 5-point Likert scale based on constructs from the TAM3, UTAUT2, and TOE models.

Data analysis was conducted using SEM-PLS with SmartPLS 4.0 to test the measurement model (validity and reliability) and structural model (path significance and hypothesis testing). The data met tests for normality, multicollinearity, heteroscedasticity, and adhered to research ethical principles.

RESULTS

Research Results

In this study, the researcher will present the test results of validity and reliability using Structure Equation Modelling – Partial Last Square (SEMPLS) using the Smart PLS software application. In this test, there are two main stages, namely the Outer Moder (Measurement Model) and Inner Model (Structural Model).

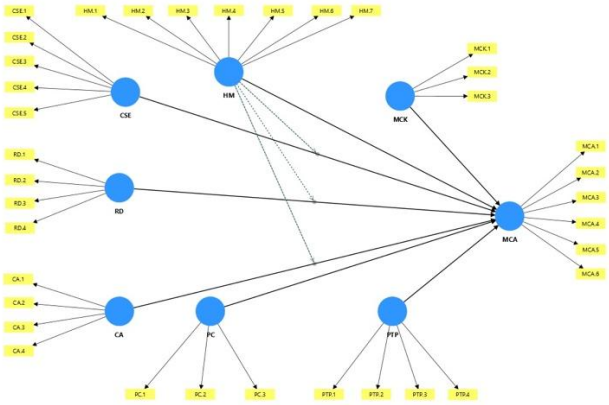

Figure 1. Research Model

Source: Data processed by researchers (2025)

1. **Outer Model Test Results**

The measurement model testing stage was carried out using PLS-SEM to ensure the validity and reliability of the instrument, especially the constructs **for constructs relevant to the research with the title "M-Commerce Analysis on Online Food Delivery Services using TAM3, UTAUT2, and TOE Models in MSMEs in the Food and Beverage Sector MSMEs in the Central Parahyangan Area, West Java".** The researcher tested the validity of the convergence by looking at **the value of outer loading** and **Average Variance Extracted** (AVE), where the indicator is said to be valid if it has an outer loading value of > 0.70 (values between 0.60–0.70 are still acceptable) and AVE > 0.50.

Reliability was tested with **Cronbach's Alpha** and **Composite Reliability**, with a minimum value of > 0.70 as a sign of good internal consistency. The test results show all major constructs, including moderation constructs meet these thresholds, ensuring the measuring instruments used are stable and reliable.

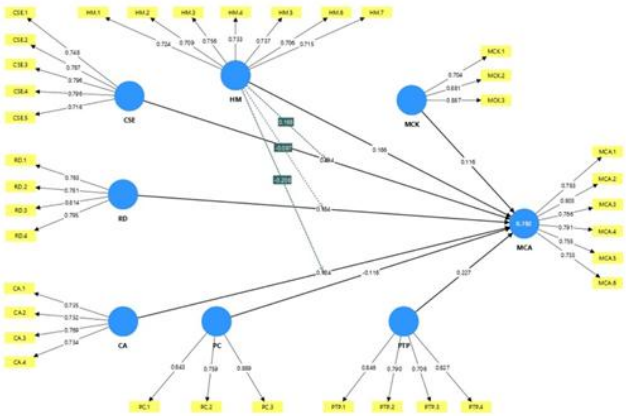

Figure 2. Outer Model Graphics

Source: Data processed by researchers (2025)

Table 1. Outer Loading and AVE Results

Variable	Indicators	Value of Outer Loadings	AVE Value
Computer Self Efficacy (CSE)	CSE1	0.748	0.592
	CSE2	0.787	
	CSE3	0.796	
	CSE4	0.796	
	CSE5	0.716	
Computer Anxiety (CA)	CA1	0.735	0.551
	CA2	0.732	
	CA3	0.769	
	CA4	0.734	
Result: Demonstrability (RD)	RD1	0.763	0.622
	RD2	0.781	
	RD3	0.814	
	RD4	0.795	
Mobile Commerce Knowledge (MCK)	MCK1	0.704	0.686
	MCK2	0.881	
	MCK3	0.887	
Pressure from Trading Partners (PTP)	PTP1	0.846	0.630
	PTP2	0.790	
	PTP3	0.706	
	PTP4	0.827	
Pressure from Competitors (PC)	PC1	0.843	0.692
	PC2	0.759	
	PC3	0.889	
Hedonic Motivations (HM)	HM1	0.724	0.527
	HM2	0.709	
	HM3	0.756	
	HM4	0.733	
	HM5	0.737	
	HM6	0.706	
	HM7	0.715	
Mobile Commerce Adoption (MCA)	MCA1	0.783	0.596
	MCA2	0.803	
	MCA3	0.766	
	MCA4	0.791	
	MCA5	0.755	
	MCA6	0.733	

Source: Data processed by researchers (2025)

Based on the data results in table 1., it is concluded that no indicators were found that had a loading factor value of <0.60. Because in the test ssat, the researcher has tested the existing variables, all variables are concluded to be suitable. The loading factor itself shows how closely the relationship between the indicator or statement and the latent variable is, which can be seen in table 1. that each variable tested in this study is recorded as having a value greater than 0.6 so that the variable can be declared valid.

Table 2. Value of Outer Loadings

Variable	Indicators	Value of Outer Loadings	Category
Computer Self Efficacy (CSE)	CSE1	0.748	Valid
	CSE2	0.787	Valid
	CSE3	0.796	Valid
	CSE4	0.796	Valid
	CSE5	0.716	Valid
Computer Anxiety (CA)	CA1	0.735	Valid
	CA2	0.732	Valid
	CA3	0.769	Valid
	CA4	0.734	Valid
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	HM4	0.733	Valid
	HM5	0.737	Valid
	HM6	0.706	Valid
	HM7	0.715	Valid
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	MCA2	0.803	Valid
	MCA3	0.766	Valid
	MCA4	0.791	Valid
	MCA5	0.755	Valid
	MCA6	0.733	Valid

Source: Data processed by researchers (2025)

Based on Table 2. above, the results of the outer loading test of all indicators have a value above 0.7 which results in the conclusion that each indicator is able to explain the latent variables that are validly measured. Thus, all indicators are considered valid and adequate to be used in the next analysis, namely the inner model.

Table 3. AVE Score

Variable	AVE Value
Computer Self Efficacy (CSE)	0.592
Computer Anxiety (CA)	0.551
Result Demonstrability (RD)	0.622

Mobile Commerce Knowledge (MCK)	0.686
Pressure from Trading Partners (PTP)	0.630
Pressure from Competitors (PC)	0.692
Hedonic Motivations (HM)	0.527
Mobile Commerce Adoption (MCA)	0.596

Source: Data processed by researchers (2025)

In table 3, it is found that the results of the AVE test where all of these variables have an AVE value greater than or above 0.5, then it can be concluded that the latent construct or variable in this model meets convergent validity.

a. Discriminatory Validity

The researcher tested the validity of the discriminator by comparing the **cross loading** of each indicator against its construct and with other constructs. An indicator is said to have appropriate discriminant validity if the cross loading value of the main construct is higher than the loading value of the other construct, and the value is above the minimum threshold of 0.60 (Nuryani & Winata, 2023).

Table 4. Cross Loadings

	CSE	CA	RD	MCK	PTP	PC	HM	MCA
CSE1	**0,748**	0,291	0,236	0,331	0,330	0,058	0,270	0,489
CSE2	**0,787**	0,200	0,214	0,327	0,328	0,063	0,337	0,550
CSE3	**0,796**	0,230	0,318	0,430	0,314	0,047	0,315	0,588
CSE4	**0,796**	0,274	0,285	0,303	0,314	0,132	0,335	0,564
CSE5	**0,716**	0,232	0,157	0,291	0,412	0,093	0,386	0,552
CA1	0,217	**0,735**	0,210	0,162	0,096	0,093	0,102	0,201
CA2	0,222	**0,732**	0,158	0,282	0,089	0,017	0,114	0,236
CA3	0,290	**0,769**	0,326	0,395	0,214	0,085	0,201	0,351
CA4	0,195	**0,734**	0,260	0,264	0,146	0,075	0,147	0,285
RD1	0,112	0206	**0,763**	0,183	0,006	0,239	0,074	0,169
RD2	0,234	0,239	**0,781**	0,315	0,138	0,189	0,169	0,312
RD3	0,359	0,271	**0,814**	0,312	0,238	0,140	0,250	0,413
RD4	0,203	0,316	**0,795**	0,211	0,173	0,168	0,185	0,341
MCK1	0,179	0,305	0,179	**0,704**	0,115	0,083	0,115	0,249
MCK2	0,360	0,336	0,226	**0,881**	0,261	0,109	0,257	0,457
MCK3	0,470	0,342	0,383	**0,887**	0,311	0,107	0,330	0,551
PTP1	0,415	0,175	0,218	0,309	**0,846**	0,305	0,579	0,556
PTP2	0,387	0,112	0,191	0,246	**0,790**	0,236	0,409	0,505
PTP3	0,256	0,121	0,173	0,148	**0,706**	0,230	0,347	0,369
PTP4	0,318	0,210	0,187	0,221	**0,827**	0,356	0,521	0,481
PC1	0,123	0,069	0,651	0,125	0,265	**0,843**	0,134	0,116
PC2	0,076	0,068	0,662	0,037	0,201	**0,759**	0,048	0,047
PC3	0,062	0,072	0,636	0,108	0,368	**0,889**	0,240	0,146
HM1	0,272	0,193	0,228	0,263	0,380	0,190	**0,724**	0,469
HM2	0,339	0,115	0,156	0,265	0,415	0,114	**0,709**	0,387
HM3	0,325	0,161	0,183	0,201	0,504	0,145	**0,756**	0,494
HM4	0,315	0,137	0,205	0,183	0,441	0,134	**0,733**	0,415
HM5	0,383	0,154	0,165	0,238	0,533	0,167	**0,737**	0,430
HM6	0, 206	0,122	0,100	0,181	0,356	0,117	**0,706**	0,344
HM7	0,327	0,119	0,139	0,227	0,363	0,140	**0,715**	0,379
MCA1	0,561	0,317	0,292	0,414	0,497	0,090	0,421	**0,783**
MCA2	0,607	0,293	0,316	0,543	0,468	0,043	0,416	**0,803**
MCA3	0,578	0,356	0,427	0,477	0,445	0,054	0,417	**0,766**
MCA4	0,592	0,297	0,367	0,414	0,435	0,477	0,428	**0,791**
MCA5	0,526	0,204	0,293	0,313	0,474	0,173	0,454	**0,755**
MCA6	0,436	0,436	0,242	0,316	0,517	0,189	0,576	**0,733**

Source: Data processed by researchers (2025)

Based on the findings in table 4, the test results that have been carried out show that the correlation value of each indicator with its construct is greater when compared to other constructs. This is also supported by a cross loading value that is in accordance with the requirements as an adequate value, which is above 0.60. Thus, it can be concluded that this model has adequate discriminant validity.

b. Reliability Test

The researcher tested the reliability in this study using Cronbach's Alpha and Composite Reliability (CR) methods within the framework of PLSSEM. Cronbach's Alpha measures the internal consistency of an indicator in one construct of a value > 0.70 which means it indicates good reliability, while values between 0.60 and 0.70 are still acceptable especially in exploratory research (Leman et al, 2021). Composite Reliability itself provides a more accurate estimate of reliability as it takes into account indicator weights and measurement errors; a CR value of > 0.70 also indicates a good level of construction reliability.

Table 5. Reliability Test

Variable	Cronbach's Alpha	Composite Reliability	The value in Recommend	Information
CSE	0.827	0.829	>0.7	Reliable
CA	0.737	0.750	>0.7	Reliable
RD	0.806	0.827	>0.7	Reliable
MCK	0.781	0.858	>0.7	Reliable
PTP	0.804	0.820	>0.7	Reliable
PC	0.797	0.877	>0.7	Reliable
HM	0.851	0.855	>0.7	Reliable
MCA	0.865	0.867	>0.7	Reliable

Source: Data processed by researchers (2025)

From table 5, it can be concluded that the results of the reliability test of all latent variables in this study produced Cronbach's alpha and composite reliability values above 0.7. Therefore, the measuring tool used in this study provides consistent and reliable results to measure some concepts that are not directly visible. Cronsbach's Alpha and Composite Reliability values are above 0.70, which can be interpreted that the above variables have adequate reliability and are in accordance with the standard.

Discussion of Hypothesis Test Results

The Effect of Computer Self Efficacy on Mobile Commerce Adoption

Hypothesis test shows that there is a significant influence between Computer Self Efficacy on Mobile Commerce Adoption which has a positive influence on the adoption of m commerce on online food delivery services for MSME actors. (P=0.000, less than 0.5). Based on the results obtained, it can be interpreted that the ability and self-confidence in using technology has a crucial influence on MSME actors to adopt it. The researcher has also conducted informal interviews with several MSME actors in one of the areas in Sumedang Regency, the majority of them answered that they want to use mobile commerce in online food delivery services after they feel confident in operating the technology with the understanding they understand. This is also supported by several government programs that always hold socialization about understanding digitalization by using online food delivery services technology for MSMEs in local cities (Head of the Sumedang MSME Office, personal interview, February 21, 2025).

These findings are in line with the findings of research conducted by Oktaviana & Pusposari (2023), which provides findings that CSE has a significant effect on the interest in ecommerce use. The experience of MSME actors in Central Parahyangan reflects a similar pattern: those who are more confident in using digital applications tend to adopt mcommerce services earlier. Research by Widiyasari & Achadiyah (2023) also confirms that CSE has a direct impact on the interest in using information technology among MSMEs. The TAM3 model involving CSE has also shown a positive influence of CSE on the adoption of mobile commerce in Malaysia and similar countries. The adjustment includes local government support in Parahyangan, similar to the socialization mechanism in Sumedang, as an important factor that sharpens CSE at the local level

Although CSE is proven to be important, there are still obstacles in the form of low basicdigital literacy among MSMEs, which can hinder the formation of early confidence. Many actors have never interacted with mobile technology (Head of the Sumedang MSME Office, personal interview, February 21, 2025). Therefore, it is recommended to expand practical training based on application installation and transaction simulation, supported by periodic mentoring. In conclusion, increasing CSE is the main foundation for accelerating the adoption of mcommerce by MSMEs and can be strengthened with intensive socialization and consistent government support.

The Effect of Computer Anxiety on Mobile Commerce Adoption

This hypothesis test shows that there is a significant influence between Computer Anxiety on Mobile Commerce Adoption to have a positive influence on the adoption of m commerce on online food delivery services for MSME actors. (P = 0.001, less than 0.05). Based on the findings, it can be said that the pressure of self-confidence affects MSME actors to adopt technology to be relatively significant. This is in line with a study by Osisanwo et al. (2019) in Nigeria that found "high levels of **computer anxiety** have a significant impact on technology use"—these findings are complemented by survey results and correlation analysis ($r = 0.844$; $P < 0.001$) which proves a strong relationship between computer anxiety and low use of IT tools (Osisanwo et all, 2020).

Interviews conducted in the Parahyangan area (Sumedang) revealed that MSME actors who are afraid of making mistakes or damaging applications tend to delay using m-commerce platforms. This is parallel to a study by Santos & Santana (2021), which showed that computer anxiety is one of the main barriers to technology adaptation in elderly users and affects the initial retention of mobile application use. MSME actors also experience a similar form of anxiety, for them applications such as GrabFood feel complicated which shows the need for local intervention through user-friendly early stage training and accompanying novice users.

However, Sokoguru.id (2025) stated that if interventions such as the government's efforts to enrich the literacy of MSME actors to reduce anxiety through direct practice, simulations, and visual guides based on local language, Computer Anxiety will no longer be an obstacle, but a trigger for motivation to learn and adapt. A comfortable infrastructure and conducive learning environment can significantly lower anxiety and increase the use of technology. Therefore, the efforts that have been made by the local government to organize training with the theme of digital literacy will greatly support local MSMEs and increase their confidence.

The Effect of Result Demonstrability on Mobile Commerce Adoption

This Hypothesis Test shows that there is a significant influence between Result Demonstrability on Mobile Commerce Adoption to have a positive influence on the adoption of m commerce on online food delivery services for MSME actors. (P = 0.000, less than 0.05). Based on the results above, it can be interpreted that the results that can be shown and disseminated affect MSME actors in adopting m commerce technology in online food delivery services.

In Central Parahyangan, MSME players reported that after trying the GrabFood system, they could immediately see an increase in the number of transactions and ease of order management through automated reports, this allegation is in line with the study of Bukama et al. (2017), which found that the adoption of e-commerce improved the performance of MSMEs in Malang through the effectiveness of the reporting system and transaction transparency.

Although some MSMEs still have difficulty in seeing direct results due to the lack of the ability to read digital data and reports, Linkumkm.id (2025) stated in its news portal that there are already companies in the Central Priangan area that can make Indonesian products more widely distributed, this can help local MSMEs to see more results and feel experience when they want to make their products more digitized to achieve wider market. To overcome this, it is hoped that practical assistance based on dashboards**,** short training on how to read reports, and workshops on sharing best practices between MSMEs. Thus, the ability to display the results of use will be a powerful motivator that drives sustainable adoption.

The Influence of Mobile Commerce Knowledge on Mobile Commerce Adoption

This Hypothesis Test shows that there is a significant influence between Mobile Commerce Knowledge on Mobile Commerce Adoption which has a positive influence on the adoption of m commerce on online food

delivery services for MSME actors. (P = 0.001, less than 0.05). Based on the results above, it can be interpreted that human resources and their understanding of m commerce technology in online food delivery services are relatively crucial for MSME actors in adopting their technology. Based on the results of an interview conducted by the researcher with one of the regional MSME actors in the Central Priangan area, most of the actors admitted that understanding how to use online food delivery services technology is important to pay attention to to adopt the technology, in this case to trade their products. The results of interviews in Central Priangan support this finding, that the majority of MSMEs stated that understanding the use of technology is a crucial aspect in convincing them to start transactions using online food delivery services. These findings are in line with the results of community service in Subang by Safitri et al. (2022), where m-commerce training led to a significant increase in the digital understanding of cassava chip MSMEs.

Practical experience shows that when MSMEs in Central Parahyangan receive direct training on how to use the GrabFood application starting from registration, menu upload, to accepting orders, they feel more confident and quickly adapt. This is in line with the Maulana & Pradikto (2025) study in Jarangan Village, which found that increasing e-commerce knowledge paves the way for digital transformation and increases MSME income by up to 40%. Parahyangan local MSMEs also use a similar approach, namely cross-institutional cooperation such as the district government and BUMDes to hold live sessions with the guidance of experienced user mentors.

There are still MSMEs who feel that theory-based training is not enough, they need real simulations, not just theory. In addition, time constraints, internet access costs, and tight operational schedules are significant obstacles. To overcome this, Zonapriangan.pikiran-rakyat.com (2025) has conducted training in the Priangan area for MSME actors by providing knowledge on how to digitize their products online. This activity was carried out to respond to the challenge of promoting digitally for the local community. That way, Mobile Commerce Knowledge is not only owned, but also effectively integrated into the daily operational processes of MSMEs.

The Effect of Pressure from Trading Partners on Mobile Commerce Adoption

This hypothesis test shows that there is a significant influence between Pressure from Trading Partners on Mobile Commerce Adoption which has a positive influence on the adoption of m commerce on online food delivery services for MSME actors. (P = 0.000, less than 0.05). Based on the results above, it can be interpreted that pressure from colleagues regarding the adoption of m commerce technology in online food delivery services is quite important for MSME actors in adopting their technology. This finding is reinforced by research conducted by Nurlinda & Fathimah (2019) which states that "pressure from fellow business partners increases the likelihood of companies adopting e-commerce to maintain the company's position competitively".

In the Central Priangan area, some MSMEs reported that their large suppliers or distributors required digital stock updates and sales data, so they needed to use GrabFood regularly. Ayuningtyas et al.'s (2024) study in the context of sales and payment applications shows that external factors including support and pressure from trading partners play a significant role in technology adoption decisions by MSMEs. Parahyangan imitates a similar pattern, where the synergy between MSMEs and trading partners in terms of ordering, stock, and reporting systems is a strong motivator to switch to mcommerce.

However, external pressure can also cause resistance if MSMEs feel unprepared in terms of infrastructure and competence. This is in line with what the Bandung City Kominfo is doing as the local government to conduct seminars and training related to digitalization using online food delivery services for local MSME actors (Ppid.bandung.go.id, 2024). If support from trading partners is not followed by mentoring and training, the adoption can be "coercive" without full understanding, which leads to the use of technology not being maximized. Therefore, it is recommended that the mcommerce adoption program involves a collaborative approach, for example joint training between MSMEs and trading partners, plus the creation of simple digital SOPs. Thus, Pressure from Trading Partners is not only a pressure, but a continuous transformation opportunity.

The Effect of Pressure from Competitors on Mobile Commerce Adoption

This Hypothesis Test shows that there is a significant influence between Pressure from Competitors on Mobile Commerce Adoption which has a positive influence on the adoption of m commerce on online food

delivery services for MSME actors. (P = 0.000, less than 0.05). Based on the results above, it can be interpreted that pressure from competitors related to the adoption of m commerce technology in online food delivery services is quite crucial for MSME actors in adopting their technology. Qualitative evidence from interviews in the field shows that many business actors decide to join digital platforms because they see their competitors "first and more messages".

This finding is strengthened by a research entitled Analysis of Factors Affecting E-Commerce Adoption and Its Impact on the Performance of SMEs in Subang Regency which states that "competitive pressure has a positive and significant effect in the context of ecommerce adoption" on Subang MSMEs, because business actors do not want to lose customers when their competitors are already using digital technology (Ausat, Astuti, & Wilopo, 2022). Within the scope of Central Parahyangan, culinary MSMEs that pay attention to nearby competitors such as stalls, caterers, or other online merchants tend to quickly adopt GrabFood. This is in line with the Palangan (2023) study on DIY handicraft MSMEs in Yogyakarta, which found that "competitor pressure" was an important factor in ecommerce adoption decisions. The Technology Organization Environment (TOE) method was adapted in the study, and the results show that the competitive environment accelerates the acceleration of digitalization. Local adjustments such as MSME community cooperation and field visit sessions have been effective in triggering competitive awareness in Central Parahyangan.

Although competition makes conditions faster to develop, pressure from competitors can cause a pseudo-push without technical readiness, so that MSMEs are forced to enter mcommerce but are unable to maintain the quality of digital services. Nasional.kompas.com (2024) said that training for local MSMEs on digitalization is crucial to be able to compete with an even larger market. The policy is also in favor of MSMEs, especially in efforts to digitize the actors. In this way, pressure from competitors is not just a threat to competition, but a trigger for digital transformation that has a positive impact.

The Effect of Hedonic Motivations on Moderating Computer Self Efficacy on Mobile Commerce Adoption

This Hypothesis Test shows a significant influence between Hedonic Motivations moderating Computer Self Efficacy on Mobile Commerce Adoption has a positive influence on the adoption of m commerce on online food delivery services for MSME actors. (P = 0.000, less than 0.05). Based on the results above, it can be interpreted that the factors of confidence and self-ability to adopt m commerce technology in online food delivery services are influenced by relatively high hedonistic motivation factors. Based on the results of an interview conducted with one of the MSME actors in the Central Priangan area, it was stated that the majority of the actors felt that there was a motivational factor from outside when they saw other traders feeling pleasure when using online food delivery services technology, this encouraged them to feel confident in trying to use and adopt similar technology. Interviews in Central Priangan support this where MSME actors feel "motivated by the pleasure of other users", so their courage increases. This finding is in line with a study by Permana & Parasari (2019) from Denpasar, which found that **hedonic motivation** has a relatively positive or significant effect on the use of m commerce by MSMEs

Data findings in the field, show that a number of MSME actors said that when they saw other traders looking happy when serving orders through the application, such as receiving order notifications with a voice or a satisfied customer response, they felt "like to try because they were driven by positive emotions". This is in line with the findings of Abdurachman et al. (2023) in Shopee which affirmed that hedonistic motivation triggers impulsive buying behavior, indicating that pleasure is a strong trigger for digital behavior. In the context of Central Parahyangan, similar interventions such as use demonstrations and sharing sessions from MSME actors who enjoy using applications have the potential to strengthen the moderation effect of Hedonic Motivations on Computer Self Efficacy.

Although the concept of hedonism has a positive impact, if this aspect is not captured properly—for example, application settings are not "pleasant" or the screen display feels monotonous, the Hedonic Motivations moderation function can be interpreted as a failure, and can even weaken Computer Self Efficacy. Bandungbergerak.id (2022) The Mayor of Bandung also admitted that he has made several efforts to help increase digitalization in MSMEs. One of them is also by creating an e-catalog application which is an online shopping application that can be used by MSME actors to sell their goods digitally. There are already around 200 thousand products that have been marketed digitally on the application, it can be concluded that there has been a relatively high increase. Therefore, it is recommended that the

GrabFood platform and MSME training include interactive and aesthetic elements such as encouraging visual and voice notifications, "success story" sessions that spark a sense of excitement\ as well as simple gamification features (e.g. "active seller" badges) to reinforce the fun atmosphere. Thus, Hedonic Motivations will strengthen Computer Self Efficacy on an ongoing basis, not just start a momentary adoption.

The Influence of Hedonic Motivations on Moderating Computer Anxiety in the Face of Mobile Commerce Adoption

This hypothesis test shows a significant influence between Hedonic Motivations moderating Computer Anxiety on Mobile Commerce Adoption has a positive influence on the adoption of m commerce on online food delivery services for MSME actors. (P = 0.000, less than 0.05). Based on the above results, it can be interpreted that the factors of anxiety and uncertainty in adopting m commerce technology in online food delivery services are influenced by relatively high hedonistic motivation factors. Based on the results of an interview conducted with one of the MSME actors in the Central Priangan area, he also admitted that a small part of them in their environment, the perpetrators felt that there was a motivational factor from the outside when they saw other traders feeling that they did not have confidence or were anxious when using online food delivery services technology due to a lack of deep understanding, and the level of MSME actors who are already far away, this encourages them to feel unconfident in using or adopting similar technology. These findings are supported by a study in Jakarta by Pranata et al. (2024), which emphasized that **hedonic motivation** has a significant effect on mobile shopping adoption intentions, because user pleasure increases interest in learning technology.

In Central Parahyangan, many MSME actors said that seeing their colleagues showing off their smiles or satisfied expressions when receiving orders via GrabFood had a real positive effect that they felt "want to try it because it looks fun". This is in line with a description in a journal that calls **hedonic motivation** the "feeling of joy and pleasure" that arises when using digital applications (Rabiah, 2024). Similar approaches such as demo sessions, experience sharing, and cheerful visual displays of apps significantly reduce anxiety and increase the courage to try new technologies (Wibowo & Sobari, 2023).

Although joy and pleasure have a positive influence, lack of understanding and excessive levels of confidence can make the sense of joy and pleasure forgotten in the adoption of m commerce technology in online food delivery services for MSME actors. At the same time, MediaIndonesia.com (2024) stated that the implementation of the Go Digital MSME Companion event has been held in the Bandung area with the aim of providing literacy and understanding of digitalization to local MSME businesses. This can help local MSME actors to better understand digitalization so that the Computer Anxiety factor is no longer a problem for MSME actors in the Central Priangan area, West Java.

The Effect of Hedonic Motivations on Moderating Demonstrability Results on Mobile Commerce Adoption

This Hypothesis Test shows a significant influence between Hedonic Motivations moderating Result Demonstrability on Mobile Commerce Adoption to have a positive influence on the adoption of m commerce on online food delivery services for MSME actors. (P = 0.032, less than 0.05). Based on the above results, it can be interpreted that the easy factor showing the results in adopting m commerce technology in online food delivery services is influenced by the hedonistic factor with a relatively high degree. Based on the results of an interview conducted with one of the MSME actors in the Central Priangan area, it was stated that some of the actors felt that there was a motivation factor from outside when seeing other traders seeing and sharing their experiences when using online food delivery services technology, this encouraged them to want to try to use and adopt similar technology. These findings are in line with the study of Permana & Parasari (2019) that HM positively amplifies the effect of outcome demonstration for digital technology users, where the pleasure magnifies the perception of the value of the results of use.

In Central Parahyangan, business actors reported that sharing "increased orders" testimonials, screenshot ratings, or endorsements from other users created an encouraging atmosphere and increased motivation to try. This is in line with research by Putri & Anggraeni (2022), which shows that HM & **perceived enjoyment** triggers the desire to adopt technology such as buying products or using payment applications. Local adaptation in the form of demonstrations of use by successful actors, performance

dashboards that display results visually, and sharing sessions between MSMEs strengthen this process.

Although the pleasure of MSME actors in using online food delivery services with encouraging motivation has a relatively high relevance, some MSME actors also admit that it is difficult to get pleasure from monotonous results and experiences. This is supported by Sastika (2016) who presents an attractive interface appearance, gives a pleasant impression, and includes good information quality and also tends to provide a special experience that is pleasing to users, especially when the application is used. At the same time, the Bandung Photojournalist (WFB) community-initiated photography training for MSMEs to help make attractive promotional photos for MSMEs (pikiran-rakyat.com, 2025). Thus, some of the efforts made by the local community can also help to turn off the Hedonc Motivation to serve as an effective trigger to expand the influence of Result Demonstrability on the sustainable adoption of technology

CONCLUSION

The research concluded that all tested variables significantly influenced the adoption of mobile commerce technology in online food delivery services among MSMEs in the Central Priangan region. Higher Computer Self-Efficacy (CSE) and Mobile Commerce Knowledge (MCK) increased adoption, while Computer Anxiety (CA) reduced it. Result Demonstrability (RD) positively impacted adoption by encouraging sharing of experiences. External pressures from trading partners (PTP) and competitors (PC) also promoted adoption. Hedonic Motivation (HM) significantly moderated the effects of CSE, CA, and RD, enhancing the influence of self-confidence, reducing anxiety, and amplifying the impact of experienced results on adoption. These findings show that m-commerce adoption among MSMEs is shaped by interacting internal, external, and intrinsic factors. Future research could explore longitudinal studies to examine how these factors evolve over time and their long-term impact on technology adoption.

REFERENCES

Abdurachman, A., Arifah, A. N., Lestari, D. F., & Ridwan, R. (2023). The effect of hedonistic shopping motivation on impulse purchases in Shopee e-commerce in millennials. Scientific Journal of Unit Management (JIMKES), 11(1), 205–212. https://doi.org/10.37641/jimkes.v11i1.2005

Arghajata. (2024, May 11). Digital Processing Trends. https://www.arghajata.com/en/insight/2024/05/digital-transformation- Trends/

Ausat, A. M. A., Astuti, E. S., & Wilopo. (2022). Analysis of factors influencing e-commerce adoption and their impact on the performance of SMEs in Subang Regency. Journal of Information Technology and Computer Science (JTIIK), 9(2), 333–346. https://doi.org/10.25126/jtiik.202295422

Awa, H.O. and Ojiabo, O.U. (2016). A model of adoption determinants of ERP within TOE framework. Information Technology and People.

Ayuningtyas, Y., Suhandiah, S., Sudarmaningtyas, P., & Lebdaningrum, K. (2024). Analysis of technology and organizational factors in the adoption of sales and payment applications by MSMEs. Journal of Informatics Exploration, 13(2). https://doi.org/10.30864/eksplora.v13i2.1091

Azzahra, R. V., & Nasution, M. I. P. (2024). Building an e-commerce ecosystem that supports the growth of MSMEs: Future opportunities and challenges. Switch: Journal of Information Science and Technology. https://doi.org/10.62951/switch.v2i3.83

Bukama, S., Hanggara, B. T., & Syawli, A. (2017). The effect of e-commerce and e-payment adoption on the performance of MSMEs in Penanggungan Village. Journal of Information Technology and Computer Science Development, 1(1), xx–xx. http://j-ptiik.ub.ac.id

Dos Santos, T. D., & de Santana, V. F. (2021). Computer anxiety: Supporting the transition from desktop to mobile. In Proceedings of the CHI '21 Workshop on Designing Interactions for the Ageing Populations (Yokohama, Japan, May 8–13, 2021).

Haris, I. P., Setiawan, Y. I. N., Rendi, R., & Fajarwati, N. K. (2024). Current trends in communication science in Indonesia: Between digital transformation and cultural dynamics. Philosophy: Publications of Communication Sciences, Design, Cultural Arts, 1(1), 140-149. https://doi.org/10.62383/filosofi.v1i1.73

Herwanto, A. (2025). New business opportunities in industry 5.0 with IoT, AI, and cloud computing. JITU (Journal of Information and Technology), 2(1), 24-31.

Public Relations and Legal Advocacy of the Ministry of Cooperatives and SMEs. (2020). MSME Sector So Key Recovery Economics at Middle Pandemic. https://www.kemenkopukm.go.id/read/sektor-umkm-jadi-kunci- recovery-economy-in-the-middle of the pandemic

Kanalsatu.com. (2023, January 30). Digital economy is growing, here's how it changes behaviour shop user.

https://kanalsatu.com/id/post/59732/ekonomi-digital-semakin-bertumbuh-- this-is-this-consumer-shopping-behavior change

Khatimah, H., Susanto, P. and Abdullah, N.L. (2019), "Hedonic motivation and social influence on behavioral intention of E-Money: the role of payment habit as a mediator", International Journal of Entrepreneurship, Vol. 23 No. 1, pp. 1-9.

Laudinsha, B. Y., & Sanggarwati, D. A. (2024). An effective strategy to increase customer satisfaction in the digital age. Journal of Economics of Business Accounting Management and Information Technology (JEMABITEK), 1(3).

Leman, M. A., Claramita, M., & Rahayu, G. R. (2021). Development and validation of instrument to measure the characteristics of a healthy role-model in medical school. Indonesian Journal of Medical Education, 10(2), 140–151. https://doi.org/10.22146/jpki.61301

Maulana, A., Aditiya, M., & Pradikto, S. (2025). Dissecting the importance of e-commerce knowledge for the transformation of MSMEs in Jarangan Village, Rejoso District, Pasuruan Regency. Student Research Journal, 3(1), 67–74. https://doi.org/10.55606/srj-yappi.v3i1.1688

Nur Alifah, N. (2022, July 22). 5 Provinces with the Most Universities, West Java and East Java Dominate. GoodStats.

Nurlinda, & Fathimah, V. (2019). Determinants of e-commerce adoption and its impact on the performance of micro, small and medium enterprises (MSMEs). Journal of Accounting and Finance Research, 7(3), 445–464. https://doi.org/10.17509/jrak.v7i3.18105

Nuryani, Y., & Winata, A. Y. S. (2023). Measuring interest in revisiting based on social media and the image of the tourist destination of Lon Malang Beach in Sampang Madura. Journal of Management Science Studies, 3(4), 613–628. https://journal.trunojoyo.ac.id/jkim

Oktaviana, R., & Pusposari, D. (2023). Interest in the use of e-commerce by MSME actors in the perspective of the Technology Acceptance Model (TAM). Faculty of Economics and Business, Universitas Brawijaya.

Osisanwo, T., Ehioghae, M., & Abdulsalaam, T. (2020). Computer anxiety as correlate of use of information technology tools among undergraduates of Library and Information Science in Tai Solarin University of Education, Ijagun, Ogun State. Information Impact: Journal of Information and Knowledge Management, 10(2), 15–27. https://doi.org/10.4314/iijikm.v10i2.2

Palangan, C. Y. (2023). Analysis of factors influencing the adoption of e-commerce by DIY handicraft MSMEs. Constellation: Convergence of Technology and Information Systems, 3(2), 425–xxx.*

Permana, G. P. L., & Parasari, A. A. A. I. (2019). The Influence of Hedonic Motivation, Social Influence, and Perceived Enjoyment on the Use of Marketplace in MSMEs in Bali: A Case Study on HIPMI Bali Province. Scientific Journal of Management & Business, 4(1), 90–xx. http://journal.undiknas.ac.id/index.php/manajemen

Pranata, J. A., Riyanto, M. R. P., Hendrawan, S., & Gunadi, W. (2024). The effect of hedonic motivation and IT affordance on impulsive buying decisions in social commerce: TikTok. International Journal of Electronic Commerce Studies, 15(2), 63–102. https://doi.org/10.7903/ijecs.2303

Putri, F. N. R., Zed, E. Z., Sagita, M., & Nayla, U. N. (2024). Utilization of GrabFood and GoFood Market Places in Increasing MSME Sales in West Cikarang District. Positive Activities: Journal of Community Service Works, 2(4), 105–114.

Putri, P. G. V., & Anggraeni, R. (2022). The influence of hedonistic motives and promotions on social media on impulse purchases. Journal of Marketing Management and Consumer Behavior, 1(4), 458–465. https://doi.org/10.21776/jmppk.2022.01.4.05

Rabiah, A. S., Setiawan, M., Rohman, F., & Mugiono. (2024). Assess the impact of hedonic motivation, social influence, gamification, and education level on behavioral intention to adopt mobile shopping in Jakarta, Indonesia. Journal of Social and Environmental Management, 18(7), e05024. https://doi.org/10.24857/rgsa.v18n7-008

Safitri, L. S., Rahayu, W. E., Purwasih, R., Sobari, E., & Destiana, I. D. (2022). Introduction to digital marketing and m-commerce for cassava chip MSME actors in Subang Regency. Journal of Community Service and Empowerment, 6(2), 343–347. https://doi.org/10.30595/jppm.v6i2.9114

Sari, M. A., & Takari, D. (2024). Analysis of Opportunities and Challenges Using Gojek or Grabfood Applications for MSME Development in Palangkaraya City. Syntax Admiration, 5(12), 5358-5364.

Venkatesh, V., Thong, J.Y. and Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. MIS Quarterly, 36(1), 157-178.

Wibowo, N. A. P., & Sobari, N. (2023). The influence of behavioral intention, facilitating condition, and habit on use behavioral of QRIS: A study on mobile banking services. Wiralodra Echo, 14(3), 1243–1258. https://gemawiralodra.unwir.ac.id/index.php/gemawiralodra/article/view/xxx

Widiyasari, R., & Achadiyah, B. N. (2023). Computer anxiety, computer self-efficacy, and perceived usefulness by MSME actors. Journal of Accounting. State University of Malang. Retrieved from http://journal2.um.ac.id/index.php/jaa